

USER GUIDE

Essential Studio for EJ2 React

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File manager

Getting Started

This section explains how to create and configure the simple [Link to the Video](#) component.

To get started quickly with React File Manager, you can check the video below.

Dependencies

The following list of dependencies are required to use the File Manager component in your application.

```
`javascript
|-- @syncfusion/ej2-react-filemanager
|-- @syncfusion/ej2-base
|-- @syncfusion/ej2-grids
|-- @syncfusion/ej2-buttons
|-- @syncfusion/ej2-layouts
|-- @syncfusion/ej2-navigations
`,`
```

Installation and configuration

You can use [create-react-app](#) to setup the applications. To install `create-react-app` run the following command.

```
`
npm install -g create-react-app
`,`
```

To set-up a React application in TypeScript environment, run the following command.

```
`
npx create-react-app my-app --template typescript
cd my-app
`,`
```

To set-up a React application in JavaScript environment, run the following command.

```
`
npx create-react-app my-app
cd my-app
`,`
```

Adding Syncfusion packages

All the available Essential JS 2 packages are published in [npmjs.com](https://www.npmjs.com) public registry.

You can choose the component that you want to install. For this application, we are going to use `File Manager` component.

To install File Manager component, use the following command

```
`bash
npm install @syncfusion/ej2-react-filemanager --save
`
```

Adding Style sheet to the Application

To render the File Manager component, need to import File Manager and its dependent component's styles as given below in `App.css`.

```
`css
@import '../node_modules/@syncfusion/ej2-base/styles/material.css';
@import '../node_modules/@syncfusion/ej2-icons/styles/material.css';
@import '../node_modules/@syncfusion/ej2-inputs/styles/material.css';
@import '../node_modules/@syncfusion/ej2-popups/styles/material.css';
@import '../node_modules/@syncfusion/ej2-buttons/styles/material.css';
@import '../node_modules/@syncfusion/ej2-splitbuttons/styles/material.css';
@import '../node_modules/@syncfusion/ej2-navigations/styles/material.css';
@import '../node_modules/@syncfusion/ej2-layouts/styles/material.css';
@import '../node_modules/@syncfusion/ej2-grids/styles/material.css';
@import "../node_modules/@syncfusion/ej2-react-filemanager/styles/material.css";
`
```

Note: If you want to refer the combined component styles, please make use of our [CRG](#) (Custom Resource Generator) in your application.

Adding File Manager component to the Application

File Manager can be initialized using the `<FileManagerComponent>` tag. Now, you can start adding Essential JS 2 File Manager component to the application.

- To include the File Manager component in application import the `FileManagerComponent` from `ej2-react-filemanager` package in `App.tsx`.
- Then add the File Manager component as shown in below code example.

[src/App.tsx]

```
{% raw %}
`ts
import { FileManagerComponent } from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
```



```

return (
  <div className="control-section">
    <FileManagerComponent id="file" ajaxSettings = {{
      url: hostUrl + "api/FileManager/FileOperations"
    }} />
  </div>
);
}
export default App;
`
{% endraw %}
{% raw %}
`ts
import { FileManagerComponent } from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
  let hostUrl = "https://ej2-aspcore-service.azurewebsites.net/";
  return (<div className="control-section">
    <FileManagerComponent id="file" ajaxSettings={{
      url: hostUrl + "api/FileManager/FileOperations"
    }}/>
  </div>);
}
export default App;
`
{% endraw %}

```

Run the application

Now run the `npm start` command in the console, it will run your application and open the browser window.

```
npm start
```

The following sample, shows the basic File Manager component.

APP.JSX

```
{% raw %}
import { FileManagerComponent } from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
  let hostUrl = "https://ej2-aspcore-service.azurewebsites.net/";
  return (<div className="control-section">
    <FileManagerComponent id="file" ajaxSettings={{
      url: hostUrl + "api/FileManager/FileOperations"
    }}/>
  </div>);
}
export default App;
{% endraw %}
```

APP.TSX

```
{% raw %}
import { FileManagerComponent } from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
  let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
  return (
    <div className="control-section">
      <FileManagerComponent id="file" ajaxSettings = {{
        url: hostUrl + "api/FileManager/FileOperations"
      }} />
    </div>
  );
}
export default App;{% endraw %}
```

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render( <App />, document.getElementById('root') as HTMLElement);
```

File Download support

To perform the download operation, initialize the `downloadUrl` property in a `ajaxSettings` of File Manager component.

```
{% raw %}
```

```
`ts
```

```
import { FileManagerComponent } from '@syncfusion/ej2-react-filemanager';
```

```
import * as React from 'react';

function App() {
  let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
  return (
    <div className="control-section">
      <FileManagerComponent id="file" ajaxSettings = {{
        url: hostUrl + "api/FileManager/FileOperations",
        downloadUrl: hostUrl + 'api/FileManager/Download'
      }} />
    </div>
  );
}

export default App;
```

{% endraw %}

File Upload support

To perform the upload operation, initialize the `uploadUrl` property in a [ajaxSettings](#) of File Manager Component.

{% raw %}

`ts

```
import { FileManagerComponent } from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';

function App() {
  let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
  return (
    <div className="control-section">
      <FileManagerComponent id="file" ajaxSettings = {{
        url: hostUrl + "api/FileManager/FileOperations",
        uploadUrl: hostUrl + 'api/FileManager/Upload'
      }} />
    </div>
  );
}

export default App;
```

{% endraw %}

Image Preview support

To perform the image preview support in the File Manager component, need to initialize the `getImageUrl` property in a [ajaxSettings](#) of File Manager component.

APP.JSX

```
{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
  let hostUrl = "https://ej2-aspcore-service.azurewebsites.net/";
  return (<div className="control-section">
    <FileManagerComponent id="file" view="LargeIcons" ajaxSettings={{
      getImageUrl: hostUrl + "api/FileManager/GetImage",
      url: hostUrl + "api/FileManager/FileOperations"
    }}>
      <Inject services={[NavigationPane, DetailsView, Toolbar]} />
    </FileManagerComponent>
  </div>);
}
export default App;
{% endraw %}
```

APP.TSX

```
{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
  let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
  return (
    <div className="control-section">
      <FileManagerComponent id="file" view="LargeIcons" ajaxSettings = {{
        getImageUrl: hostUrl + "api/FileManager/GetImage",
        url: hostUrl + "api/FileManager/FileOperations"
      }} >
        <Inject services={[ NavigationPane, DetailsView, Toolbar]} />
      </FileManagerComponent>
    </div>
  );
}
export default App;{% endraw %}
```

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render( <App />, document.getElementById('root') as HTMLElement);
```

Injecting services for Overview

By default, the File Manager component not having any extra module. You can configure **NavigationPane**, **Toolbar**, **ContextMenu** module using Inject.

APP.JSX

```
{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
    let hostUrl = "https://ej2-aspcore-service.azurewebsites.net/";
    return (<div className="control-section">
        <FileManagerComponent id="file" view="LargeIcons" ajaxSettings={{
            downloadUrl: hostUrl + 'api/FileManager/Download',
            getImageUrl: hostUrl + "api/FileManager/GetImage",
            uploadUrl: hostUrl + 'api/FileManager/Upload',
            url: hostUrl + "api/FileManager/FileOperations"
        }}>
            <Inject services={[NavigationPane, DetailsView, Toolbar]} />
        </FileManagerComponent>
    </div>);
}
export default App;
{% endraw %}
```

APP.TSX

```
{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
    let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
    return (
        <div className="control-section">
            <FileManagerComponent id="file" view="LargeIcons" ajaxSettings = {{
                downloadUrl: hostUrl + 'api/FileManager/Download',
                getImageUrl: hostUrl + "api/FileManager/GetImage",
                uploadUrl: hostUrl + 'api/FileManager/Upload',
                url: hostUrl + "api/FileManager/FileOperations"
            }} >
                <Inject services={[ NavigationPane, DetailsView, Toolbar]} />
            </FileManagerComponent>
        </div>
    );
}
export default App;{% endraw %}
```

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render( <App />, document.getElementById('root') as HTMLElement);
```

Note: The appearance of the File Manager can be customized by using [cssClass](#) property. This adds a css class to the root of the File Manager which can be used to add new styles or override existing styles to the File Manager.

Switching initial view of the File Manager

The initial view of the File Manager can be changed to details or largeicons view with the help of [view](#) property. By default, the File Manager will be rendered in large icons view. When the File Manager is initially rendered, [created](#) will be triggered. This event can be utilized for performing operations once the File Manager has been successfully created.

APP.JSX

```
{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
    let hostUrl = "https://ej2-aspcore-service.azurewebsites.net/";
    function onCreated(args) {
        console.log("File Manager has been created successfully");
    }
    return (<div className="control-section">
        <FileManagerComponent id="file" view="LargeIcons" ajaxSettings={{
            downloadUrl: hostUrl + 'api/FileManager/Download',
            getImageUrl: hostUrl + "api/FileManager/GetImage",
            uploadUrl: hostUrl + 'api/FileManager/Upload',
            url: hostUrl + "api/FileManager/FileOperations"
        }} created={onCreated.bind(this)}>
            <Inject services={[NavigationPane, DetailsView, Toolbar]} />
        </FileManagerComponent>
    </div>);
}
export default App;
{% endraw %}
```

APP.TSX

```
{% raw %}
```

```
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
  let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
  function onCreated(args: any) {
    console.log("File Manager has been created successfully");
  }
  return (
    <div className="control-section">
      <FileManagerComponent id="file" view="LargeIcons" ajaxSettings = {{
        downloadUrl: hostUrl + 'api/FileManager/Download',
        getImageUrl: hostUrl + "api/FileManager/GetImage",
        uploadUrl: hostUrl + 'api/FileManager/Upload',
        url: hostUrl + "api/FileManager/FileOperations"
      }} created = {onCreated.bind(this)}>
        <Inject services={[ NavigationPane, DetailsView, Toolbar]} />
      </FileManagerComponent>
    </div>
  );
}
export default App;{% endraw %}
```

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render( <App />, document.getElementById('root') as HTMLElement);
```

Maintaining component state on page reload

The File Manager supports maintaining the component state on page reload. This can be achieved by enabling [enablePersistence](#) property which maintains the following,

- Previous view of the File Manager - [View](#)
- Previous path of the File Manager - [Path](#)
- Previous selected items of the File Manager - [SelectedItems](#)

For every operation in File Manager, ajax request will be sent to the server which then processes the request and sends back the response. When the ajax request is success, [success](#) event will be triggered and [failure](#) event will be triggered if the request gets failed.

APP.JSX

```
{% raw %}
```

```

import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
    let hostUrl = "https://ej2-aspcore-service.azurewebsites.net/";
    function onSuccess(args) {
        console.log("Ajax request successful");
    }
    function onFailure(args) {
        console.log("Ajax request has failed");
    }
    return (<div className="control-section">
        <FileManagerComponent id="file" view="LargeIcons"
enablePersistence={true} ajaxSettings={{
            downloadUrl: hostUrl + 'api/FileManager/Download',
            getImageUrl: hostUrl + "api/FileManager/GetImage",
            uploadUrl: hostUrl + 'api/FileManager/Upload',
            url: hostUrl + "api/FileManager/FileOperations"
        }} success={onSuccess.bind(this)} failure={onFailure.bind(this)}>
            <Inject services={[NavigationPane, DetailsView, Toolbar]} />
        </FileManagerComponent>
    </div>);
}
export default App;
{% endraw %}

```

APP.TSX

```

{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject,
SuccessEventArgs, FailureEventArgs } from '@syncfusion/ej2-react-
filemanager';
import * as React from 'react';
function App() {
    let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
    function onSuccess(args: SuccessEventArgs) {
        console.log("Ajax request successful");
    }
    function onFailure(args: FailureEventArgs) {
        console.log("Ajax request has failed");
    }
    return (
        <div className="control-section">
            <FileManagerComponent id="file" view="LargeIcons"
enablePersistence={true} ajaxSettings = {{
                downloadUrl: hostUrl + 'api/FileManager/Download',
                getImageUrl: hostUrl + "api/FileManager/GetImage",
                uploadUrl: hostUrl + 'api/FileManager/Upload',
                url: hostUrl + "api/FileManager/FileOperations"
            }} success={onSuccess.bind(this)} failure={onFailure.bind(this)} >
                <Inject services={[ NavigationPane, DetailsView, Toolbar]} />
            </FileManagerComponent>
        </div>
    );
}
export default App;{% endraw %}

```


INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render( <App />, document.getElementById('root') as HTMLElement);
```

Note: The files of the current folder opened in the File manager can be refreshed programatically by calling [refreshFiles](#) method.

Rendering component in right-to-left direction

It is possible to render the File Manager in right-to-left direction by setting the [enableRtl](#) API to true.

APP.JSX

```
{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
    let hostUrl = "https://ej2-aspcore-service.azurewebsites.net/";
    return (<div className="control-section">
        <FileManagerComponent id="file" enableRtl={true} ajaxSettings={{
            downloadUrl: hostUrl + 'api/FileManager/Download',
            getImageUrl: hostUrl + "api/FileManager/GetImage",
            uploadUrl: hostUrl + 'api/FileManager/Upload',
            url: hostUrl + "api/FileManager/FileOperations"
        }}>
            <Inject services={[NavigationPane, DetailsView, Toolbar]} />
        </FileManagerComponent>
    </div>);
}
export default App;
{% endraw %}
```

APP.TSX

```
{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
    let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
    return (
        <div className="control-section">
            <FileManagerComponent id="file" enableRtl={true} ajaxSettings = {{
                downloadUrl: hostUrl + 'api/FileManager/Download',
```

```

        getImageUrl: hostUrl + "api/FileManager/GetImage",
        uploadUrl: hostUrl + 'api/FileManager/Upload',
        url: hostUrl + "api/FileManager/FileOperations"
    }} >
    <Inject services={[ NavigationPane, DetailsView, Toolbar]} />
  </FileManagerComponent>
</div>
);
}
export default App;{% endraw %}

```

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render( <App />, document.getElementById('root') as HTMLElement);

```

Specifying the current path of the File Manager

The current path of the File Manager can be specified initially or dynamically using the [path](#) property.

The following code snippet demonstrates specifying the current path in File Manager on rendering.

```
{% raw %}
```

```
`ts
```

```
import { FileManagerComponent } from '@syncfusion/ej2-react-filemanager';
```

```
import * as React from 'react';
```

```
function App() {
```

```
let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
```

```
return (
```

```
<div className="control-section">
```

```
<FileManagerComponent id="file" ajaxSettings = {{
```

```
url: hostUrl + "api/FileManager/FileOperations"
```

```
}} />
```

```
</div>
```

```
);
```

```
}
```

```
export default App;
```

```
{% endraw %}  
{% raw %}  
`ts  
import { FileManagerComponent } from '@syncfusion/ej2-react-filemanager';  
import * as React from 'react';  
function App() {  
  let hostUrl = "https://ej2-aspcore-service.azurewebsites.net/";  
  return (<div className="control-section">  
    <FileManagerComponent id="file" ajaxSettings={{  
      url: hostUrl + "api/FileManager/FileOperations"  
    }}/>  
  </div>);  
}  
export default App;  
`
```

```
{% endraw %}
```

Note: You can refer to our [React File Manager](#) feature tour page for its groundbreaking feature representations. You can also explore our [React File Manager example](#) that shows you how to render the File Manager in React.

Creating a Next.js Application Using Syncfusion React Components

This section provides a step-by-step guide for setting up a Next.js application and integrating the Syncfusion React File manager component.

What is Next.js?

[Next.js](#) is a React framework that makes it easy to build fast, SEO-friendly, and user-friendly web applications. It provides features such as server-side rendering, automatic code splitting, routing, and API routes, making it an excellent choice for building modern web applications.

Prerequisites

Before getting started with the Next.js application, ensure the following prerequisites are met:

- [Node.js 18.17](#) or later.
- The application is compatible with macOS, Windows, and Linux operating systems.

Create a Next.js application

To create a new **Next.js** application, use one of the commands that are specific to either NPM or Yarn.

NPM

```
npx create-next-app@latest
```

YARN

```
yarn create next-app
```

Using one of the above commands will lead you to set up additional configurations for the project as below:

1. Define the project name: Users can specify the name of the project directly. Let's specify the name of the project as `ej2-nextjs-file-manager`.

CMD

```
√ What is your project named? » ej2-nextjs-file-manager
```

2. Select the required packages.

CMD

```
√ What is your project named? ... ej2-nextjs-file-manager
√ Would you like to use TypeScript? ... No / `Yes`
√ Would you like to use ESLint? ... No / `Yes`
√ Would you like to use Tailwind CSS? ... `No` / Yes
√ Would you like to use `src/` directory? ... No / `Yes`
√ Would you like to use App Router? (recommended) ... No / `Yes`
√ Would you like to customize the default import alias? ... `No` / Yes
Creating a new Next.js app in D:\ej2-nextjs-file-manager.
```

3. Once complete the above mentioned steps to create `ej2-nextjs-file-manager`, navigate to the directory using the below command:

CMD

```
cd ej2-nextjs-file-manager
```

The application is ready to run with default settings. Now, let's add Syncfusion components to the project.

Install Syncfusion React packages

Syncfusion React component packages are available at [npmjs.com](https://www.npmjs.com). To use Syncfusion React components in the project, install the corresponding npm package.

Here, the [React File Manager component](#) is used as an example. To install the React File manager component in the project, use the following command:

NPM

```
npm install @syncfusion/ej2-react-filemanager --save
```

YARN

```
yarn add @syncfusion/ej2-react-filemanager
```

Import Syncfusion CSS styles

Syncfusion React components come with [built-in themes](#), which are available in the installed packages. It's easy to adapt the Syncfusion React components to match the style of your application by referring to one of the built-in themes.

Import the **Material** theme into the **src/app/globals.css** file and removed the existing styles in that file, as shown below:

GLOBALS.CSS

```
@import '../node_modules/@syncfusion/ej2-base/styles/material.css';
@import '../node_modules/@syncfusion/ej2-icons/styles/material.css';
@import '../node_modules/@syncfusion/ej2-inputs/styles/material.css';
@import '../node_modules/@syncfusion/ej2-popups/styles/material.css';
@import '../node_modules/@syncfusion/ej2-buttons/styles/material.css';
@import '../node_modules/@syncfusion/ej2-splitbuttons/styles/material.css';
@import '../node_modules/@syncfusion/ej2-navigations/styles/material.css';
@import '../node_modules/@syncfusion/ej2-layouts/styles/material.css';
@import '../node_modules/@syncfusion/ej2-File managers/styles/material.css';
@import "../node_modules/@syncfusion/ej2-react-filemanager/styles/material.css";
```

To know more about built-in themes and CSS reference for individual components, refer to the [themes](#) section.

Add Syncfusion React component

Follow the below steps to add the React File manager component to the Next.js project:

1. Define the File manager component in the **src/app/page.tsx** file, as shown below:

PAGE.TSX

```
'use client'
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject }
  from '@syncfusion/ej2-react-filemanager';
function App() {
  let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
  let ajaxSettings: object = {
    url: hostUrl + "api/FileManager/FileOperations",
    getImageUrl: hostUrl + "api/FileManager/GetImage"
  };
  return (
    <div className="control-section">
      <FileManagerComponent id="file" view="LargeIcons" ajaxSettings =
        {ajaxSettings} >
        <Inject services={[ NavigationPane, DetailsView, Toolbar]} />
      </FileManagerComponent>
    </div>
  );
}
export default App;
```

Run the application

To run the application, use the following command:

NPM

```
npm run dev
```

YARN

```
yarn run dev
```

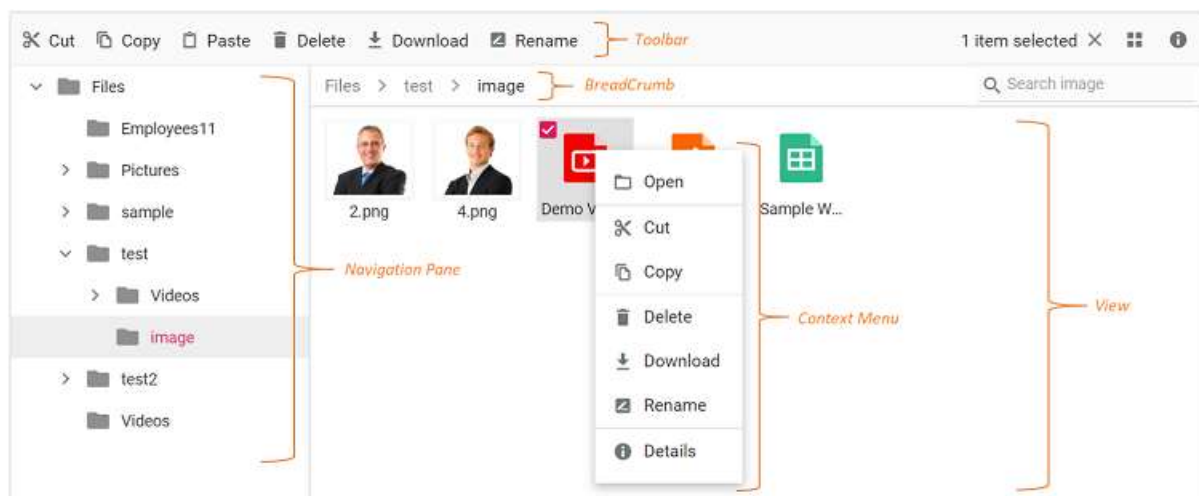
To learn more about the functionality of the File manager component, refer to the [documentation](#).

[View the NEXT.js File manager sample in the GitHub repository.](#)

User interface in React File manager component

The file manager UI is comprised of several sections like view, toolbar, breadcrumb, context menu, and so on. The UI of the file manager is enhanced with injectable modules like **Details View** for browsing files and folders in a grid, **Navigation Pane** for folder navigation, and **Toolbar** for file operations. The file manager with all feature modules have the following sections in its UI.

- [View](#) (Large Icons view for browsing files and folders),
- [Toolbar](#) (For direct access to file operations),
- [Navigation Pane](#) (For easy navigation between folders),
- [Breadcrumb](#) (For parent folder navigations),
- [Context Menu](#) (For accessing file operations).



The basic file manager is a light weight component with all the basic functions. The basic file manager have the following sections in its UI to browse files and folders and manage them with file operations.

- [View](#) (Large Icons view for browsing files and folders),
- [Breadcrumb](#) (For parent folder navigations),
- [Context Menu](#) (For accessing file operations).

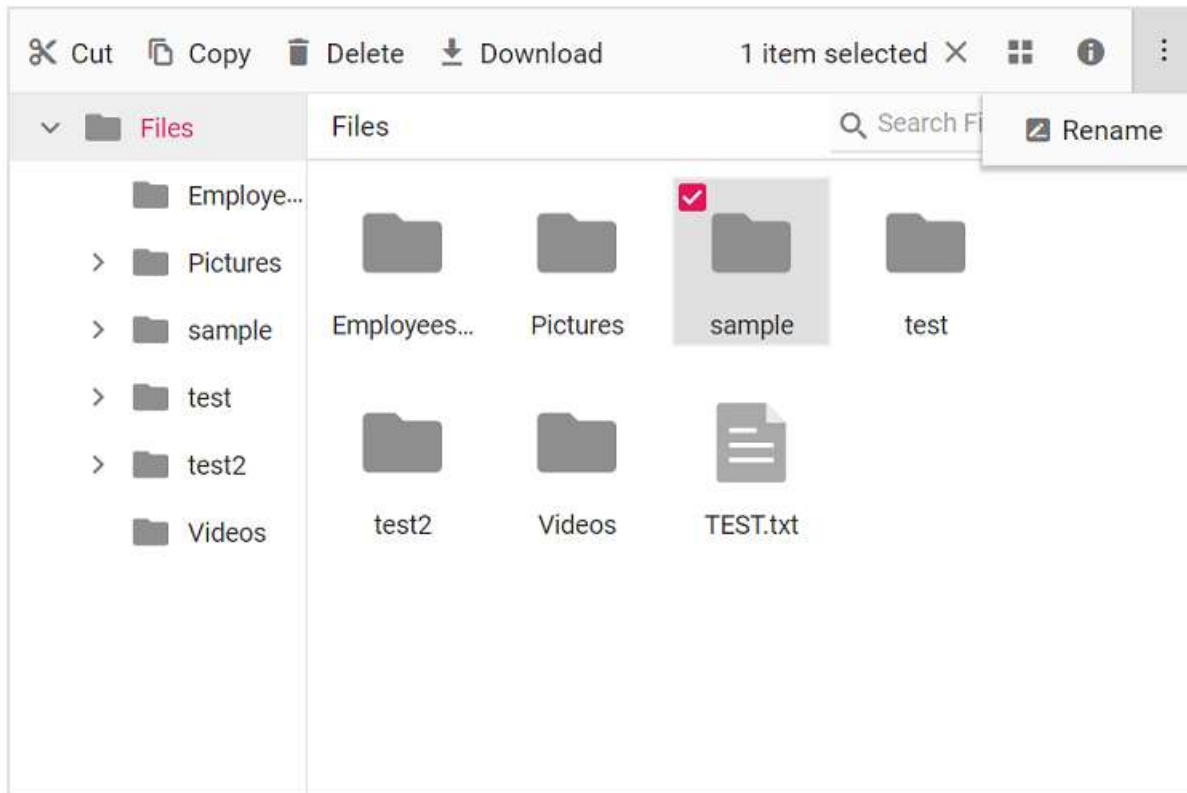


Toolbar

The toolbar is an injectable module in file manager. It should be injected before rendering the file manager to avail its functionality. It is present at the top of the file manager. Toolbar provides easy access to the file operations using different buttons.

If the toolbar items exceed the size of the toolbar, then the exceeding toolbar size will be moved to toolbar popup with a dropdown button at the end of toolbar.

**Refer [Toolbar](#) section in file operations to know more about the buttons present in toolbar*.*



Files and folders navigation

The file manager provides navigation between files and folders using the following two options.

- [Navigation Pane](#)
- [Breadcrumb](#)

Navigation pane

The navigation pane is an injectable module so, it should be injected before rendering the file manager to use its functionality.

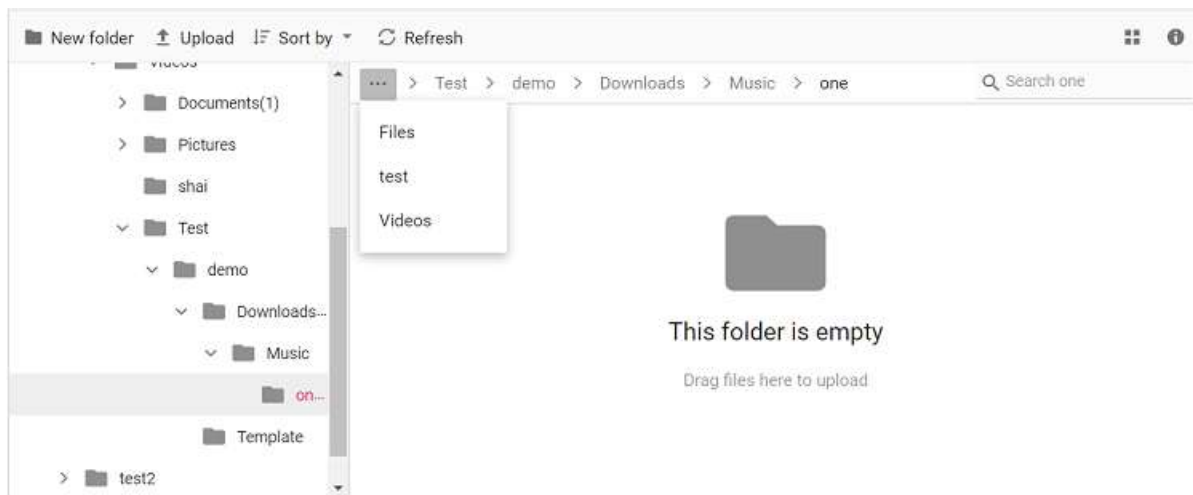
It displays the folder hierarchy of the file system and provides easy navigation to the desired folder. Using [navigationPaneSettings](#) minimum and maximum width of the navigation pane can be changed.

The navigation pane can be shown or hidden using the `visible` option in the [navigationPaneSettings](#).

BreadCrumb

The file manager provides breadcrumb for navigating to the parent folders. The breadcrumb in the file manager is responsible for resizing.

Whenever the path length exceeds the breadcrumb length, a dropdown button will be added at the starting of the breadcrumb to hold the parent folders adjacent to root.



View

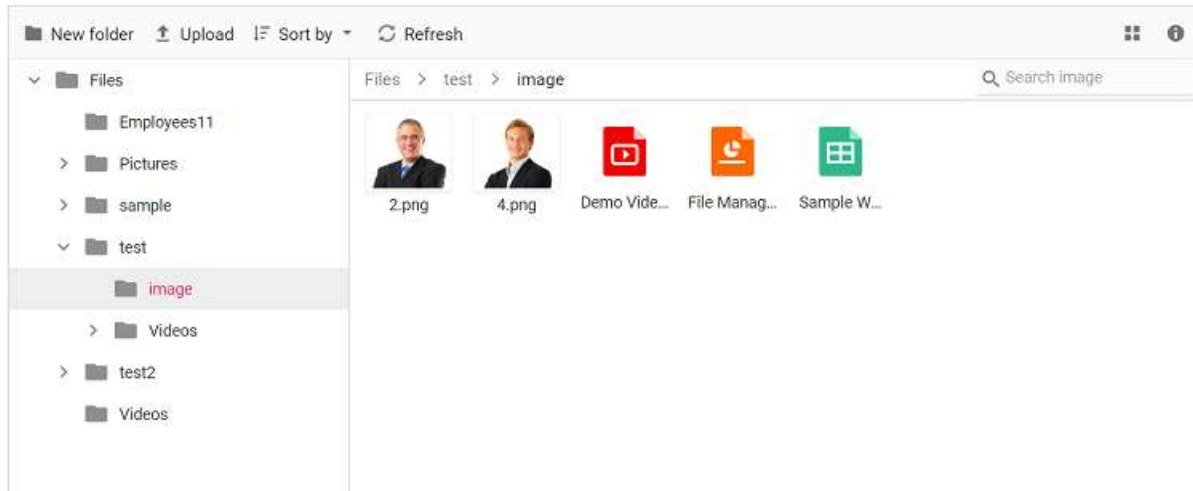
View is the section where the files and folders are displayed for the user to browse. The file manager has two types of views to display the files and folders.

- [Large Icons View](#)
- [Details View](#)

The `large icons view` is the default starting view in the file manager. The view can be changed by using the [toolbar](#) view button or by using the view menu in [context menu](#). The [view](#) API can also be used to change the initial view of the file manager.

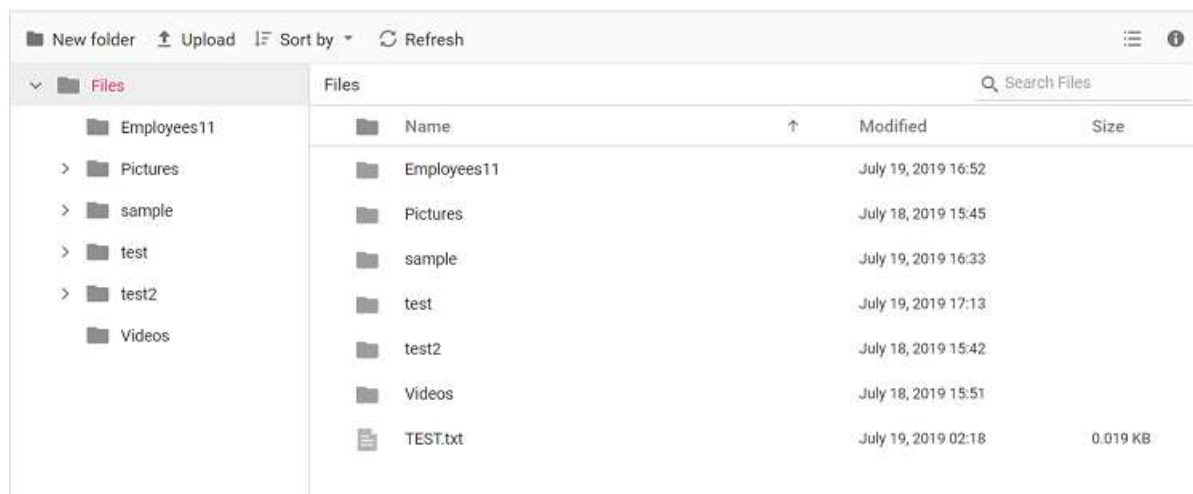
Large icons view

In the large icons view, the thumbnail icons will be shown in a larger size, which displays the data in a form that best suits their content. For image and video type files, a **preview** will be displayed. Extension thumbnails will be displayed for other type files.



Details view

Details view is an injectable module in the file manager so, it should be injected before rendering the file manager to avail its functionality. In the details view, the files are displayed in a sorted list order. This file list comprises of several columns of information about the files such as **Name**, **Date Modified**, **Type**, and **Size**. Each file has its own small icon representing the file type. Additional columns can be added using [detailsViewSettings](#) API. The details view allows you to perform sorting using column header.

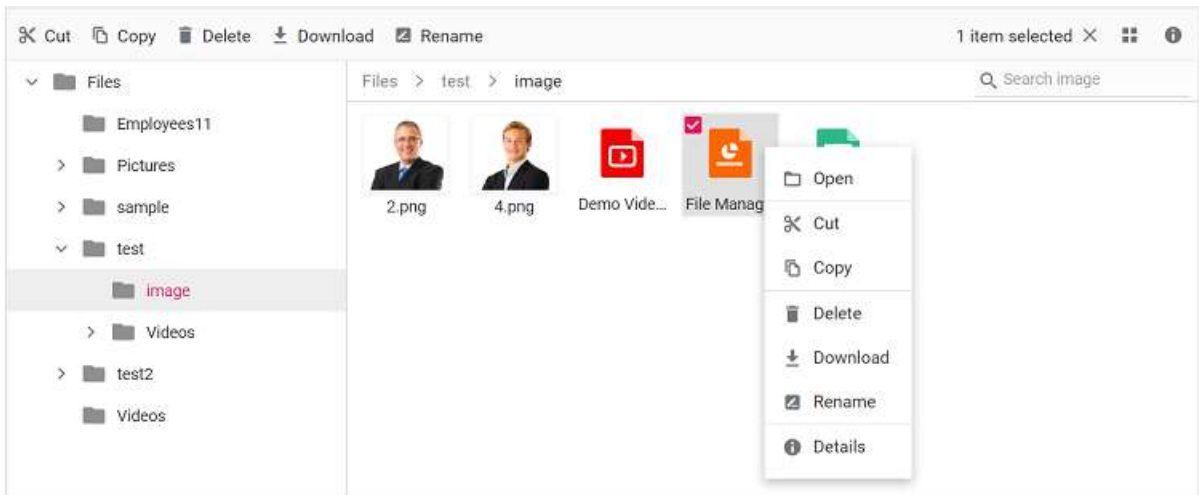


Context menu

The context menu appears on user interaction such as right-click. The file manager is provided with context menu support to perform list of file operations with the files and folders. Context menu appears with varying menu items based on the targets such as file, folder (including navigation pane folders), and layout (empty area in view).

Context menu can be customized using the [contextMenuSettings](#), [menuOpen](#), and [menuClick](#) events.

**Refer [Context Menu](#) section in file operations to know more about the menu items present in context menu*.*



File operations in React File manager component

The file manager component is used to browse, manage, and organize the files and folders in a file system through a web application. All basic file operations like creating a new folder, uploading and downloading of files in the file system, and deleting and renaming of existing files and folders are available in the file manager component. Additionally, previewing of image files is also provided in the file manager component.

The following table represents the basic operations available in the file manager and their corresponding functions.

Operation Name	Function
read	Read the details of files or folders available in the given path from the file system, to display the files for the user to browse the content.
create	Creates a new folder in the current path of the file system.
delete	Removes the file or folder from the file server.
rename	Rename the selected file or folder in the file system.
search	Searches for items matching the search string in the current and child directories.
details	Gets the detail of the selected item(s) from the file server.
copy	Copy the selected file or folder in the file system.
move	Cut the selected file or folder in the file server.
upload	Upload files to the current path or directory in the file system.
download	Downloads the file from the server and the multiple files can be downloaded as ZIP files.

The *CreateFolder*, *Remove*, and *Rename* actions will be reflected in the file manager only after the successful response from the server.

Folder Upload support

To perform the directory(folder) upload in File Manager, set [directoryUpload](#) as true within the uploadSettings property. The directory upload feature is supported for the following file service providers:

- Physical file service provider.
- Azure file service provider.
- NodeJS file service provider.
- Amazon file service provider.

In the following example, directory upload is enabled/disabled on DropDownButton selection.

APP.JSX

```
{% raw %}
import * as React from 'react';
import { FileManagerComponent, Inject, NavigationPane, DetailsView, Toolbar }
  from '@syncfusion/ej2-react-filemanager';
import { DropDownButton } from '@syncfusion/ej2-splitbuttons';
/**
 * File Manager folder upload sample
 */
function App() {
  let fmObj;
  let hostUrl = "https://ej2-aspcore-service.azurewebsites.net/";
  let items = [{ text: 'Folder' }, { text: 'Files' }];
  function onCreated(args) {
    document.getElementById('file_tb_upload').onclick = (e) => {
      e.stopPropagation();
    };
    let drpDownBtn = new DropDownButton({
      items: items,
      select: (args) => {
        if (args.item.text === 'Folder') {
          fmObj.uploadSettings.directoryUpload = true;
        }
        else {
          fmObj.uploadSettings.directoryUpload = false;
        }
        setTimeout(function () {
          let uploadBtn = document.querySelector('.e-file-select-
wrap button');
          uploadBtn.click();
        }, 100);
      },
    }, '#file_tb_upload');
  }
  return (<div>
    <div className="control-section">
      <FileManagerComponent id="file" ref={(scope) => { fmObj =
scope; }} ajaxSettings={{
        url: hostUrl + "api/FileManager/FileOperations",
        getImageUrl: hostUrl + "api/FileManager/GetImage",
        uploadUrl: hostUrl + 'api/FileManager/Upload',
        downloadUrl: hostUrl + 'api/FileManager/Download'
```

```

    }} created={onCreated.bind(this)}>
    <Inject services={[NavigationPane, DetailsView, Toolbar]}/>
    </FileManagerComponent>
  </div>
</div>);
}
export default App;
{% endraw %}

```

APP.TSX

```

{% raw %}
import * as React from 'react';
import { FileManagerComponent, Inject, NavigationPane, DetailsView, Toolbar }
from '@syncfusion/ej2-react-filemanager';
import { DropDownButton, ItemModel } from '@syncfusion/ej2-splitbuttons';
/**
 * File Manager folder upload sample
 */
function App() {
  let fmObj: FileManagerComponent;
  let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
  let items: ItemModel[] = [{ text: 'Folder' }, { text: 'Files' }];
  function onCreated(args) {
    (document.getElementById('file_tb_upload') as HTMLElement).onclick =
    (e) => {
      e.stopPropagation();
    };
    let drpDownBtn: DropDownButton = new DropDownButton({
      items: items,
      select: (args) => {
        if (args.item.text === 'Folder') {
          fmObj.uploadSettings.directoryUpload = true;
        } else {
          fmObj.uploadSettings.directoryUpload = false;
        }
        setTimeout(function () {
          let uploadBtn: HTMLElement = document.querySelector('.e-file-
select-wrap button');
          uploadBtn.click();
        }, 100);
      },
    },
    '#file_tb_upload'
  );
}
return(
  <div>
    <div className="control-section">
      <FileManagerComponent id="file" ref={(scope) => { fmObj =
scope; }} ajaxSettings = {{
        url: hostUrl + "api/FileManager/FileOperations",
        getImageUrl: hostUrl + "api/FileManager/GetImage",
        uploadUrl: hostUrl + 'api/FileManager/Upload',
        downloadUrl: hostUrl + 'api/FileManager/Download'
      }}
    </div>
  </div>
)

```

```

        created={onCreated.bind(this)}>
        <Inject services={[ NavigationPane, DetailsView, Toolbar]} />
        </FileManagerComponent>
      </div>
    </div>
  );
}
export default App;
{% endraw %}

```

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render( <App />, document.getElementById('root') as HTMLElement);

```

Physical file service provider

To achieve the directory upload in the physical file service provider, use the below code snippet in **IActionResult Upload** method in the **Controllers/FileManagerController.cs** file.

```

`ts
[Route("Upload")]
public IActionResult Upload(string path, IList<IFormFile> uploadFiles, string action)
{
    FileManagerResponse uploadResponse;
    foreach (var file in uploadFiles)
    {
        var folders = (file.FileName).Split('/');
        // checking the folder upload
        if (folders.Length > 1)
        {
            for (var i = 0; i < folders.Length - 1; i++)
            {
                string newDirectoryPath = Path.Combine(this.basePath + path, folders[i]);
                if (!Directory.Exists(newDirectoryPath))
                {

```

```

this.operation.ToCamelCase(this.operation.Create(path, folders[i]));
}
path += folders[i] + "/";
}
}
}

uploadResponse = operation.Upload(path, uploadFiles, action, null);
if (uploadResponse.Error != null)
{
    Response.Clear();
    Response.ContentType = "application/json; charset=utf-8";
    Response.StatusCode = Convert.ToInt32(uploadResponse.Error.Code);
    Response.HttpContext.Features.Get<IHttpResponseFeature>().ReasonPhrase =
        uploadResponse.Error.Message;
}
return Content("");
}
`ts

```

Refer to the [GitHub](#) for more details

And also add the below code snippet in `FileManagerResponse Upload` method in `Models/PhysicalFileProvider.cs` file.

```

`ts
string[] folders = name.Split('/');
string fileName = folders[folders.Length - 1];
var fullName = Path.Combine((this.contentRootPath + path), fileName);
`ts

```

Refer to the [GitHub](#) for more details.

Azure file service provider

For Azure file service provider, no customizations are needed for directory upload with server side and this will work with the below default upload method code.

Refer to the [GitHub](#) for more details.

NodeJS file service provider

To perform the directory upload in the NodeJS file service provider, use the below code snippet in `app.post` method in the `filesystem-server.js` file.

```

`ts

```

```
var folders = (req.body.filename).split('/');
var filepath = req.body.path;
var uploadedFileName = folders[folders.length - 1];
// checking the folder upload
if (folders.length > 1)
{
  for (var i = 0; i < folders.length - 1; i++)
  {
    var newDirectoryPath = path.join(contentRootPath + filepath, folders[i]);
    if (!fs.existsSync(newDirectoryPath)) {
      fs.mkdirSync(newDirectoryPath);
      (async () => {
        await FileManagerDirectoryContent(req, res, newDirectoryPath).then(data => {
          response = { files: data };
          response = JSON.stringify(response);
        });
      })();
    }
    filepath += folders[i] + "/";
  }
  fs.rename('./' + uploadedFileName, path.join(contentRootPath, filepath + uploadedFileName), function
  (err) {
    if (err) {
      if (err.code !== 'EBUSY') {
        errorValue.message = err.message;
        errorValue.code = err.code;
      }
    }
  });
}
```

Refer to the [GitHub](#) for more details.

Amazon file service provider

To perform the directory upload in the Amazon file service provider, use the below code snippet in `IActionResult AmazonS3Upload` method in the `Controllers/AmazonS3ProviderController.cs` file.

```

`ts
foreach (var file in uploadFiles)
{
    var folders = (file.FileName).Split('/');
    // checking the folder upload
    if (folders.Length > 1)
    {
        for (var i = 0; i < folders.Length - 1; i++)
        {
            if (!this.operation.checkFileExist(path, folders[i]))
            {
                this.operation.ToCamelCase(this.operation.Create(path, folders[i], dataObject));
            }
            path += folders[i] + "/";
        }
    }
}
`

```

Refer to the [GitHub](#) for more details.

And also add the below code snippet in `AsyncUpload` method in `Models/AmazonS3FileProvider.cs` file.

```

`ts
string[] folders = file.FileName.Split('/');
string name = folders[folders.Length - 1];
`

```

Refer to the [GitHub](#) for more details.

File operation request and response Parameters

The default parameters available in file operation request from the file manager and the corresponding response parameters required by the file manager are listed as follows.

Read

The following table represents the request parameters of *read* operations.

Parameter	Type	Default	Explanation
-----------	------	---------	-------------

action	String	read	Name of the file operation.	
path	String	-	Relative path from which the data has to be read.	
showHiddenItems	Boolean	-	Defines show or hide the hidden items.	
data	FileManagerDirectoryContent	-	Details about the current path (directory).	

**Refer [File request and response contents](#) for the contents of data*.*

Example:

```
`ts
{
  action: "read",
  path: "/",
  showHiddenItems: false,
  data: []
}
```

The following table represents the response parameters of *read* operations.

Parameter	Type	Default	Explanation
cwd	FileManagerDirectoryContent	-	Path (Current Working Directory) details.
files	FileManagerDirectoryContent[]	-	Details of files and folders present in given path or directory.
error	ErrorDetails	-	Error Details

**Refer [File request and response contents](#) for the contents of cwd, files, and error*.*

Example:

```
`ts
{
  cwd:
  {
    name:"Download",
    size:0,
    dateModified:"2019-02-28T03:48:19.8319708+00:00",
    dateCreated:"2019-02-27T17:36:15.812193+00:00",
    hasChild:false,
    isFile:false,
```

```
type:"",
filterPath:"//Download//"
},
files:[
{
name:"Sample Work Sheet.xlsx",
size:6172,
dateModified:"2019-02-27T17:23:50.9651206+00:00",
dateCreated:"2019-02-27T17:36:15.8151955+00:00",
hasChild:false,
isFile:true,
type:".xlsx",
filterPath:"//Download//"
}
],
error:null,
details:null
}
,
```

Create

The following table represents the request parameters of *create* operations.

Parameter	Type	Default	Explanation
----	----	----	----
action	String	create	Name of the file operation.
path	String	-	Relative path in which the folder has to be created.
name	String	-	Name of the folder to be created.
data	FileManagerDirectoryContent	-	Details about the current path (directory).

Refer [File request and response contents](#) for the contents of data

Example:

```
`ts
{
action: "create",
data: [
```

```
{
  dateCreated: "2019-02-27T17:36:15.6571949+00:00",
  dateModified: "2019-03-12T10:17:31.8505975+00:00",
  filterPath: "/",
  hasChild: true,
  isFile: false,
  name: files,
  nodeId: "fe_tree",
  size: 0,
  type: ""
},
{
  name: "Hello",
  path: "/"
},
{
  `
```

The following table represents the response parameters of *create* operations.

Parameter	Type	Default	Explanation
files	FileManagerDirectoryContent[]	-	Details of the created folder
error	ErrorDetails	-	Error Details

**Refer [File request and response contents](#) for the contents of files and error*.*

Example:

```
`ts
{
  cwd: null,
  files: [
    {
      dateCreated: "2019-03-15T10:25:05.3596171+00:00",
      dateModified: "2019-03-15T10:25:05.3596171+00:00",
      filterPath: null,
      hasChild: false,
      isFile: false,
    }
  ]
}
```

```
name: "New",
size: 0,
type: ""
},
details: null,
error: null
},
`
```

[Rename](#)

The following table represents the request parameters of *rename* operations.

Parameter	Type	Default	Explanation
----	----	----	----
action	String	rename	Name of the file operation.
path	String	-	Relative path in which the item is located.
name	String	-	Current name of the item to be renamed.
newname	String	-	New name for the item.
data	FileManagerDirectoryContent	-	Details of the item to be renamed.

**Refer [File request and response contents](#) for the contents of data*.*

Example:

```
`ts
{
  action: "rename",
  data: [
    {
      dateCreated: "2019-03-20T05:22:34.621Z",
      dateModified: "2019-03-20T08:45:56.000Z",
      filterPath: "/Pictures/Nature/",
      hasChild: false,
      iconClass: "e-fe-image",
      isFile: true,
      name: "seaviews.jpg",
      size: 95866,
```

```
type: ".jpg"
}
],
newname: "seaview.jpg",
name: "seaviews.jpg",
path: "/Pictures/Nature/"
}
`
```

The following table represents the response parameters of *rename* operations.

Parameter	Type	Default	Explanation
files	FileManagerDirectoryContent[]	-	Details of the renamed item.
error	ErrorDetails	-	Error Details

**Refer [File request and response contents](#) for the contents of files and error*.*

Example:

```
`ts
{
  cwd:null,
  files:[
    {
      name:"seaview.jpg",
      size:95866,
      dateModified:"2019-03-20T08:45:56+00:00",
      dateCreated:"2019-03-20T05:22:34.6214847+00:00",
      hasChild:false,
      isFile:true,
      type:".jpg",
      filterPath:"//Pictures//Nature//seaview.jpg"
    }
  ],
  error:null,
  details:null
}
```

`

Delete

The following table represents the request parameters of *delete* operations.

Parameter	Type	Default	Explanation
----	----	----	----
action	String	delete	Name of the file operation.
path	String	-	Relative path where the items to be deleted are located.
names	String[]	-	List of the items to be deleted.
data	FileManagerDirectoryContent	-	Details of the item to be deleted.

**Refer [File request and response contents](#) for the contents of data*.*

Example:

```
`ts
{
  action: "delete",
  path: "/Hello/",
  names: ["New"],
  data: []
}
```

`

The following table represents the response parameters of *delete* operations.

Parameter	Type	Default	Explanation
----	----	----	----
files	FileManagerDirectoryContent[]	-	Details about the deleted item(s).
error	ErrorDetails	-	Error Details

**Refer [File request and response contents](#) for the contents of files and error*.*

Example:

```
`ts
{
  cwd: null,
  details: null,
  error: null,
  files: [
    {
```

```
dateCreated: "2019-03-15T10:13:30.346309+00:00",
dateModified: "2019-03-15T10:13:30.346309+00:00",
filterPath: "/Hello/folder",
hasChild: true,
isFile: false,
name: "folder",
size: 0,
type: ""
}
]
}
`
```

Details

The following table represents the request parameters of *details* operations.

Parameter	Type	Default	Explanation
action	String	details	Name of the file operation.
path	String	-	Relative path where the items are located.
names	String[]	-	List of the items to get details.
data	FileManagerDirectoryContent	-	Details of the selected item.

**Refer [File request and response contents](#) for the contents of data*.*

Example:

```
`ts
{
  action: "details",
  path: "/FileContents/",
  names: ["All Files"],
  data: []
}
`
```

The following table represents the response parameters of *details* operations.

Parameter	Type	Default	Explanation
-----	-----	-----	-----

|details|FileManagerDirectoryContent|-|Details of the requested item(s).|

|error|ErrorDetails|-|Error Details|

**Refer [File request and response contents](#) for the contents of details and error*.*

Example:

```
`ts
{
  cwd:null,
  files:null,
  error:null,
  details:
  {
    name:"All Files",
    location:"//Files//FileContents//All Files",
    isFile:false,
    size:"679.8 KB",
    created:"3/8/2019 10:18:37 AM",
    modified:"3/8/2019 10:18:39 AM",
    multipleFiles:false
  }
}
```

[Search](#)

The following table represents the request parameters of *search* operations.

Parameter	Type	Default	Explanation
action	String	search	Name of the file operation.
path	String	-	Relative path to the directory where the files should be searched.
showHiddenItems	Boolean	-	Defines show or hide the hidden items.
caseSensitive	Boolean	-	Defines search is case sensitive or not.
searchString	String	-	String to be searched in the directory.
data	FileManagerDirectoryContent	-	Details of the searched item.

Example:

```
`ts
```



```
{
  action: "search",
  path: "/",
  searchString: "nature",
  showHiddenItems: false,
  caseSensitive: false,
  data: []
}
```

The following table represents the response parameters of *search* operations.

Parameter	Type	Default	Explanation
-----------	------	---------	-------------

----	----	----	----
------	------	------	------

cwd	FileManagerDirectoryContent	-	Path (Current Working Directory) details.
-----	-----------------------------	---	---

files	FileManagerDirectoryContent[]	-	Files and folders in the searched directory that matches the search input.
-------	-------------------------------	---	--

error	ErrorDetails	-	Error Details
-------	--------------	---	---------------

Refer [File request and response contents](#) for the contents of cwd, files and error.

Example:

```
`ts
{
  cwd:
  {
    name:files,
    size:0,
    dateModified:"2019-03-15T10:07:00.8658158+00:00",
    dateCreated:"2019-02-27T17:36:15.6571949+00:00",
    hasChild:true,
    isFile:false,
    type:"",
    filterPath:"/"
  },
  files:[
    {
```

```
name:"Nature",
size:0,
dateModified:"2019-03-08T10:18:42.9937708+00:00",
dateCreated:"2019-03-08T10:18:42.5907729+00:00",
hasChild:true,
isFile:false,
type:"",
filterPath:"//FileContents//Nature"
}
],
error:null,
details:null
}
`
```

Copy

The following table represents the request parameters of *copy* operations.

Parameter	Type	Default	Explanation
----	----	----	----
action	String	copy	Name of the file operation.
path	String	-	Relative path to the directory where the files should be copied.
names	String[]	-	List of files to be copied.
targetPath	String	-	Relative path where the items to be pasted are located.
data	FileManagerDirectoryContent	-	Details of the copied item.
renameFiles	String[]	-	Details of the renamed item.

Example:

```
`ts
{
  action: "copy",
  path: "/",
  names: ["6.png"],
  renameFiles: ["6.png"],
  targetPath: "/Videos/"
}
```

The following table represents the response parameters of *copy* operations.

Parameter	Type	Default	Explanation
----	----	----	----
cwd	FileManagerDirectoryContent	-	Path (Current Working Directory) details.
files	FileManagerDirectoryContent[]	-	Details of copied files or folders
error	ErrorDetails	-	Error Details

Refer [File request and response contents](#) for the contents of cwd, files and error.

Example:

```
`ts
{
  cwd:null,
  files:[
    {
      path:null,
      action:null,
      newName:null,
      names:null,
      name:"justin.mp4",
      size:0,
      previousName:"album.mp4",
      dateModified:"2019-06-21T06:58:32+00:00",
      dateCreated:"2019-06-24T04:22:14.6245618+00:00",
      hasChild:false,
      isFile:true,
      type:".mp4",
      id:null,
      filterPath:"/"
    }
  ],
  error:null,
  details:null
}
```

Move

The following table represents the request parameters of *move* operations.

Parameter	Type	Default	Explanation
action	String	move	Name of the file operation.
path	String	-	Relative path to the directory where the files should be copied.
names	String[]	-	List of files to be moved.
targetPath	String	-	Relative path where the items to be pasted are located.
data	FileManagerDirectoryContent	-	Details of the moved item.
renameFiles	String[]	-	Details of the renamed item.

Example:

```
`ts
{
  action: "move",
  path: "/",
  names: ["6.png"],
  renameFiles: ["6.png"],
  targetPath: "/Videos/"
}
```

The following table represents the response parameters of *copy* operations.

Parameter	Type	Default	Explanation
cwd	FileManagerDirectoryContent	-	Path (Current Working Directory) details.
files	FileManagerDirectoryContent[]	-	Details of cut files or folders
error	ErrorDetails	-	Error Details

Refer [File request and response contents](#) for the contents of cwd, files and error.

Example:

```
`ts
{
  cwd:null,
  files:[
```

```
{
  path:null,
  action:null,
  newName:null,
  names:null,
  name:"justin biber.mp4",
  size:0,
  previousName:"justin biber.mp4",
  dateModified:"2019-06-21T06:58:32+00:00",
  dateCreated:"2019-06-24T04:26:49.2690476+00:00",
  hasChild:false,
  isFile:true,
  type:".mp4",
  id:null,
  filterPath:"//Videos//"
}
],
error:null,
details:null
}
```

Upload

The following table represents the request parameters of *Upload* operations.

Parameter	Type	Default	Explanation
----	----	----	----
action	String	Save	Name of the file operation.
path	String	-	Relative path to the location where the file has to be uploaded.
uploadFiles	<code>IList<IFormFile></code>	-	File that are uploaded.

Example:

```
`ts
uploadFiles: (binary),
path: /,
action: Save,
```

```
data: {
  path:null,
  action:null,
  newName:null,
  names:null,
  name:"Downloads",
  size:0,
  previousName:null,
  dateModified:"2019-07-22T11:23:46.7153977 00:00",
  dateCreated:"2019-07-22T11:26:13.9047229 00:00",
  hasChild:false,
  isFile:false,
  type:"",
  id:null,
  filterPath:"/",
  targetPath:null,
  renameFiles:null,
  uploadFiles:null,
  caseSensitive:false,
  searchString:null,
  showHiddenItems:false,
  fmiconClass:null,
  fmid:"fetree1",
  fmpId:null,
  fmselected:false,
  fmicon:null,
  data:null,
  targetData:null,
  permission:null
}
```

The upload response is an empty string.

Download

The following table represents the request parameters of *download* operations.

Parameter	Type	Default	Explanation
action	String	download	Name of the file operation
path	String	-	Relative path to location where the files to download are present.
names	String[]	-	Name list of the items to be downloaded.
data	FileManagerDirectoryContent	-	Details of the download item.

Example:

```
`ts
{
  action:"download",
  path:"/",
  names:["1.png"],
  data:[
    {
      path:null,
      action:null,
      newName:null,
      names:null,
      name:"1.png",
      size:49792,
      previousName:null,
      dateModified:"2019-07-22T12:15:45.0972405+00:00",
      dateCreated:"2019-07-22T12:15:45.0816042+00:00",
      hasChild:false,
      isFile:true,
      type:".png",
      id:null,
      filterPath:"/",
      targetPath:null,
      renameFiles:null,
      uploadFiles:null,
```

```

caseSensitive:false,
searchString:null,
showHiddenItems:false,
fmiconClass:"e-fe-image",
fmid:null,
fmpld:null,
fmselected:false,
fmicon:null,
data:null,
targetData:null,
permission:null,
fmcreated:"2019-07-22T12:15:45.081Z",
fmmodified:"2019-07-22T12:15:45.097Z",
fmimageUrl:"https://ej2-aspcore-service.azurewebsites.net/api/FileManager/GetImage?path=/1.png",
fmimageAttr:
{
  alt:"1.png"
},
fmhtmlAttr:
{
  class:"e-large-icon",
  title:"1.png"
}
]
}
,

```

Downloads the requested items from the file server in response.

GetImage

The following table represents the request parameters of *GetImage* operations.

Parameter	Type	Default	Explanation
path	String	-	Relative path to the image file

Return the image as a file stream in response.

The request from the file manager can be customized using the `beforeSend` event. Additional information can be passed to the file manager in file operation response and can be used in customization.

File request and response contents

The following table represents the contents of *data*, *cwd*, and *files* in the file manager request and response.

Parameter	Type	Default	Explanation
----	----	----	----
name	String	-	File name
dateCreated	String	-	Date in which file was created (UTC Date string).
dateModified	String	-	Date in which file was last modified (UTC Date string).
filterPath	String	-	Relative path to the file or folder.
hasChild	Boolean	-	Defines this folder has any child folder or not.
isFile	Boolean	-	Say whether the item is file or folder.
size	Number	-	File size
type	String	-	File extension

The following table represents the contents of *error* in the file manager request and response.

Parameter	Type	Default	Explanation
----	----	----	----
code	String	-	Error code
message	String	-	Error message
fileExists	String[]	-	List of duplicate file names

The following table represents the contents of *details* in the file manager request and response.

Parameter	Type	Default	Explanation
----	----	----	----
name	String	-	File name
dateCreated	String	-	Date in which file was created (UTC Date string).
dateModified	String	-	Date in which file was last modified (UTC Date string).
filterPath	String	-	Relative path to the file or folder.
hasChild	Boolean	-	Defines this folder has any child folder or not.
isFile	Boolean	-	Say whether the item is file or folder.
size	Number	-	File size
type	String	-	File extension

|multipleFiles| Boolean| -| Say whether the details are about single file or multiple files. |

Action Buttons

The file manager has several menu buttons to access the file operations. The list of menu buttons available in the file manager is given in the following table.

|Menu Button| Behaviour|

|----|----|

|SortBy| Opens the sub menu to choose the sorting order and sorting parameter. |

|View| Opens the sub menu to choose the View. |

|Open| Navigates to the selected folder. Opens the preview for image files. |

|Refresh| Initiates the read operation for the current directory and displays the updated directory content. |

|NewFolder| Opens the new folder dialog box to receive the name for the new folder. |

|Rename| Opens the rename dialog box to receive the new name for the selected item. |

|Delete| Opens the delete dialog box to confirm the removal of the selected items from the file system. |

|Upload| Opens the upload box to select the items to upload to the file system. |

|Download| Downloads the selected item(s). |

|Details| Get details about the selected items and display them in details dialog box. |

|SelectAll| Selects all the files and folders displayed in the view section. |

The action menu buttons are present in the toolbar and context menu. The toolbar contains the buttons based on the selected items count, while the context menu will appear with a list based on the target.

Toolbar

The toolbar can be divided into two sections as right and left. Whenever the toolbar buttons exceed the size, the buttons present in the left section of the toolbar will be moved to the toolbar popup.

The following table provides the toolbar buttons that appear based on the selection.

<!-- markdownlint-disable MD033 -->

Selected Items Count	Left section	Right section
0 (none of the item)	<i>SortBy</i> Refresh <i>NewFolder</i> Upload	<i>View</i> Details
1 (single item selected)	<i>Delete</i> Download* Rename	<i>Selected items count</i> View* Details
>1 (multiple selection)	<i>Delete</i> Download	<i>Selected items count</i> View* Details

Context menu

The following table provides the default context menu item and the corresponding target areas.

<!-- markdownlint-disable MD033 -->

Menu Name	Menu Items	Target
Layout	<i>SortBy View Refresh NewFolder Upload Details* Select all</i>	<i>Empty space in the view section (details view and large icon view area). Empty folder content.</i>
Folders	<i>Open Delete Rename Downloads* Details</i>	<i>* Folders in treeview, details view, and large icon view.</i>
Files	<i>Open Delete Rename Downloads* Details</i>	<i>* Files in details view and large icon view.</i>

Views in React File manager component

View is the section where the files and folders are displayed for the user to browse. The [view](#) API can also be used to change the initial view of the file manager.

The file manager has two types of [views](#) to display the files and folders.

- [Largelcons View](#)
- [Details View](#)

Largelcons View

By Default, File Manager is rendered with largeicons view. The following example demonstrate this.

APP.JSX

```
{% raw %}
import { DetailsView, FileManagerComponent, Inject, NavigationPane, Toolbar
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
  let fileObj;
  let hostUrl = "https://ej2-aspcore-service.azurewebsites.net/";
  return (<div>
    <div className="control-section">
      <FileManagerComponent ref={s => (fileObj = s)} id="file"
      ajaxSettings={{
        downloadUrl: hostUrl + 'api/FileManager/Download',
        getImageUrl: hostUrl + "api/FileManager/GetImage",
        uploadUrl: hostUrl + 'api/FileManager/Upload',
        url: hostUrl + "api/FileManager/FileOperations"
      }}>
        <Inject services={[NavigationPane, DetailsView, Toolbar]}/>
      </FileManagerComponent>
    </div>
  </div>);
}
export default App;
{% endraw %}
```

APP.TSX

```
{% raw %}
```

```
import { DetailsView, FileManagerComponent, Inject, NavigationPane, Toolbar
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
  let fileObj: FileManagerComponent;
  let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
  return (
    <div>
      <div className="control-section">
        <FileManagerComponent ref={ s => (fileObj = s as
FileManagerComponent)} id="file"
          ajaxSettings = {{
            downloadUrl: hostUrl + 'api/FileManager/Download',
            getImageUrl: hostUrl + "api/FileManager/GetImage",
            uploadUrl: hostUrl + 'api/FileManager/Upload',
            url: hostUrl + "api/FileManager/FileOperations"
          }} >
          <Inject services={[ NavigationPane, DetailsView, Toolbar]} />
        </FileManagerComponent>
      </div>
    </div>
  );
}
export default App;{% endraw %}
```

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render( <App />, document.getElementById('root') as HTMLElement);
```

Details View

Details view is an injectable module in the file manager so, it should be injected before rendering the file manager to avail its functionality. The default appearance of the file manager can be changed from largeicons to details view by using the [view](#) property. The following example demonstrate the file manager with details view.

APP.JSX

```
{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Inject, Toolbar
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
  let fileObj;
  let hostUrl = "https://ej2-aspcore-service.azurewebsites.net/";
```

```

    return (<div>
      <div className="control-section">
        <FileManagerComponent ref={s => (fileObj = s)} id="file"
view="Details" ajaxSettings={{
          downloadUrl: hostUrl + 'api/FileManager/Download',
          getImageUrl: hostUrl + "api/FileManager/GetImage",
          uploadUrl: hostUrl + 'api/FileManager/Upload',
          url: hostUrl + "api/FileManager/FileOperations"
        }}>
          <Inject services={[NavigationPane, DetailsView, Toolbar]}/>
        </FileManagerComponent>
      </div>
    </div>);
  }
  export default App;
  {% endraw %}

```

APP.TSX

```

{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Inject, Toolbar
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
  let fileObj: FileManagerComponent;
  let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
  return (
    <div>
      <div className="control-section">
        <FileManagerComponent ref={ s => (fileObj = s as
FileManagerComponent)} id="file" view="Details"
          ajaxSettings = {{
            downloadUrl: hostUrl + 'api/FileManager/Download',
            getImageUrl: hostUrl + "api/FileManager/GetImage",
            uploadUrl: hostUrl + 'api/FileManager/Upload',
            url: hostUrl + "api/FileManager/FileOperations"
          }} >
          <Inject services={[ NavigationPane, DetailsView, Toolbar]} />
        </FileManagerComponent>
      </div>
    </div>
  );
}
export default App;{% endraw %}

```

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';

```

```
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render( <App />, document.getElementById('root') as HTMLElement);
```

Customization in React File manager component

The file manager component allows customizing its functionalities like, context menu, searching, uploading, toolbar using APIs. Given below are some of the functionalities that can be customized in the File Manager,

- [Context menu customization](#)
- [Details view customization](#)
- [Navigation pane customization](#)
- [Show/Hide file extension](#)
- [Show/Hide hidden items](#)
- [Show/Hide thumbnail images in large icons view](#)
- [Toolbar customization](#)
- [Upload customization](#)
- [Tooltip customization](#)

Context menu customization

The context menu settings like, items to be displayed on files, folders and layout click and visibility can be customized using [contextMenuSettings](#) property.

APP.JSX

```
{% raw %}
import { DetailsView, FileManagerComponent, Inject, NavigationPane, Toolbar
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
  let fileObj;
  let hostUrl = "https://ej2-aspcore-service.azurewebsites.net/";
  return (<div>
    <div className="control-section">
      <FileManagerComponent ref={s => (fileObj = s)} id="file"
view="Details" ajaxSettings={{
        downloadUrl: hostUrl + 'api/FileManager/Download',
        getImageUrl: hostUrl + "api/FileManager/GetImage",
        uploadUrl: hostUrl + 'api/FileManager/Upload',
        url: hostUrl + "api/FileManager/FileOperations"
      }} contextMenuSettings={{
        file: ['Open', '|', 'Details'],
        folder: ['Open', '|', 'Details'],
        layout: ['SortBy', 'View', 'Refresh', '|', 'Details', '|']
      }}>
        <Inject services={[NavigationPane, DetailsView, Toolbar]}>
          </FileManagerComponent>
        </div>
      </div>);
}
export default App;
{% endraw %}
```

APP.TSX

```
{% raw %}
import { DetailsView, FileManagerComponent, Inject, NavigationPane, Toolbar
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
  let fileObj: FileManagerComponent;
  let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
  return (
    <div>
      <div className="control-section">
        <FileManagerComponent ref={ s => (fileObj = s as
FileManagerComponent)} id="file" view="Details"
          ajaxSettings = {{
            downloadUrl: hostUrl + 'api/FileManager/Download',
            getImageUrl: hostUrl + "api/FileManager/GetImage",
            uploadUrl: hostUrl + 'api/FileManager/Upload',
            url: hostUrl + "api/FileManager/FileOperations"
          }}
          contextMenuSettings = {{
            file: ['Open', '|', 'Details'],
            folder: ['Open', '|', 'Details'],
            layout: ['SortBy', 'View', 'Refresh', '|', 'Details', '|']
          }} >
          <Inject services={[ NavigationPane, DetailsView, Toolbar]} />
        </FileManagerComponent>
      </div>
    </div>
  );
}
export default App;{% endraw %}
```

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render( <App />, document.getElementById('root') as HTMLElement);
```

Details view customization

The details view settings like, column width, header text, template for each field can be customized using [detailsViewSettings](#) property.

APP.JSX

```
{% raw %}
```

```

import { DetailsView, FileManagerComponent, Inject, NavigationPane, Toolbar
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
  let hostUrl = "https://ej2-aspcore-service.azurewebsites.net/";
  return (<div className="control-section">
    <FileManagerComponent id="file" view="Details" ajaxSettings={{
      downloadUrl: hostUrl + 'api/FileManager/Download',
      getImageUrl: hostUrl + "api/FileManager/GetImage",
      uploadUrl: hostUrl + 'api/FileManager/Upload',
      url: hostUrl + "api/FileManager/FileOperations"
    }} detailsViewSettings={{
      columns: [
        { field: 'name', headerText: 'File Name', minWidth: 120,
width: 'auto', customAttributes: { class: 'e-fe-grid-name' }, template:
'${name}' },
        { field: 'size', headerText: 'File Size', minWidth: 50,
width: '110', template: '${size}' },
        { field: '_fm_modified', headerText: 'Date Modified',
minWidth: 50, width: '190' }
      ]
    }}>
    <Inject services={[NavigationPane, DetailsView, Toolbar]}/>
    </FileManagerComponent>
  </div>);
}
export default App;
{% endraw %}

```

APP.TSX

```

{% raw %}
import { DetailsView, FileManagerComponent, Inject, NavigationPane, Toolbar
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
  let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
  return (
    <div className="control-section">
      <FileManagerComponent id="file" view="Details" ajaxSettings = {{
        downloadUrl: hostUrl + 'api/FileManager/Download',
        getImageUrl: hostUrl + "api/FileManager/GetImage",
        uploadUrl: hostUrl + 'api/FileManager/Upload',
        url: hostUrl + "api/FileManager/FileOperations"
      }}
      detailsViewSettings ={
        {
          columns : [
            {field: 'name', headerText: 'File Name', minWidth: 120, width:
'auto', customAttributes: { class: 'e-fe-grid-name' },template: '${name}'},
            {field: 'size', headerText: 'File Size',minWidth: 50, width:
'110', template: '${size}'},
            { field: '_fm_modified', headerText: 'Date Modified',minWidth:
50, width: '190' }
          ]
        }
      }
    >
  )
}

```



```

    }>
    <Inject services={[ NavigationPane, DetailsView, Toolbar]} />
  </FileManagerComponent>
</div>
);
}
export default App;{% endraw %}

```

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render( <App />, document.getElementById('root') as HTMLElement);

```

Navigation pane customization

The navigation pane settings like, minimum and maximum width and visibility can be customized using [navigationPaneSettings](#) property.

APP.JSX

```

{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
  let hostUrl = "https://ej2-aspcore-service.azurewebsites.net/";
  return (<div className="control-section">
    <FileManagerComponent id="file" view="LargeIcons" ajaxSettings={{
      downloadUrl: hostUrl + 'api/FileManager/Download',
      getImageUrl: hostUrl + "api/FileManager/GetImage",
      uploadUrl: hostUrl + 'api/FileManager/Upload',
      url: hostUrl + "api/FileManager/FileOperations"
    }} navigationPaneSettings={{ maxWidth: '850px', minWidth: '140px',
visible: true }}>
      <Inject services={[NavigationPane, DetailsView, Toolbar]} />
    </FileManagerComponent>
  </div>);
}
export default App;
{% endraw %}

```

APP.TSX

```

{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject
} from '@syncfusion/ej2-react-filemanager';

```

```
import * as React from 'react';
function App() {
  let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
  return (
    <div className="control-section">
      <FileManagerComponent id="file" view="LargeIcons" ajaxSettings = {{
        downloadUrl: hostUrl + 'api/FileManager/Download',
        getImageUrl: hostUrl + "api/FileManager/GetImage",
        uploadUrl: hostUrl + 'api/FileManager/Upload',
        url: hostUrl + "api/FileManager/FileOperations"
      }} navigationPaneSettings={{ maxWidth: '850px', minWidth:
'140px', visible: true }} >
        <Inject services={[ NavigationPane, DetailsView, Toolbar]} />
      </FileManagerComponent>
    </div>
  );
}
export default App;{% endraw %}
```

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render( <App />, document.getElementById('root') as HTMLElement);
```

Show/Hide file extension

The file extensions are displayed in the File Manager by default. This can be hidden by disabling the [showFileExtension](#) property.

In File Manager [fileLoad](#) and [fileOpen](#) events are triggered before the file/folder is rendered and before the file/folder is opened respectively. These events can be utilized to perform operations before a file/folder is rendered or opened.

APP.JSX

```
{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Inject, Toolbar
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
  let hostUrl = "https://ej2-aspcore-service.azurewebsites.net/";
  function onBeforeFileLoad(args) {
    console.log(args.fileDetails.name + " is loading");
  }
  function onBeforeFileOpen(args) {
    console.log(args.fileDetails.name + " is opened");
  }
}
```

```

    return (<div className="control-section">
      <FileManagerComponent id="file" view="LargeIcons"
showFileExtension={false} ajaxSettings={{
        downloadUrl: hostUrl + 'api/FileManager/Download',
        getImageUrl: hostUrl + "api/FileManager/GetImage",
        uploadUrl: hostUrl + 'api/FileManager/Upload',
        url: hostUrl + "api/FileManager/FileOperations"
      }} fileLoad={onBeforeFileLoad.bind(this)}
fileOpen={onBeforeFileOpen.bind(this)}>
        <Inject services={[NavigationPane, DetailsView, Toolbar]}/>
      </FileManagerComponent>
    </div>);
  }
  export default App;
  {% endraw %}

```

APP.TSX

```

{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Inject, Toolbar
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
  let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
  function onBeforeFileLoad(args: any) {
    console.log(args.fileDetails.name + " is loading");
  }
  function onBeforeFileOpen(args: any) {
    console.log(args.fileDetails.name + " is opened");
  }
  return (
    <div className="control-section">
      <FileManagerComponent id="file" view="LargeIcons"
showFileExtension={false} ajaxSettings = {{
        downloadUrl: hostUrl + 'api/FileManager/Download',
        getImageUrl: hostUrl + "api/FileManager/GetImage",
        uploadUrl: hostUrl + 'api/FileManager/Upload',
        url: hostUrl + "api/FileManager/FileOperations"
      }} fileLoad={onBeforeFileLoad.bind(this)}
fileOpen={onBeforeFileOpen.bind(this)} >
        <Inject services={[ NavigationPane, DetailsView, Toolbar]} />
      </FileManagerComponent>
    </div>
  );
}
export default App;{% endraw %}

```

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render( <App />, document.getElementById('root') as HTMLElement);
```

Show/Hide hidden items

The File Manager provides support to show/hide the hidden items by enabling/disabling the [showHiddenItems](#) property.

APP.JSX

```
{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
    let hostUrl = "https://ej2-aspcore-service.azurewebsites.net/";
    return (<div className="control-section">
        <FileManagerComponent id="file" view="LargeIcons"
showHiddenItems={true} ajaxSettings={{
            downloadUrl: hostUrl + 'api/FileManager/Download',
            getImageUrl: hostUrl + "api/FileManager/GetImage",
            uploadUrl: hostUrl + 'api/FileManager/Upload',
            url: hostUrl + "api/FileManager/FileOperations"
        }}>
            <Inject services={[NavigationPane, DetailsView, Toolbar]} />
        </FileManagerComponent>
    </div>);
}
export default App;
{% endraw %}
```

APP.TSX

```
{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
    let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
    return (
        <div className="control-section">
            <FileManagerComponent id="file" view="LargeIcons"
showHiddenItems={true} ajaxSettings = {{
                downloadUrl: hostUrl + 'api/FileManager/Download',
                getImageUrl: hostUrl + "api/FileManager/GetImage",
                uploadUrl: hostUrl + 'api/FileManager/Upload',
                url: hostUrl + "api/FileManager/FileOperations"
            }} >
                <Inject services={[ NavigationPane, DetailsView, Toolbar]} />
            </FileManagerComponent>
        </div>
    );
}
export default App;{% endraw %}
```

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render( <App />, document.getElementById('root') as HTMLElement);
```

Show/Hide thumbnail images in large icons view

The thumbnail images are displayed in the File Manager's large icons view by default. This can be hidden by disabling the [showThumbnail](#) property.

APP.JSX

```
{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Inject, Toolbar
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
    let hostUrl = "https://ej2-aspcore-service.azurewebsites.net/";
    return (<div className="control-section">
        <FileManagerComponent id="file" view="LargeIcons"
showThumbnail={false} ajaxSettings={{
            downloadUrl: hostUrl + 'api/FileManager/Download',
            getImageUrl: hostUrl + "api/FileManager/GetImage",
            uploadUrl: hostUrl + 'api/FileManager/Upload',
            url: hostUrl + "api/FileManager/FileOperations"
        }}>
            <Inject services={[NavigationPane, DetailsView, Toolbar]} />
        </FileManagerComponent>
    </div>);
}
export default App;
{% endraw %}
```

APP.TSX

```
{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Inject, Toolbar
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
    let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
    return (
        <div className="control-section">
            <FileManagerComponent id="file" view="LargeIcons"
showThumbnail={false} ajaxSettings = {{

```

```

        downloadUrl: hostUrl + 'api/FileManager/Download',
        getImageUrl: hostUrl + "api/FileManager/GetImage",
        uploadUrl: hostUrl + 'api/FileManager/Upload',
        url: hostUrl + "api/FileManager/FileOperations"
    }} >
    <Inject services={[ NavigationPane, DetailsView, Toolbar]} />
  </FileManagerComponent>
</div>
);
}
export default App;{% endraw %}

```

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render( <App />, document.getElementById('root') as HTMLElement);

```

Toolbar customization

The toolbar settings like, items to be displayed in toolbar and visibility can be customized using [toolbarSettings](#) property.

APP.JSX

```

{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
    let fileObj;
    let hostUrl = "https://ej2-aspcore-service.azurewebsites.net/";
    return <div>
        <div className="control-section">
            <FileManagerComponent ref={s => (fileObj = s)} id="file"
view="Details" ajaxSettings={{
                downloadUrl: hostUrl + 'api/FileManager/Download',
                getImageUrl: hostUrl + "api/FileManager/GetImage",
                uploadUrl: hostUrl + 'api/FileManager/Upload',
                url: hostUrl + "api/FileManager/FileOperations"
            }} toolbarSettings={{ items: ['NewFolder', 'Refresh', 'View',
'Details'] }}>
                <Inject services={[NavigationPane, DetailsView, Toolbar]} />
            </FileManagerComponent>
        </div>
    </div>);
}
export default App;

```

```
{% endraw %}
```

APP.TSX

```
{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
  let fileObj: FileManagerComponent;
  let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
  return (
    <div>
      <div className="control-section">
        <FileManagerComponent ref={ s => (fileObj = s as
FileManagerComponent)} id="file" view="Details"
          ajaxSettings = {{
            downloadUrl: hostUrl + 'api/FileManager/Download',
            getImageUrl: hostUrl + "api/FileManager/GetImage",
            uploadUrl: hostUrl + 'api/FileManager/Upload',
            url: hostUrl + "api/FileManager/FileOperations"
          }}
          toolbarSettings = {
            { items: ['NewFolder', 'Refresh', 'View', 'Details']}
          } >
          <Inject services={[ NavigationPane, DetailsView, Toolbar]}
        />
      </FileManagerComponent>
    </div>
  </div>
  );
}
export default App;{% endraw %}
```

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render( <App />, document.getElementById('root') as HTMLElement);
```

See Also

- [How to add new items or customize default items](#)

Upload customization

The upload settings like, minimum and maximum file size and enabling auto upload can be customized using [uploadSettings](#) property.

APP.JSX

```
{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
  let hostUrl = "https://ej2-aspcore-service.azurewebsites.net/";
  return (<div className="control-section">
    <FileManagerComponent id="file" view="LargeIcons" ajaxSettings={{
      downloadUrl: hostUrl + 'api/FileManager/Download',
      getImageUrl: hostUrl + "api/FileManager/GetImage",
      uploadUrl: hostUrl + 'api/FileManager/Upload',
      url: hostUrl + "api/FileManager/FileOperations"
    }} uploadSettings={{ maxFileSize: 233332, minFileSize: 120,
autoUpload: true }}>
      <Inject services={[NavigationPane, DetailsView, Toolbar]} />
    </FileManagerComponent>
  </div>);
}
export default App;
{% endraw %}
```

APP.TSX

```
{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
  let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";

  return (
    <div className="control-section">
      <FileManagerComponent id="file" view="LargeIcons" ajaxSettings = {{
        downloadUrl: hostUrl + 'api/FileManager/Download',
        getImageUrl: hostUrl + "api/FileManager/GetImage",
        uploadUrl: hostUrl + 'api/FileManager/Upload',
        url: hostUrl + "api/FileManager/FileOperations"
      }} uploadSettings={{ maxFileSize: 233332, minFileSize: 120,
autoUpload: true }}>
        <Inject services={[ NavigationPane, DetailsView, Toolbar]} />
      </FileManagerComponent>
    </div>
  );
}
export default App;{% endraw %}
```

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
```



```
import App from './App';
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render( <App />, document.getElementById('root') as HTMLElement);
```

Tooltip customization

The tooltip value can be customized by adding extra content to the title of the toolbar, navigation pane, details view and large icons of the file manager element.

APP.JSX

```
{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
import { getValue, select } from '@syncfusion/ej2-base';
import { TooltipComponent } from '@syncfusion/ej2-react-popups';
function App() {
    let fileObj;
    let tooltipObj;
    let hostUrl = "https://ej2-aspcore-service.azurewebsites.net/";
    function onTooltipBeforeRender(args) {
        const buttonId = select('button', args.target).id;
        let description = '';
        switch (buttonId) {
            case fileObj.element.id + '_tb_newfolder':
                description = 'Create a new folder';
                break;
            case fileObj.element.id + '_tb_upload':
                description = 'Upload new files';
                break;
            case fileObj.element.id + '_tb_cut':
                description = 'Cut files and folders from the current
location';
                break;
            case fileObj.element.id + '_tb_copy':
                description = 'Copy files and folders from the current
location';
                break;
            case fileObj.element.id + '_tb_paste':
                description = 'Paste files and folders in the current
location';
                break;
            case fileObj.element.id + '_tb_delete':
                description = 'Delete selected files and folders';
                break;
            case fileObj.element.id + '_tb_download':
                description = 'Download selected files and folders';
                break;
            case fileObj.element.id + '_tb_rename':
```

```

        description = 'Rename selected file or folder';
        break;
    case fileObj.element.id + '_tb_sortby':
        description = 'Change the file sorting order';
        break;
    case fileObj.element.id + '_tb_refresh':
        description = 'Refresh the current location';
        break;
    case fileObj.element.id + '_tb_selection':
        description = 'Following items are currently selected: ';
        for (let i = 0; i < fileObj.selectedItems.length; i++) {
            description = description + '</br>' +
fileObj.selectedItems[i];
        }
        break;
    case fileObj.element.id + '_tb_view':
        description = 'Switch the layout view';
        break;
    case fileObj.element.id + '_tb_details':
        description = 'Get the details of the seletced items';
        break;
    default:
        description = '';
        break;
    }
    tooltipObj.content = args.target.getAttribute('title') + '</br>' +
description;
}
function fileLoad(args) {
    const target = args.element;
    if (args.module === 'DetailsView') {
        const element = select('[title]', args.element);
        const title = getValue('name', args.fileDetails) +
            '\n' + getValue('dateModified', args.fileDetails);
        element.setAttribute('title', title);
    }
    else if (args.module === 'LargeIconsView') {
        const title = getValue('name', args.fileDetails) +
            '\n' + getValue('dateModified', args.fileDetails);
        target.setAttribute('title', title);
    }
}
return (<TooltipComponent id="template-tootip" ref={s => (tooltipObj =
s)} target="#file_toolbar [title]" beforeRender={onTooltipBeforeRender}>
    <div className="filemanager-container">
        { /* Filemanager element */ }
        <FileManagerComponent ref={s => (fileObj = s)} id="file"
ajaxSettings={{
    downloadUrl: hostUrl + 'api/FileManager/Download',
    getImageUrl: hostUrl + 'api/FileManager/GetImage',
    uploadUrl: hostUrl + 'api/FileManager/Upload',
    url: hostUrl + 'api/FileManager/FileOperations'
}} fileLoad={fileLoad}>
            <Inject services={[NavigationPane, DetailsView,
Toolbar]}/>
        </FileManagerComponent>
    </div>

```

```

        </TooltipComponent>);
    }
    export default App;
    {% endraw %}

```

APP.TSX

```

{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
import { getValue, select } from '@syncfusion/ej2-base';
import { TooltipComponent, TooltipEventArgs } from '@syncfusion/ej2-react-
popups';
function App() {
    let fileObj: FileManagerComponent;
    let tooltipObj: TooltipComponent;
    let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
    function onTooltipBeforeRender(args: TooltipEventArgs): void {
        const buttonId: string = select('button', args.target).id;
        let description: string = '';
        switch (buttonId) {
            case fileObj.element.id + '_tb_newfolder':
                description = 'Create a new folder';
                break;
            case fileObj.element.id + '_tb_upload':
                description = 'Upload new files';
                break;
            case fileObj.element.id + '_tb_cut':
                description = 'Cut files and folders from the current
location';
                break;
            case fileObj.element.id + '_tb_copy':
                description = 'Copy files and folders from the current
location';
                break;
            case fileObj.element.id + '_tb_paste':
                description = 'Paste files and folders in the current
location';
                break;
            case fileObj.element.id + '_tb_delete':
                description = 'Delete selected files and folders';
                break;
            case fileObj.element.id + '_tb_download':
                description = 'Download selected files and folders';
                break;
            case fileObj.element.id + '_tb_rename':
                description = 'Rename selected file or folder';
                break;
            case fileObj.element.id + '_tb_sortby':
                description = 'Change the file sorting order';
                break;
            case fileObj.element.id + '_tb_refresh':
                description = 'Refresh the current location';
                break;
            case fileObj.element.id + '_tb_selection':

```

```

        description = 'Following items are currently selected: ';
        for (let i: number = 0; i < fileObj.selectedItems.length;
i++) {
            description = description + '</br>' +
fileObj.selectedItems[i];
        }
        break;
    case fileObj.element.id + '_tb_view':
        description = 'Switch the layout view';
        break;
    case fileObj.element.id + '_tb_details':
        description = 'Get the details of the seletced items';
        break;
    default:
        description = '';
        break;
    }
    tooltipObj.content = args.target.getAttribute('title') + '</br>' +
description;
}
function fileLoad(args: any): void {
    const target: Element = args.element;
    if (args.module==='DetailsView') {
        const element: Element = select('[title]', args.element);
        const title: string = getValue('name', args.fileDetails) +
'\n' + getValue('dateModified', args.fileDetails);
        element.setAttribute('title', title);
    } else if (args.module==='LargeIconsView') {
        const title: string = getValue('name', args.fileDetails) +
'\n' + getValue('dateModified', args.fileDetails);
        target.setAttribute('title', title);
    }
}
return (
    <TooltipComponent id="template-tootip" ref={ s => (tooltipObj = s as
TooltipComponent)} target="#file_toolbar [title]"
beforeRender={onTooltipBeforeRender} >
        <div className="filemanager-container">
            { /* Filemanager element */ }
            <FileManagerComponent ref={ s => (fileObj = s as
FileManagerComponent)} id="file"
                ajaxSettings = {{
                    downloadUrl: hostUrl + 'api/FileManager/Download',
                    getImageUrl: hostUrl + 'api/FileManager/GetImage',
                    uploadUrl: hostUrl + 'api/FileManager/Upload',
                    url: hostUrl + 'api/FileManager/FileOperations'
                }} fileLoad={fileLoad}>
                <Inject services={[ NavigationPane, DetailsView,
Toolbar]} />
            </FileManagerComponent>
        </div>
    </TooltipComponent>
);
}
export default App;
{% endraw %}

```

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render( <App />, document.getElementById('root') as HTMLElement);
```

Multiple selection in React File manager component

The file manager allows you to select multiple files by enabling the [allowMultiSelection](#) property (enabled by default). The multiple selection can be done by pressing the Ctrl key or Shift key and selecting the files. The check box can also be used to do multiple selection. Ctrl + A can be used to select all files in the current directory. The [fileSelect](#) event will be triggered when the items of file manager control is selected or unselected.

APP.JSX

```
{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
    let hostUrl = "https://ej2-aspcore-service.azurewebsites.net/";
    function onFileSelect(args) {
        console.log(args.fileDetails.name + " has been " + args.action +
"ed");
    }
    return (<div className="control-section">
        <FileManagerComponent id="file" view="Details"
allowMultiSelection={true} ajaxSettings={{
            downloadUrl: hostUrl + 'api/FileManager/Download',
            getImageUrl: hostUrl + "api/FileManager/GetImage",
            uploadUrl: hostUrl + 'api/FileManager/Upload',
            url: hostUrl + "api/FileManager/FileOperations"
        }} fileSelect={onFileSelect.bind(this)}>
            <Inject services={[NavigationPane, DetailsView, Toolbar]} />
        </FileManagerComponent>
    </div>);
}
export default App;
{% endraw %}
```

APP.TSX

```
{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject
} from '@syncfusion/ej2-react-filemanager';
```

```
import * as React from 'react';
function App() {
  let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
  function onFileSelect(args: any) {
    console.log(args.fileDetails.name + " has been " + args.action + "ed");
  }
  return (
    <div className="control-section">
      <FileManagerComponent id="file" view="Details"
allowMultiSelection={true} ajaxSettings = {{
        downloadUrl: hostUrl + 'api/FileManager/Download',
        getImageUrl: hostUrl + "api/FileManager/GetImage",
        uploadUrl: hostUrl + 'api/FileManager/Upload',
        url: hostUrl + "api/FileManager/FileOperations"
      }} fileSelect={onFileSelect.bind(this)} >
        <Inject services={[ NavigationPane, DetailsView, Toolbar]} />
      </FileManagerComponent>
    </div>
  );
}
export default App;{% endraw %}
```

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render( <App />, document.getElementById('root') as HTMLElement);
```

Note: The File Manager has support to select files and folders initially or dynamically by specifying their names in [selectedItems](#) property.

Drag and drop in React File manager component

The file manager allows files or folders to be moved from one folder to another by using the [allowDragAndDrop](#) property. It also supports uploading a file by dragging it from Windows Explorer to FileManager control. You can enable or disable this support by using the [allowDragAndDrop](#) property of file manager.

The event triggered in drag and drop support are

- [fileDragStart](#) - Triggers when the file/folder dragging is started.
- [fileDragging](#) - Triggers while dragging the file/folder.
- [fileDragStop](#) - Triggers when the file/folder is about to be dropped at the target.
- [fileDropped](#) - Triggers when the file/folder is dropped.

APP.JSX

```
{% raw %}
import { DetailsView, FileManagerComponent, Inject, NavigationPane, Toolbar
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
  let fileObj;
  let hostUrl = "https://ej2-aspcore-service.azurewebsites.net/";
  // File Manager Drag start event
  function onFileDragStart(args) {
    console.log("File Drag Start");
  }
  // File Manager Drag start event
  function onFileDragStop(args) {
    console.log("File Drag Stop");
  }
  // File Manager Drag start event
  function onFileDragging(args) {
    console.log("File Dragging");
  }
  // File Manager Drag start event
  function onFileDropped(args) {
    console.log("File Dropped");
  }
  return (<div>
    <div className="control-section">
      <FileManagerComponent ref={s => (fileObj = s)} id="file"
allowDragAndDrop={true} ajaxSettings={{
        downloadUrl: hostUrl + 'api/FileManager/Download',
        getImageUrl: hostUrl + "api/FileManager/GetImage",
        uploadUrl: hostUrl + 'api/FileManager/Upload',
        url: hostUrl + "api/FileManager/FileOperations"
      }} fileDragStart={onFileDragStart.bind(this)}
fileDragStop={onFileDragStop.bind(this)}
fileDragging={onFileDragging.bind(this)}
fileDropped={onFileDropped.bind(this)}>
        <Inject services={[NavigationPane, DetailsView, Toolbar]}/>
      </FileManagerComponent>
    </div>
  </div>);
}
export default App;
{% endraw %}
```

APP.TSX

```
{% raw %}
import { DetailsView, FileManagerComponent, Inject, NavigationPane, Toolbar
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
  let fileObj: FileManagerComponent;
  let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
  // File Manager Drag start event
  function onFileDragStart(args: any) {
    console.log("File Drag Start");
  }
}
```

```

// File Manager Drag start event
function onFileDragStop(args: any) {
  console.log("File Drag Stop");
}
// File Manager Drag start event
function onFileDragging(args: any) {
  console.log("File Dragging");
}
// File Manager Drag start event
function onFileDropped(args: any) {
  console.log("File Dropped");
}
return (
  <div>
    <div className="control-section">
      <FileManagerComponent ref={ s => (fileObj = s as
FileManagerComponent)} id="file" allowDragAndDrop={true}
        ajaxSettings = {{
          downloadUrl: hostUrl + 'api/FileManager/Download',
          getImageUrl: hostUrl + "api/FileManager/GetImage",
          uploadUrl: hostUrl + 'api/FileManager/Upload',
          url: hostUrl + "api/FileManager/FileOperations"
        }} fileDragStart={onFileDragStart.bind(this)}
fileDragStop={onFileDragStop.bind(this)}
fileDragging={onFileDragging.bind(this)}
fileDropped={onFileDropped.bind(this)}>
        <Inject services={[ NavigationPane, DetailsView, Toolbar]} />
      </FileManagerComponent>
    </div>
  </div>
);
}
export default App;{% endraw %}

```

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render(<App />, document.getElementById('root') as HTMLElement);

```

File system provider in React File manager component

The file system provider allows the File Manager component to manage the files and folders in a physical or cloud-based file system. It provides the methods for performing various file actions like creating a new folder, copying and moving of files or folders, deleting, uploading, and downloading the files or folders in the file system.

The following file providers are added in Syncfusion EJ2 File Manager component.

- [ASP.NET Core file system provider](#)
- [ASP.NET MVC 5 file system provider](#)
- [ASP.NET Core Azure cloud file system Provider](#)
- [ASP.NET MVC 5 Azure cloud file system Provider](#)
- [ASP.NET Core Amazon S3 cloud file provider](#)
- [ASP.NET MVC Amazon S3 cloud file provider](#)
- [File Transfer Protocol file system provider](#)
- [SQL database file system provider](#)
- [NodeJS file system provider](#)
- [Google Drive file system provider](#)
- [Firebase Realtime Database file system provider](#)
- [IBM Cloud Object Storage provider](#)

ASP.NET Core file system provider

The ASP.NET Core file system provider allows the users to access and manage the physical file system. To get started, clone the [ej2-aspcore-file-provider](#) using the following command.

```
`ts
git clone https://github.com/SyncfusionExamples/ej2-aspcore-file-provider ej2-aspcore-file-provider
cd ej2-aspcore-file-provider
`
```

After cloning, just open the project in Visual Studio and restore the NuGet packages. Now, set the root directory of the physical file system in the FileManager controller.

After setting the root directory of the file system, just build and run the project. Now, the project will be hosted in `http://localhost:{port}` and just mapping the **ajaxSettings** property of the FileManager component to the appropriate controller methods allows to manage the files in the physical file system.

{% raw %}

```
`ts
// Initializing File Manager ASP.NET Core service.
<div>
<div className="control-section">
<FileManagerComponent id="file"
ajaxSettings = {{
// Replace the hosted port number in the place of "{port}"
url="http://localhost:{port}/api/FileManager/FileOperations",
downloadUrl="http://localhost:{port}/api/FileManager/Download",
uploadUrl="http://localhost:{port}/api/FileManager/Upload",
getImageUrl="http://localhost:{port}/api/FileManager/GetImage"
```

```

}} >
</FileManagerComponent>
</div>
</div>
`
{% endraw %}

```

Note: To learn more about file actions that can be performed with ASP.NET Core file system provider, refer to this [link](#)

ASP.NET MVC 5 file provider

The ASP.NET MVC5 file system provider allows the users to access and manage the physical file system. To get started, clone the [ej2-aspmvc-file-provider](#) using the following command.

```

`ts
git clone https://github.com/SyncfusionExamples/ej2-aspmvc-file-provider ej2-aspmvc-file-provider
cd ej2-aspmvc-file-provider
`

```

After cloning, just open the project in Visual Studio and restore the NuGet packages. Now, set the root directory of the physical file system in the FileManager controller using the Root Folder method.

After setting the root directory of the file system, just build and run the project. Now, the project will be hosted in `http://localhost:{port}` and just mapping the **ajaxSettings** property of the FileManager component to the appropriate controller methods allows to manage the files in the physical file system.

```

{% raw %}
`ts
// Initializing File Manager ASP.NET MVC service.
<div>
<div className="control-section">
<FileManagerComponent id="file"
ajaxSettings = {{
// Replace the hosted port number in the place of "{port}"
url="http://localhost:{port}/api/FileManager/FileOperations",
downloadUrl="http://localhost:{port}/api/FileManager/Download",
uploadUrl="http://localhost:{port}/api/FileManager/Upload",
getImageUrl="http://localhost:{port}/api/FileManager/GetImage"
}} >
</FileManagerComponent>
</div>

```

```
</div>
```

```
,
```

```
{% endraw %}
```

Note: To learn more about file actions that can be performed with ASP.NET MVC 5 file system provider, refer to this [link](#)

ASP.NET Core Azure cloud file system provider

In ASP.NET Core, Azure cloud file system provider allows the users to access and manage the blobs in the Azure blob storage. To get started, clone the [azure-aspcore-file-provider](#) using the following command

```
`ts
```

```
git clone https://github.com/SyncfusionExamples/azure-aspcore-file-provider azure-aspcore-file-provider
```

```
,
```

After cloning, just open the project in Visual Studio and restore the NuGet packages. Now, register the Azure storage by passing details like name, password, and blob name to the Register Azure method in the FileManager controller.

```
`ts
```

```
void RegisterAzure(string accountName, string accountKey, string blobName)
```

```
,
```

Then, set the blob container and the root blob directory by passing the corresponding URLs as parameters in the setBlobContainer method as follows.

```
`ts
```

```
void setBlobContainer(string blobPath, string filePath)
```

```
,
```

Note: Also, assign the same *blobPath URL* and *filePath URL* in [AzureFileOperations](#) and [AzureUpload](#) methods in the FileManager controller to determine the original path of the Azure blob.

After setting the blob container references, just build and run the project. Now, the project will be hosted in `http://localhost:{port}` and just mapping the **ajaxSettings** property of the FileManager component to the appropriate controller methods allows to manage the Azure blob storage.

```
{% raw %}
```

```
`ts
```

```
// Initializing File Manager Azure cloud file system service.
```

```
<div>
```

```
<div className="control-section">
```

```
<FileManagerComponent id="file"
```

```
ajaxSettings = {{
```

```
// Replace the hosted port number in the place of "{port}"
url="http://localhost:{port}/api/AzureProvider/AzureFileOperations",
downloadUrl="http://localhost:{port}/api/AzureProvider/AzureDownload",
uploadUrl="http://localhost:{port}/api/AzureProvider/AzureUpload",
getImageUrl="http://localhost:{port}/api/AzureProvider/AzureGetImage"
}} >
</FileManagerComponent>
</div>
</div>
`
{% endraw %}
```

NuGet: Additionally, we have created a [NuGet](#) package of **ASP.NET Core Azure file system provider**.

Please, use the following command to install the NuGet package in an application.

```
`ts
dotnet add package Syncfusion.EJ2.FileManager.AzureFileProvider.AspNet.Core
`
```

Note: To learn more about file actions that can be performed with ASP.NET Core Azure cloud file system Provider, refer to this [link](#)

ASP.NET MVC 5 Azure cloud file system provider

In ASP.NET MVC, Azure cloud file system provider allows the users to access and manage the blobs in the Azure blob storage. To get started, clone the [ej2-azure-aspmvc-file-provider](#) using the following command

```
`ts
git clone https://github.com/SyncfusionExamples/ej2-azure-aspmvc-file-provider ej2-azure-aspmvc-file-provider
`
```

After cloning, just open the project in Visual Studio and restore the NuGet packages. Now, register the Azure storage by passing details like name, password, and blob name to the Register Azure method in the FileManager controller.

```
`ts
void RegisterAzure(string accountName, string accountKey, string blobName)
`
```

Then, set the blob container and the root blob directory by passing the corresponding URLs as parameters in the **setBlobContainer** method as follows.

```
`ts
```

```
void setBlobContainer(string blobPath, string filePath)
```

```
,
```

Note: Also, assign the same *blobPath* URL and *filePath* URL in [AzureFileOperations](#) and [AzureUpload](#) methods in the FileManager controller to determine the original path of the Azure blob.

After setting the blob container references, just build and run the project. Now, the project will be hosted in `http://localhost:{port}` and just mapping the **ajaxSettings** property of the FileManager component to the appropriate controller methods allows to manage the Azure blob storage.

```
{% raw %}
```

```
`ts
```

```
// Initializing File Manager Azure cloud file system service.
```

```
<div>
```

```
<div className="control-section">
```

```
<FileManagerComponent id="file"
```

```
ajaxSettings = {{
```

```
// Replace the hosted port number in the place of "{port}"
```

```
url="http://localhost:{port}/AzureProvider/AzureFileOperations",
```

```
downloadUrl="http://localhost:{port}/AzureProvider/AzureDownload",
```

```
uploadUrl="http://localhost:{port}/AzureProvider/AzureUpload",
```

```
getImageUrl="http://localhost:{port}/AzureProvider/AzureGetImage"
```

```
}} >
```

```
</FileManagerComponent>
```

```
</div>
```

```
</div>
```

```
,
```

```
{% endraw %}
```

Note: To learn more about file actions that can be performed with ASP.NET MVC Azure cloud file system Provider, refer to this [link](#)

ASP.NET Core Amazon S3 cloud file provider

In ASP.NET Core, Amazon **S3** (*Simple Storage Service*) cloud file provider allows the users to access and manage a server hosted file system as collection of objects stored in the Amazon S3 Bucket. To get started, clone the [amazon-s3-aspcore-file-provider](#) using the following command

```
`ts
```

```
git clone https://github.com/SyncfusionExamples/amazon-s3-aspcore-file-provider.git amazon-s3-aspcore-file-provider.git
```

```
,
```

Note: To learn more about creating and configuring an Amazon S3 bucket, refer to this [link](#).

After cloning, open the project in Visual Studio and restore the NuGet packages. Now, register Amazon S3 client account details like *awsAccessKeyId*, *awsSecretKeyId* and *awsRegion* details in **RegisterAmazonS3** method in the FileManager controller to perform the file operations.

```
`ts
```

```
void RegisterAmazonS3(string bucketName, string awsAccessKeyId, string awsSecretAccessKey, string bucketRegion)
```

```
,
```

After registering the Amazon client account details, just build and run the project. Now, the project will be hosted in `http://localhost:{port}` and just mapping the **ajaxSettings** property of the FileManager component to the appropriate controller methods allows to manage the Amazon **S3** (*Simple Storage Service*) bucket's objects storage.

```
{% raw %}
```

```
`ts
```

```
// Initializing File Manager Amazon S3 cloud file system service.
```

```
<div>
```

```
<div className="control-section">
```

```
<FileManagerComponent id="file"
```

```
ajaxSettings = {{
```

```
// Replace the hosted port number in the place of "{port}"
```

```
url="http://localhost:{port}/api/AmazonS3Provider/AmazonS3FileOperations",
```

```
downloadUrl="http://localhost:{port}/api/AmazonS3Provider/AmazonS3Download",
```

```
uploadUrl="http://localhost:{port}/api/AmazonS3Provider/AmazonS3Upload",
```

```
getImageUrl="http://localhost:{port}/api/AmazonS3Provider/AmazonS3GetImage"
```

```
}} >
```

```
</FileManagerComponent>
```

```
</div>
```

```
</div>
```

```
,
```

```
{% endraw %}
```

Note: To learn more about the file actions that can be performed with Amazon S3 cloud file provider, refer to this [link](#)

ASP.NET MVC Amazon S3 cloud file provider

In ASP.NET MVC, Amazon **S3** (*Simple Storage Service*) cloud file provider allows the users to access and manage a server hosted files as collection of objects stored in the Amazon S3 Bucket. To get started, clone the [ej2-amazon-s3-aspmvc-file-provider](#) using the following command

```
`ts
```

```
git clone https://github.com/SyncfusionExamples/ej2-amazon-s3-aspmvc-file-provider.git ej2-amazon-s3-aspmvc-file-provider.git
```

```
`
```

Note: To learn more about creating and configuring an Amazon S3 bucket, refer to this [link](#).

After cloning, open the project in Visual Studio and restore the NuGet packages. Now, register Amazon S3 client account details like *awsAccessKeyId*, *awsSecretKeyId* and *awsRegion* details in **RegisterAmazonS3** method in the FileManager controller to perform the file operations.

```
`ts
```

```
void RegisterAmazonS3(string bucketName, string awsAccessKeyId, string awsSecretAccessKey, string bucketRegion)
```

```
`
```

After registering the Amazon client account details, just build and run the project. Now, the project will be hosted in `http://localhost:{port}` and just mapping the **ajaxSettings** property of the FileManager component to the appropriate controller methods allows to manage the Amazon **S3** (*Simple Storage Service*) bucket's objects storage.

```
{% raw %}
```

```
`ts
```

```
// Initializing File Manager Amazon S3 cloud file service.
```

```
<div>
```

```
<div className="control-section">
```

```
<FileManagerComponent id="file"
```

```
  ajaxSettings = {{
```

```
    // Replace the hosted port number in the place of "{port}"
```

```
    url="http://localhost:{port}/FileManager/FileOperations",
```

```
    downloadUrl="http://localhost:{port}/FileManager/Download",
```

```
    uploadUrl="http://localhost:{port}/FileManager/Upload",
```

```
    getImageUrl="http://localhost:{port}/FileManager/GetImage"
```

```
  }} >
```

```
</FileManagerComponent>
```

```
</div>
```

```
</div>
```

```
`
```

```
{% endraw %}
```

Note: To learn more about the file actions that can be performed with ASP.NET MVC Amazon S3 Cloud File Provider, refer to this [link](#)

File Transfer Protocol file system provider

In ASP.NET Core, File Transfer Protocol file system provider allows the users to access to the hosted file system as collection of objects stored in the file storage using File Transfer Protocol. To get started, clone the [ftp-aspcore-file-provider](#) using the following command

```
`ts
git clone https://github.com/SyncfusionExamples/ftp-aspcore-file-provider.git ftp-aspcore-file-
provider.git
`
```

After cloning, open the project in Visual Studio and restore the NuGet packages. Now, register File Transfer Protocol details like *hostName*, *userName* and *password* in **SetFTPConnection** method in the FileManager controller to perform the file operations.

```
`ts
void SetFTPConnection(string hostName, string userName, string password)
`
```

After registering the File Transfer Protocol details, just build and run the project. Now, the project will be hosted in `http://localhost:{port}` and just mapping the **ajaxSettings** property of the FileManager component to the appropriate controller methods allows you to manage the FTP's objects storage.

```
{% raw %}
`ts
// Initializing File Manager file transfer protocol file system service.
<div>
<div className="control-section">
<FileManagerComponent id="file"
ajaxSettings = {{
// Replace the hosted port number in the place of "{port}"
url="http://localhost:{port}/api/FTPProvider/FTPFileOperations",
downloadUrl="http://localhost:{port}/api/FTPProvider/FTPDownload",
uploadUrl="http://localhost:{port}/api/FTPProvider/FTPUpload",
getImageUrl="http://localhost:{port}/api/FTPProvider/FTPGetImage"
}} >
</FileManagerComponent>
</div>
</div>
`
```

```
{% endraw %}
```

Note: To learn more about the file actions that can be performed with File Transfer Protocol file system provider, refer to this [link](#)

SQL database file system provider

In ASP.NET Core, SQL database file system provider allows the users to manage the file system being maintained in a SQL database table. Unlike the other file system providers, the SQL database file system provider works on ID basis. Here, each file and folder have a unique ID based on which all the file operations will be performed. To get started, clone the [sql-server-database-aspcore-file-provider](#) using the following command.

```
`ts
<add name="FileExplorerConnection" connectionString="Data
Source=(LocalDB)\v11.0;AttachDbFilename=|DataDirectory|\FileManager.mdf;Integrated
Security=True;Trusted_Connection=true" />
```

After cloning, just open the project in Visual Studio and restore the NuGet packages. To establish the SQL server connection with the database file (for eg: FileManager.mdf), specify the connection string in the web config file as follows.

```
`ts
<add name="FileExplorerConnection" connectionString="Data
Source=(LocalDB)\v11.0;AttachDbFilename=|DataDirectory|\FileManager.mdf;Integrated
Security=True;Trusted_Connection=true" />
```

Then, make an entry for the connection string in `appsettings.json` file as follows.

```
`ts
"ConnectionStrings": {
  "FileManagerConnection": "Data
Source=(LocalDB)\\MSSQLLocalDB;AttachDbFilename=|DataDirectory|\\App_Data\\FileManager.mdf;In
tegrated Security=True;Connect Timeout=30"
}
```

Now, to configure the database connection, set the connection name, table name and root folder ID value by passing these values to the SetSQLConnection method.

```
`ts
void SetSQLConnection(string name, string tableName, string tableID)
```

Refer to this [FileManager.mdf](#), to learn about the pre-defined file system SQL database for the EJ2 File Manager.

After configuring the connection, just build and run the project. Now, the project will be hosted in `http://localhost:{port}` and just mapping the **ajaxSettings** property of the FileManager component to the appropriate controller methods allows to manage the files in the SQL database table.

```
{% raw %}
`ts
// Initializing File Manager with SQL Server Database service configuration.
<div>
<div className="control-section">
<FileManagerComponent id="file"
ajaxSettings = {{
// Replace the hosted port number in the place of "{port}"
url="http://localhost:{port}/api/SQLProvider/SQLFileOperations",
downloadUrl="http://localhost:{port}/api/SQLProvider/SQLDownload",
uploadUrl="http://localhost:{port}/api/SQLProvider/SQLUpload",
getImageUrl="http://localhost:{port}/api/SQLProvider/SQLGetImage"
}} >
</FileManagerComponent>
</div>
</div>
`
{% endraw %}
```

Note: To learn more about file actions that can be performed with SQL database file system provider, refer to this [link](#)

NodeJS file system provider

The NodeJS file system provider allows the users to manage the files and folders in a physical file system. It provides methods for performing all basic file operations like creating a folder, copy, move, delete, and download files and folders in the file system. We can use of the NodeJS file system provider either by installing the [ej2-filemanager-node-filesystem](#) package or by cloning the [file system provider](#) from the GitHub.

Using ej2-filemanager-node-filesystem package

- Install the ej2-filemanager-node-filesystem package by running the below command.

```
`ts
npm install @syncfusion/ej2-filemanager-node-filesystem
`
```

- After installing the package, navigate to the ej2-filemanager-node-filesystem package folder within the node-modules
- Run the command **npm install** command.

Cloning the ej2-filemanager-node-filesystem from GitHub

- Clone the ej2-filemanager-node-filesystem using the following command.

```
`ts
```

```
git clone https://github.com/SyncfusionExamples/ej2-filemanager-node-filesystem.git node-filesystem-provider
```

```
`
```

- After cloning, open the root folder and run the command **npm install** command.

After installing the packages, set the root folder directory of the physical file system in the package JSON under scripts sections as follows.

```
`ts
```

```
"start": "node filesystem-server.js -d D:/Projects"
```

```
`
```

Note: By default, the root directory will be configured to set **C:/Users** as the root directory.

To set the port in which the project to be hosted and the root directory of the file system. Run the following command.

```
`ts
```

```
set PORT=3000 && node filesystem-server.js -d D:/Projects
```

```
`
```

Note: By default, the service will run **8090** port.

Now, just mapping the **ajaxSettings** property of the FileManager component to the appropriate file operation methods in the filesystem-server.js file will allow to manage the physical file system with NodeJS file system provider.

```
{% raw %}
```

```
`ts
```

```
// File Manager sample with nodejs service.
```

```
<div>
```

```
<div className="control-section">
```

```
<FileManagerComponent id="file"
```

```
  ajaxSettings = {{
```

```
    url="http://localhost:{port}/",
```

```

downloadUrl="http://localhost:{port}/Download",
uploadUrl="http://localhost:{port}/Upload",
getImageUrl="http://localhost:{port}/GetImage"
}} >
</FileManagerComponent>
</div>
</div>
`
{% endraw %}

```

Note: To learn more about file actions that can be performed with NodeJS file system provider, refer to this [link](#).

Google Drive file system provider

In ASP.NET Core, Google Drive file system provider allows the users to manage the files and folders in a Google Drive account. The Google Drive file system provider works on ID basis where each file and folder have a unique ID. To get started, clone the [google-drive-aspcore-file-provider](#) using the following command.

```

`ts
git clone https://github.com/SyncfusionExamples/google-drive-aspcore-file-provider google-drive-aspcore-file-provider
cd google-drive-aspcore-file-provider
`

```

Google Drive file system provider use the [Google Drive APIs](#) to read the file in the file system and uses the [OAuth 2.0](#) protocol for authentication and authorization. To authenticate from the client end, obtain OAuth 2.0 client credentials from the [Google API Console](#). To learn more about generating the client credentials from the from Google API Console, refer to this [link](#).

After generating the client secret data, copy the JSON data to the following specified JSON files in the cloned location.

- EJ2GoogleDriveFileProvider > credentials > client_secret.json
- GoogleOAuth2.0Base > credentials > client_secret.json

After updating the credentials, just build and run the project. Now, the project will be hosted in `http://localhost:{port}`, and it will ask to log on to the Gmail account created the client secret credentials. Then, provide permission to access the Google Drive files by clicking the allow access button in the page. Now, just mapping the **ajaxSettings** property of the FileManager component to the appropriate controller methods will allows to manage the files from the Google Drive.

```

{% raw %}
`ts
// File Manager sample with Google Drive service.

```

```
<div>
<div className="control-section">
<FileManagerComponent id="file"
ajaxSettings = {{
// Replace the hosted port number in the place of "{port}"
url="http://localhost:{port}/api/GoogleDriveProvider/GoogleDriveFileOperations",
downloadUrl="http://localhost:{port}/api/GoogleDriveProvider/GoogleDriveDownload",
uploadUrl="http://localhost:{port}/api/GoogleDriveProvider/GoogleDriveUpload",
getImageUrl="http://localhost:{port}/api/GoogleDriveProvider/GoogleDriveGetImage"
}} >
</FileManagerComponent>
</div>
</div>
`

{% endraw %}
```

Note: To learn more about file actions that can be performed with Google Drive file system provider, refer to this [link](#)

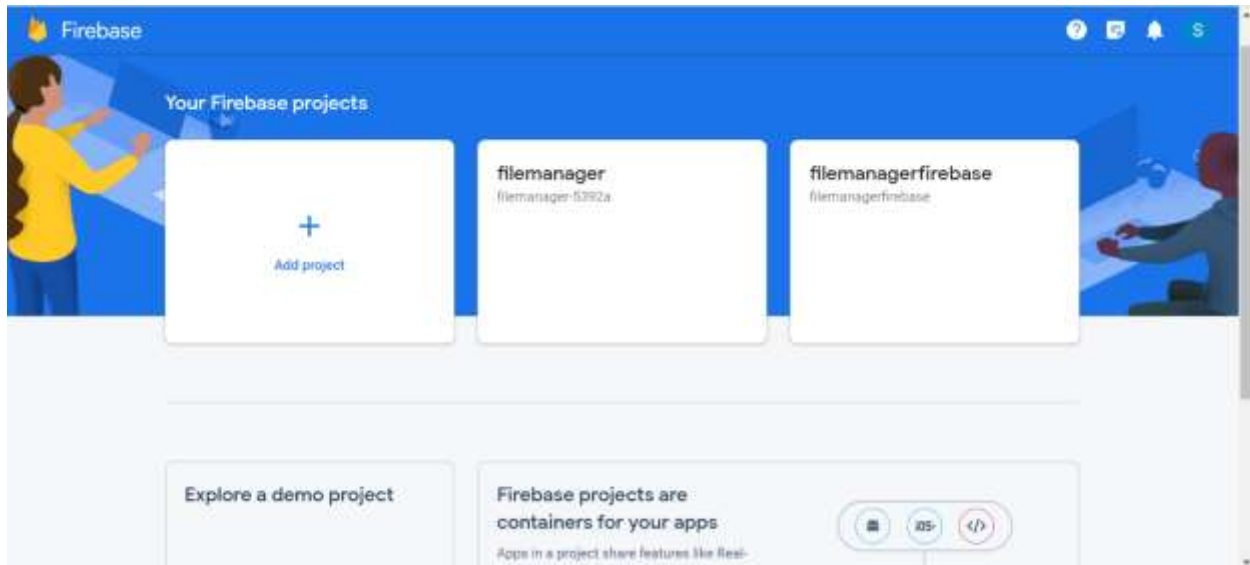
Firebase Realtime Database file system provider

The [Firebase Realtime Database](#) file system provider in **ASP.NET Core** provides the efficient way to store the File Manager file system in a cloud database as JSON representation.

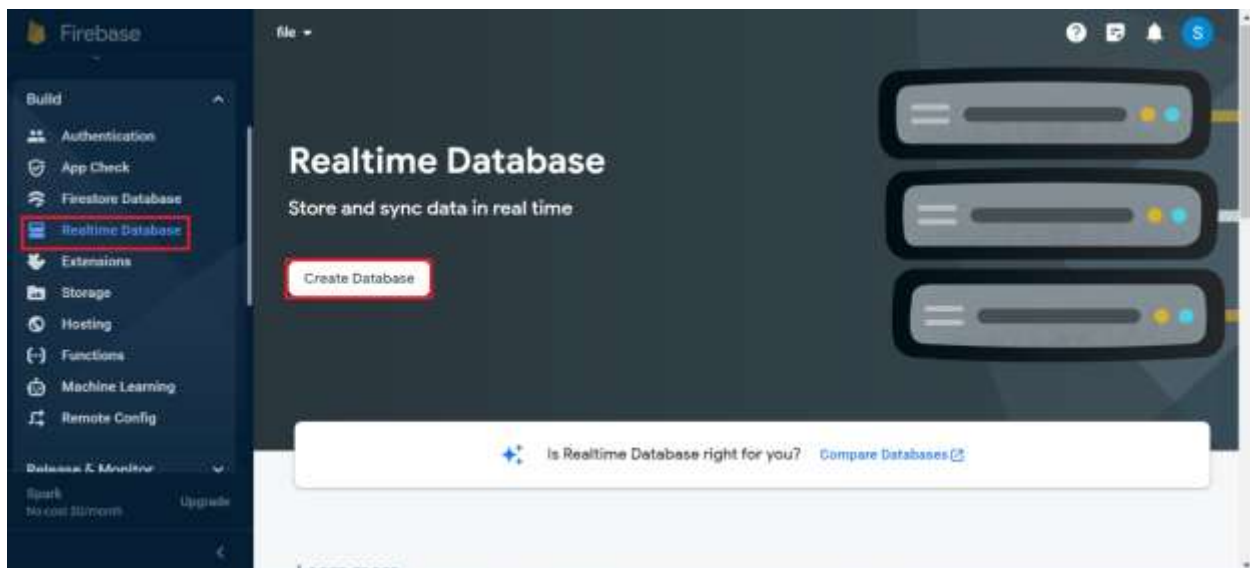
Generate Secret access key from service account

Follow the given steps to generate the secret access key:

- To access the Firebase console, please click on this [link](#). Once you have accessed the console, you can create a new project by filling in the necessary fields and clicking on the relevant buttons.



- Within the Firebase console, navigate to the **Build** tab. Under this tab, select the option for **Realtime Database**. From there, you can create a new database by clicking on the **Create Database** button.



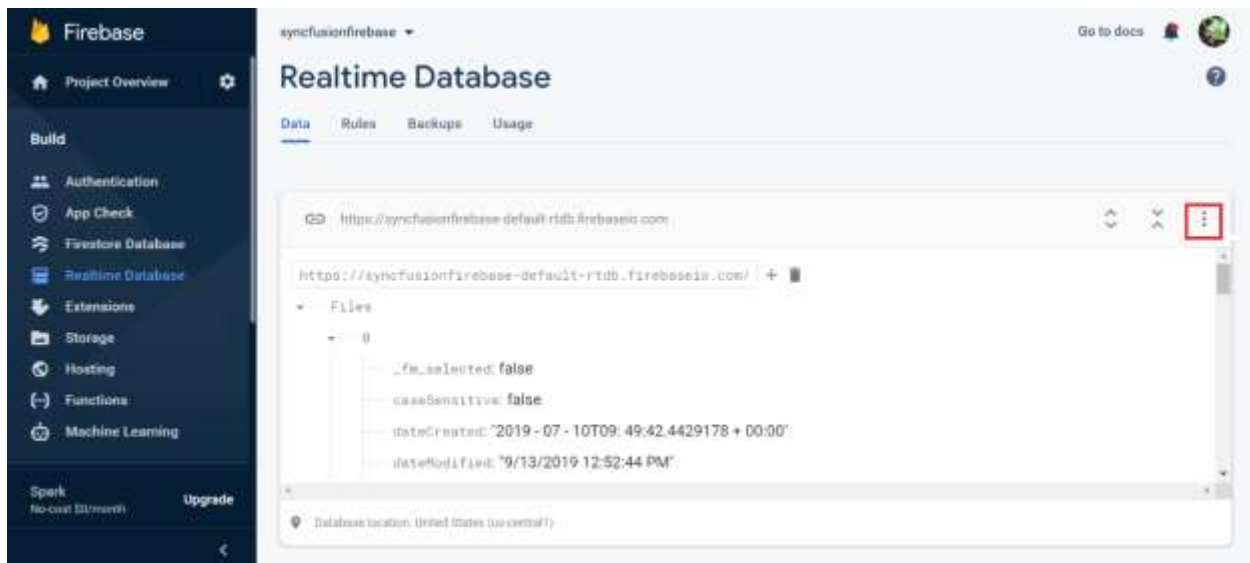
- To get started, create a root node and add any desired children to it. Please refer to the following code snippet for guidance on the structure of the JSON:

```
`ts
{
  "Files" : [ {
    "caseSensitive" : false,
    "dateCreated" : "8/22/2019 5:17:55 PM",
```

```
"dateModified" : "8/22/2019 5:17:55 PM",
"filterId" : "0/",
"filterPath" : "/",
"hasChild" : false,
"id" : "5",
"isFile" : false,
"isRoot" : true,
"name" : "Music",
"parentId" : "0",
"selected" : false,
"showHiddenItems" : false,
"size" : 0,
"type" : "folder"
},
{
  "caseSensitive" : false,
  "dateCreated" : "8/22/2019 5:18:03 PM",
  "dateModified" : "8/22/2019 5:18:03 PM",
  "filterId" : "0/",
  "filterPath" : "/",
  "hasChild" : false,
  "id" : "6",
  "isFile" : false,
  "isRoot" : true,
  "name" : "videos",
  "parentId" : "0",
  "selected" : false,
  "showHiddenItems" : false,
  "size" : 0,
  "type" : ""
}]
}
,
```

Here, the `Files` denotes the `rootNode` and the subsequent object refers to the children of the root node. `rootNode` will be taken as the root folder of the file system loaded which will be loaded in File Manager component.

- To import a JSON file into the Firebase Realtime Database, navigate to the **Data** tab and click on the action icon shown in the accompanying image. From there, select the **Import JSON** option and upload the JSON file that was created using the code provided above.



- To interact with the Firebase Realtime Database through your application, it is necessary to grant read and write permissions by defining appropriate rules in the Firebase project's **Rules** tab, as shown in the following code snippet. Once you have specified the rules, you can publish them by clicking the **Publish** button to enable the necessary authentication.

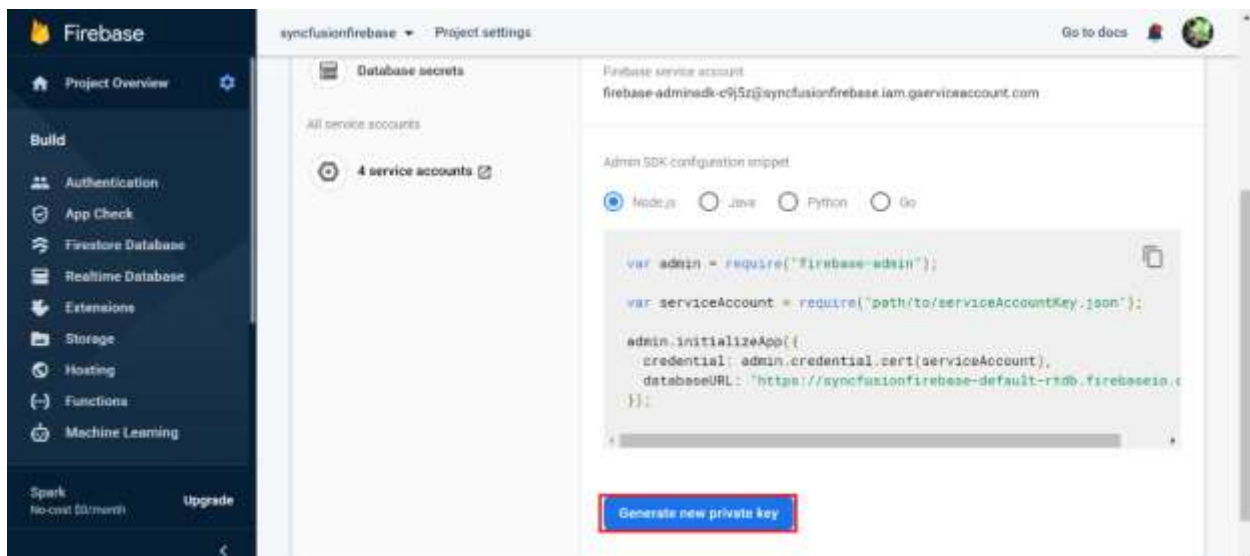
```
`ts
{
  / Visit https://firebase.google.com/docs/database/security to learn more about security rules. /
  "rules": {
    ".read": "auth!=null",
    ".write": "auth!=null"
  }
}
```

Note: By default, rules of a Firebase project will be **false**. To read and write the data, configure the **Rules** as given in the following code snippet in the *Rules* tab in the Firebase Realtime Database project.

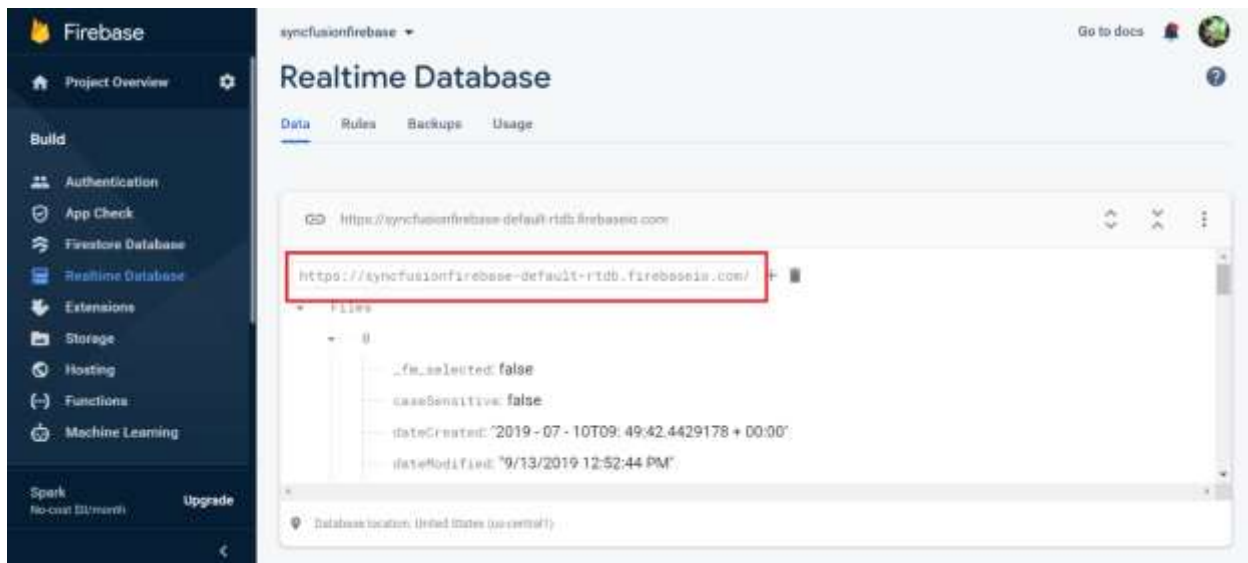
- Navigate to the project settings as instructed and then click on the **Service Account** tab.



- To obtain the access key JSON file, simply click on the **Generate new private key** button and then confirm by clicking the **Generate key** button in the pop-up window that appears.



- Next, you will need to clone the [firebase-realtime-database-apscore-file-provider](#) repository. Once cloned, simply open the project in Visual Studio and restore the NuGet package.
- Once you have generated the secret key, you will need to replace the JSON in the `access_key.json` file in the Firebase Realtime Database provider project with the newly generated key. This will enable authentication and allow you to perform read and write operations.
- In the **Data** tab, locate the project API URL and then paste it into the below mentioned section.



Register the Firebase Realtime Database by assigning *Firebase Realtime Database REST API link*, *rootNode*, and *serviceAccountKeyPath* parameters in the `RegisterFirebaseRealtimeDB` method of class `FirebaseRealtimeDBFileProvider` in the controller part of the ASP.NET Core application.

```
`ts
```

```
this.operation.RegisterFirebaseRealtimeDB(string apiUrl, string rootNode, string serviceAccountKeyPath)
```

```
,
```

Example:

```
`ts
```

```
this.operation.RegisterFirebaseRealtimeDB("{copy your API URL here}", "Files",  
hostingEnvironment.ContentRootPath + "\\FirebaseRealtimeDBHelper\\access_key.json");
```

```
,
```

In the above code,

- `{copy your API URL here}` denotes Firebase Realtime Database REST API link.
- `Files` denotes newly created root node in Firebase Realtime Database.
- `hostingEnvironment.ContentRootPath + "\\FirebaseRealtimeDBHelper\\access_key.json` denotes service account key path which has authentication key for the Firebase Realtime Database data.

After configuring the Firebase Realtime Database service link, build and run the project. Now, the project will be hosted in `http://localhost:{port}` and just mapping the `ajaxSettings` property of the File Manager component to the appropriate controller methods allows to manage the files in the Firebase Realtime Database.

```
{% raw %}
```

```
`ts
```

```
// File Manager sample with IBM COS service.
```

```

<div>
<div className="control-section">
<FileManagerComponent id="file"
ajaxSettings = {{
// Replace the hosted port number in the place of "{port}"
url="http://localhost:{port}/api/FirebaseProvider/FirebaseRealtimeFileOperations",
downloadUrl="http://localhost:{port}/api/FirebaseProvider/FirebaseRealtimeDownload",
uploadUrl="http://localhost:{port}/api/FirebaseProvider/FirebaseRealtimeUpload",
getImageUrl="http://localhost:{port}/api/FirebaseProvider/FirebaseRealtimeGetImage"
}} >
</FileManagerComponent>
</div>
</div>
`
{ % endraw %}

```

> **Note:** To learn more about the file actions that can be performed with Firebase Realtime Database file system provider, refer to this [link](#)

IBM Cloud Object Storage file provider

The IBM Cloud Object Storage file provider module allows you work with the IBM Cloud Object Storage. It also provides the methods for performing various file actions such as creating a new folder, renaming files, and deleting files. The IBM Cloud Object Storage file provider serves the file provider support for the File Manager component with the IBM Cloud Object Storage. We can make use of IBM Cloud Object Storage file provider by installing the [ej2-filemanager-ibm-cos-node-file-provider](#) npm package or by cloning the [file provider](#) from the GitHub.

Using *ej2-filemanager-ibm-cos-node-file-provider* npm package

- Install the *ej2-filemanager-ibm-cos-node-file-provider* npm package by running the below command.

```
`ts
```

```
npm install @syncfusion/ej2-filemanager-ibm-cos-node-file-provider
```

- After installing the package, navigate to the *ej2-filemanager-ibm-cos-node-file-provider* package folder within the node-modules.
- Run the **npm install** command to install the dependent packages for file provider.

Cloning the filemanager-ibm-cos-node-file-provider from GitHub

- Clone the filemanager-ibm-cos-node-file-provider using the following command.

```
`ts
git clone https://github.com/SyncfusionExamples/filemanager-ibm-cos-node-file-provider.git
`
```

- After cloning, open the root folder and run the command **npm install** command.

To set the port in which the project to be hosted. Run the following command.

```
`ts
set PORT=3000 && node index.js
`
```

Note: By default, the service will run 8090 port.

Now, just mapping the **ajaxSettings** property of the FileManager component to the appropriate file operation methods in the index.js file will allow to manage the IBM Cloud Object Storage.

```
{% raw %}
`ts
// File Manager sample with IBM COS service.
<div>
<div className="control-section">
<FileManagerComponent id="file"
ajaxSettings = {{
url="http://localhost:{port}/",
downloadUrl="http://localhost:{port}/Download",
uploadUrl="http://localhost:{port}/Upload",
getImageUrl="http://localhost:{port}/GetImage"
}} >
</FileManagerComponent>
</div>
</div>
`
{% endraw %}
```

Note: To learn more about the file actions that can be performed with IBM Cloud Object Storage file provider, refer to this [link](#)

Localization in React File manager component

The file manager can be localized to any culture by defining the texts and messages of the file manager in the corresponding culture. The default locale of the file manager is **en** (English). The following table represents the default texts and messages of the file manager in **en** culture.

KEY	Text/Message
----	----
NewFolder	New folder
Upload	Upload
Delete	Delete
Rename	Rename
Download	Download
Cut	Cut
Copy	Copy
Paste	Paste
SortBy	Sort by
Refresh	Refresh
Item-Selection	item selected
Items-Selection	items selected
View	View
Details	Details
SelectAll	Select all
Open	Open
Tooltip-NewFolder	New folder
Tooltip-Upload	Upload
Tooltip-Delete	Delete
Tooltip-Rename	Rename
Tooltip-Download	Download
Tooltip-Cut	Cut
Tooltip-Copy	Copy
Tooltip-Paste	Paste
Tooltip-SortBy	Sort by
Tooltip-Refresh	Refresh
Tooltip-Selection	Clear selection
Tooltip-View	View

Tooltip-Details	Details
Tooltip-SelectAll	Select all
Name	Name
Size	Size
DateModified	Modified
DateCreated	Date created
Path	Path
Created	Created
Modified	Modified
Location	Location
Type	Type
Permission	Permission
Ascending	Ascending
Descending	Descending
None	None
View-LargeIcons	Large icons
View-Details	Details
Search	Search
Button-Ok	OK
Button-Cancel	Cancel
Button-Yes	Yes
Button-No	No
Button-Create	Create
Button-Save	Save
Header-NewFolder	Folder
Content-NewFolder	Enter your folder name
Header-Rename	Rename
Content-Rename	Enter your new name
Header-Rename-Confirmation	Rename Confirmation
Content-Rename-Confirmation	If you change a file name extension
Are you sure you want to change it?	
Header-Delete	Delete File
Content-Delete	Are you sure you want to delete this file?

|Header-Multiple-Delete|Delete Multiple Files|

|Content-Multiple-Delete|Are you sure you want to delete these {0} files?|

|Header-Folder-Delete|Delete Folder|

|Content-Folder-Delete|Are you sure you want to delete this folder?|

|Header-Duplicate|File exists|

|Content-Duplicate| already exists. Are you sure you want to replace it?|

|Header-Upload|Upload Files|

|Error|Error|

|Validation-Empty|The file or folder name cannot be empty.|

|Validation-Invalid|The file or folder name {0} contains invalid characters. Please use a different name. Valid file or folder names cannot end with a dot or space, and cannot contain any of the following characters: \\/:*?"<>\\||

|Validation-NewFolder-Exists|A file or folder with the name {0} already exists.|

|Validation-Rename-Exists|Cannot rename {0} to {1}| destination already exists.|

|Folder-Empty|This folder is empty|

|File-Upload|Drag files here to upload|

|Search-Empty|No results found|

|Search-Key|Try with different keywords|

|Filter-Empty|No results found|

|Filter-Key|Try with different filter|

|Sub-Folder-Error|The destination folder is the subfolder of the source folder|

|Same-Folder-Error|The destination folder is the same as the source folder.|

|Access-Denied|Access Denied|

|Access-Details|You don't have permission to access this folder|

|Header-Retry|File Already Exists|

|Content-Retry|A file with this name already exists in this folder. What would you like to do?|

|Button-Keep-Both|Keep both|

|Button-Replace|Replace|

|Button-Skip|Skip|

|ApplyAll-Label|Do this for all current items|

|KB|KB|

|Access-Message|{0} is not accessible. You need permission to perform the {1} action.|

|Network-Error|Network Error: Failed to send on XMLHttpRequest: Failed to load|

|Server-Error|Server Error: Invalid response from|

The below example shows adding the German culture locale(de-DE)

APP.JSX

```
{% raw %}
import { L10n } from '@syncfusion/ej2-base';
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject } from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
// Load Locale text to FileManager component
L10n.load({
  'de': {
    'filemanager': {
      "NewFolder": "Neuer Ordner",
      "Upload": "Hochladen",
      "Delete": "Löschen",
      "Rename": "Umbenennen",
      "Download": "Herunterladen",
      "Cut": "Schnitt",
      "Copy": "Kopieren",
      "Paste": "Einfügen",
      "SortBy": "Sortiere nach",
      "Refresh": "Aktualisierung",
      "Item-Selection": "Artikel ausgewählt",
      "Items-Selection": "Elemente ausgewählt",
      "View": "Aussicht",
      "Details": "Einzelheiten",
      "SelectAll": "Wählen Sie Alle",
      "Open": "Öffnen",
      "Tooltip-NewFolder": "Neuer Ordner",
      "Tooltip-Upload": "Hochladen",
      "Tooltip-Delete": "Löschen",
      "Tooltip-Rename": "Umbenennen",
      "Tooltip-Download": "Herunterladen",
      "Tooltip-Cut": "Schnitt",
      "Tooltip-Copy": "Kopieren",
      "Tooltip-Paste": "Einfügen",
      "Tooltip-SortBy": "Sortiere nach",
      "Tooltip-Refresh": "Aktualisierung",
      "Tooltip-Selection": "Auswahl aufheben",
      "Tooltip-View": "Aussicht",
      "Tooltip-Details": "Einzelheiten",
      "Tooltip-SelectAll": "Wählen Sie Alle",
      "Name": "Name",
      "Size": "Größe",
      "DateModified": "Geändert",
      "DateCreated": "Datum erstellt",
      "Path": "Pfad",
      "Modified": "Geändert",
      "Created": "Erstellt",
      "Location": "Ort",
      "Type": "Art",
      "Permission": "Genehmigung",
      "Ascending": "Aufsteigend",
      "Descending": "Absteigend",
      "None": "Keiner",
      "View-LargeIcons": "Große Icons",
    }
  }
});
```



```

    "View-Details": "Einzelheiten",
    "Search": "Suche",
    "Button-Ok": "OK",
    "Button-Cancel": "Stornieren",
    "Button-Yes": "Ja",
    "Button-No": "Nein",
    "Button-Create": "Erstellen",
    "Button-Save": "Sparen",
    "Header-NewFolder": "Mappe",
    "Content-NewFolder": "Geben Sie Ihren Ordnernamen ein",
    "Header-Rename": "Umbenennen",
    "Content-Rename": "Geben Sie Ihren neuen Namen ein",
    "Header-Rename-Confirmation": "Bestätigung umbenennen",
    "Content-Rename-Confirmation": "Wenn Sie eine
Dateinamenerweiterung ändern, wird die Datei möglicherweise instabil.
Möchten Sie sie wirklich ändern?",
    "Header-Delete": "Datei löschen",
    "Content-Delete": "Möchten Sie diese Datei wirklich löschen?",
    "Header-Multiple-Delete": "Mehrere Dateien löschen",
    "Content-Multiple-Delete": "Möchten Sie diese {0} Dateien
wirklich löschen?",
    "Header-Folder-Delete": "Lösche Ordner",
    "Content-Folder-Delete": "Möchten Sie diesen Ordner wirklich
löschen?",
    "Header-Duplicate": "Datei / Ordner existiert",
    "Content-Duplicate": "{0} existiert bereits. Möchten Sie
umbenennen und einfügen?",
    "Header-Upload": "Daten hochladen",
    "Error": "Error",
    "Validation-Empty": "Der Datei - oder Ordnername darf nicht leer
sein.",
    "Validation-Invalid": "Der Datei- oder Ordnername {0} enthält
ungültige Zeichen. Bitte verwenden Sie einen anderen Namen. Gültige Datei-
oder Ordnernamen dürfen nicht mit einem Punkt oder Leerzeichen enden und
keines der folgenden Zeichen enthalten: \\ /: *? \" < > | ",
    "Validation-NewFolder-Exists": "Eine Datei oder ein Ordner mit
dem Namen {0} existiert bereits.",
    "Validation-Rename-Exists": "{0} kann nicht in {1} umbenannt
werden: Ziel existiert bereits.",
    "Folder-Empty": "Dieser Ordner ist leer",
    "File-Upload": "Dateien zum Hochladen hierher ziehen",
    "Search-Empty": "Keine Ergebnisse gefunden",
    "Search-Key": "Versuchen Sie es mit anderen Stichwörtern",
    "Filter-Empty": "keine Ergebnisse gefunden",
    "Filter-Key": "Versuchen Sie es mit einem anderen Filter",
    "Sub-Folder-Error": "Der Zielordner ist der Unterordner des
Quellordners.",
    "Same-Folder-Error": "Der Zielordner ist derselbe wie der
Quellordner.",
    "Access-Denied": "Zugriff verweigert",
    "Access-Details": "Sie haben keine Berechtigung, auf diesen
Ordner zuzugreifen.",
    "Header-Retry": "Die Datei existiert bereits",
    "Content-Retry": "In diesem Ordner ist bereits eine Datei mit
diesem Namen vorhanden. Was möchten Sie tun?",
    "Button-Keep-Both": "Behalte beides",
    "Button-Replace": "Ersetzen",

```

```

        "Button-Skip": "Überspringen",
        "ApplyAll-Label": "Mache das für alle aktuellen Artikel",
        "KB": "KB",
        "Access-Message": "{0} ist nicht zugänglich. Sie benötigen die
Berechtigung, um die Aktion {1} auszuführen.",
        "Network-Error": "NetworkError: Fehler beim Senden auf
XMLHttpRequest: Fehler beim Laden",
        "Server-Error": "ServerError: Ungültige Antwort von"
    }
}
});
function App() {
    let hostUrl = "https://ej2-aspcore-service.azurewebsites.net/";
    return (<div className="control-section">
        <FileManagerComponent id="file" view="Details" locale='de'
ajaxSettings={{
            downloadUrl: hostUrl + 'api/FileManager/Download',
            getImageUrl: hostUrl + "api/FileManager/GetImage",
            uploadUrl: hostUrl + 'api/FileManager/Upload',
            url: hostUrl + "api/FileManager/FileOperations"
        }}>
            <Inject services={[NavigationPane, DetailsView, Toolbar]}/>
        </FileManagerComponent>
    </div>);
}
export default App;
{% endraw %}

```

APP.TSX

```

{% raw %}
import { L10n } from '@syncfusion/ej2-base';
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject } from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
// Load Locale text to FileManager component
L10n.load({
    'de': {
        'filemanager': {
            "NewFolder": "Neuer Ordner",
            "Upload": "Hochladen",
            "Delete": "Löschen",
            "Rename": "Umbenennen",
            "Download": "Herunterladen",
            "Cut": "Schnitt",
            "Copy": "Kopieren",
            "Paste": "Einfügen",
            "SortBy": "Sortiere nach",
            "Refresh": "Aktualisierung",
            "Item-Selection": "Artikel ausgewählt",
            "Items-Selection": "Elemente ausgewählt",
            "View": "Aussicht",
            "Details": "Einzelheiten",
            "SelectAll": "Wählen Sie Alle",
            "Open": "Öffnen",
            "Tooltip-NewFolder": "Neuer Ordner",

```

```

"Tooltip-Upload": "Hochladen",
"Tooltip-Delete": "Löschen",
"Tooltip-Rename": "Umbenennen",
"Tooltip-Download": "Herunterladen",
"Tooltip-Cut": "Schnitt",
"Tooltip-Copy": "Kopieren",
"Tooltip-Paste": "Einfügen",
"Tooltip-SortBy": "Sortiere nach",
"Tooltip-Refresh": "Aktualisierung",
"Tooltip-Selection": "Auswahl aufheben",
"Tooltip-View": "Aussicht",
"Tooltip-Details": "Einzelheiten",
"Tooltip-SelectAll": "Wählen Sie Alle",
"Name": "Name",
"Size": "Größe",
"DateModified": "Geändert",
"DateCreated": "Datum erstellt",
"Path": "Pfad",
"Modified": "Geändert",
"Created": "Erstellt",
"Location": "Ort",
"Type": "Art",
"Permission": "Genehmigung",
"Ascending": "Aufsteigend",
"Descending": "Absteigend",
"None": "Keiner",
"View-LargeIcons": "Große Icons",
"View-Details": "Einzelheiten",
"Search": "Suche",
"Button-Ok": "OK",
"Button-Cancel": "Stornieren",
"Button-Yes": "Ja",
"Button-No": "Nein",
"Button-Create": "Erstellen",
"Button-Save": "Sparen",
"Header-NewFolder": "Mappe",
"Content-NewFolder": "Geben Sie Ihren Ordnernamen ein",
"Header-Rename": "Umbenennen",
"Content-Rename": "Geben Sie Ihren neuen Namen ein",
"Header-Rename-Confirmation": "Bestätigung umbenennen",
"Content-Rename-Confirmation": "Wenn Sie eine Dateinamenerweiterung
ändern, wird die Datei möglicherweise instabil. Möchten Sie sie wirklich
ändern?",
"Header-Delete": "Datei löschen",
"Content-Delete": "Möchten Sie diese Datei wirklich löschen?",
"Header-Multiple-Delete": "Mehrere Dateien löschen",
"Content-Multiple-Delete": "Möchten Sie diese {0} Dateien wirklich
löschen?",
"Header-Folder-Delete": "Lösche Ordner",
"Content-Folder-Delete": "Möchten Sie diesen Ordner wirklich
löschen?",
"Header-Duplicate": "Datei / Ordner existiert",
"Content-Duplicate": "{0} existiert bereits. Möchten Sie umbenennen
und einfügen?",
"Header-Upload": "Daten hochladen",
"Error": "Error",

```

```

    "Validation-Empty": "Der Datei - oder Ordnername darf nicht leer sein.",
    "Validation-Invalid": "Der Datei- oder Ordnername {0} enthält ungültige Zeichen. Bitte verwenden Sie einen anderen Namen. Gültige Datei- oder Ordnernamen dürfen nicht mit einem Punkt oder Leerzeichen enden und keines der folgenden Zeichen enthalten: \\ /: *? \" < > | ",
    "Validation-NewFolder-Exists": "Eine Datei oder ein Ordner mit dem Namen {0} existiert bereits.",
    "Validation-Rename-Exists": "{0} kann nicht in {1} umbenannt werden: Ziel existiert bereits.",
    "Folder-Empty": "Dieser Ordner ist leer",
    "File-Upload": "Dateien zum Hochladen hierher ziehen",
    "Search-Empty": "Keine Ergebnisse gefunden",
    "Search-Key": "Versuchen Sie es mit anderen Stichwörtern",
    "Filter-Empty": "keine Ergebnisse gefunden",
    "Filter-Key" : "Versuchen Sie es mit einem anderen Filter",
    "Sub-Folder-Error": "Der Zielordner ist der Unterordner des Quellordners.",
    "Same-Folder-Error": "Der Zielordner ist derselbe wie der Quellordner.",
    "Access-Denied": "Zugriff verweigert",
    "Access-Details": "Sie haben keine Berechtigung, auf diesen Ordner zuzugreifen.",
    "Header-Retry": "Die Datei existiert bereits",
    "Content-Retry": "In diesem Ordner ist bereits eine Datei mit diesem Namen vorhanden. Was möchten Sie tun?",
    "Button-Keep-Both": "Behalte beides",
    "Button-Replace": "Ersetzen",
    "Button-Skip": "Überspringen",
    "ApplyAll-Label": "Mache das für alle aktuellen Artikel",
    "KB": "KB",
    "Access-Message": "{0} ist nicht zugänglich. Sie benötigen die Berechtigung, um die Aktion {1} auszuführen.",
    "Network-Error": "NetworkError: Fehler beim Senden auf XMLHttpRequest: Fehler beim Laden",
    "Server-Error": "ServerError: Ungültige Antwort von"
  }
}
})
function App() {
  let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
  return (
    <div className="control-section">
      <FileManagerComponent id="file" view="Details" locale='de'
ajaxSettings = {{
        downloadUrl: hostUrl + 'api/FileManager/Download',
        getImageUrl: hostUrl + "api/FileManager/GetImage",
        uploadUrl: hostUrl + 'api/FileManager/Upload',
        url: hostUrl + "api/FileManager/FileOperations"
      }} >
        <Inject services={[ NavigationPane, DetailsView, Toolbar]} />
      </FileManagerComponent>
    </div>
  );
}
export default App;{% endraw %}

```

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render( <App />, document.getElementById('root') as HTMLElement);
```

[Virtualization in React File Manager component](#)

File Manager's UI virtualization allows you for the dynamic loading of a large number of directories and files in both the detailsView and largeIconsView without degrading its performance.

[Module Injection](#)

In order to use UI Virtualization, you need to inject its virtualization service in the App. This modules should be injected into the FileManager using the Inject directive.

```
{% raw %}
`ts
import { FileManagerComponent, Inject, Virtualization } from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
return (
// specifies the tag to render the FileManager component
<FileManagerComponent id="filemanager" ajaxSettings={{
url: hostUrl + "api/FileManager/FileOperations",
getImageUrl: hostUrl + "api/FileManager/GetImage",
uploadUrl: hostUrl + 'api/FileManager/Upload',
downloadUrl: hostUrl + 'api/FileManager/Download'
}} enableVirtualization={true}>
<Inject services={[Virtualization]}/>
</FileManagerComponent>
);
}
```

```
export default App;
```

```
{% endraw %}
```

Enable Virtualization

The virtualization of the File Manager component is based on the height and width of the viewport. The items will be loaded in both [largeIconsView](#) and [detailsView](#) based on the viewport size.

In order to enable **virtualization**, you must set the [enableVirtualization](#) property to true.

In the instance below, a sizable collection of files can be found in the folders **Documents** and **Text Documents**.

APP.JSX

```
{% raw %}
import { FileManagerComponent, Inject, NavigationPane, DetailsView, Toolbar,
Virtualization } from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
/**
 * File Manager virtualization feature sample
 */
function App() {
  let hostUrl = "https://ej2-aspcore-service.azurewebsites.net/";
  function onBeforeSend(args) {
    args.ajaxSettings.beforeSend = function (args) {
      args.httpRequest.setRequestHeader('Authorization',
'FileBrowser');
    };
  }
  function beforeImageLoad(args) {
    args.imageUrl = args.imageUrl + '&rootName=' + 'FileBrowser';
  }
  function beforeDownload(args) {
    args.data.rootFolderName = 'FileBrowser';
  }
  return (<div>
    <div className="control-section">
      <FileManagerComponent id="filemanager" ajaxSettings={{
        url: hostUrl + "api/FileManager/FileOperations",
        getImageUrl: hostUrl + "api/FileManager/GetImage",
        uploadUrl: hostUrl + 'api/FileManager/Upload',
        downloadUrl: hostUrl + 'api/FileManager/Download'
      }} view={"Details"} enableVirtualization={true}
beforeSend={onBeforeSend.bind(this)}
beforeImageLoad={beforeImageLoad.bind(this)}
beforeDownload={beforeDownload.bind(this)}>
        <Inject services={[NavigationPane, DetailsView, Toolbar,
Virtualization]}/>
        </FileManagerComponent>
      </div>
    </div>);
}
export default App;
{% endraw %}
```

APP.TSX

```
{% raw %}
import { FileManagerComponent, Inject, NavigationPane, DetailsView, Toolbar,
Virtualization } from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
/**
 * File Manager virtualization feature sample
 */
function App() {
  let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
  function onBeforeSend(args) {
    args.ajaxSettings.beforeSend = function (args) {
      args.httpRequest.setRequestHeader('Authorization',
'FileBrowser');
    };
  }
  function beforeImageLoad(args) {
    args.imageUrl = args.imageUrl + '&rootName=' + 'FileBrowser';
  }
  function beforeDownload(args) {
    args.data.rootFolderName = 'FileBrowser';
  }
  return(
    <div>
      <div className="control-section">
        <FileManagerComponent id="filemanager"
          ajaxSettings = {{
            url: hostUrl + "api/FileManager/FileOperations",
            getImageUrl: hostUrl + "api/FileManager/GetImage",
            uploadUrl: hostUrl + 'api/FileManager/Upload',
            downloadUrl: hostUrl + 'api/FileManager/Download'
          }}
          view = {"Details"}
          enableVirtualization = {true}
          beforeSend={onBeforeSend.bind(this)}
          beforeImageLoad={beforeImageLoad.bind(this)}
          beforeDownload={beforeDownload.bind(this)}>
          <Inject services={[ NavigationPane, DetailsView, Toolbar,
Virtualization]} />
        </FileManagerComponent>
      </div>
    </div>
  );
};
export default App;
{% endraw %}
```

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render( <App />, document.getElementById('root') as HTMLElement);
```

Limitations for Virtualization

- Programmatic selection using the **selectAll** method is not supported with virtual scrolling.
- The keyboard shortcut **CTRL+A** will only select the files and directories that are currently visible within the viewport, rather than selecting all files and directories in the entire directory tree.
- Selected file items are not maintained while scrolling, considering the performance of the component.

Accessibility in React File Manager component

The File Manager component followed the accessibility guidelines and standards, including [ADA](#), [Section 508](#), [WCAG 2.2](#) standards, and [WCAG roles](#) that are commonly used to evaluate accessibility.

The accessibility compliance for the File Manager component is outlined below.

| Accessibility Criteria | Compatibility |

| -- | -- |

| [WCAG 2.2](#) Support | |

| [Section 508](#) Support | |

| Screen Reader Support | |

| Right-To-Left Support | |

| Color Contrast | |

| Mobile Device Support | |

| Keyboard Navigation Support | |

| [Accessibility Checker](#) Validation | |

| [Axe-core](#) Accessibility Validation | |

<style>

.post .post-content img {


```
display: inline-block;
```

```
margin: 0.5em 0;
```

```
}
```

```
</style>
```

```
<div> - All features of the component meet the requirement.</div>
```

```
<div> - Some features of the component do not meet the requirement.</div>
```

```
<div> - The component does not meet the requirement.</div>
```

WAI-ARIA attributes

The File Manager component followed the [WAI-ARIA](#) patterns to meet the accessibility. The following ARIA attributes are used in the File Manager component:

Attributes	Purpose
------------	---------

---	---
-----	-----

role	Used to convey a significant and contextual message to the user.
-------------	--

aria-disabled	Indicates whether the File Manager component is in disabled state.
----------------------	--

aria-haspopup	Indicates whether the toolbar item has a popup list or not.
----------------------	---

aria-orientation	Indicates whether the File Manager element is oriented horizontally or vertically.
-------------------------	--

aria-expanded	Indicates whether the Treeview node has been expanded.
----------------------	--

aria-owns	Contains the ID of the suggestion list to indicate popup as a child element.
------------------	--

aria-activedescendent	Holds the ID of the active list item to focus its descendant child element.
------------------------------	---

aria-level	Specifies the level of the element in Treeview Structure.
-------------------	---

aria-selected	Indicates whether a particular node is in selected state.
----------------------	---

aria-placeholder	Represents a hint (word or phrase) to the user about what to enter in the text field.
-------------------------	---

aria-label	Provides an accessible name for the element.
-------------------	--

aria-checked	Indicates whether the checkbox is in checked state.
---------------------	---

aria-labelledby	Provides a label for the dialog. Typically, the "aria-labelledby" attribute will contain the id of the element used as the dialog's title.
------------------------	--

aria-describedby	This attribute points to the Dialog element describing the one it's set on.
-------------------------	---

aria-modal	Indicates whether an element is a modal when display.
-------------------	---

aria-colcount	Specifies the number of columns in full table.
----------------------	--

aria-colindexnt	Defines the number of columns within a table in details view.
------------------------	---

- | **aria-rowspan** | Defines the number of rows a cell spanned within a table in details view. |
- | **aria-colspan** | Defines the number of columns a cell spanned within a table in details view. |
- | **aria-sort** | Indicates whether items in the table are sorted in ascending or descending order. |
- | **aria-grabbed** | When the folder/file item is chosen for dragging, the aria-grabbed attribute is set to "true." If it's set to "false," the element can be grabbed for drag-and-drop, but it won't be actively held. |
- | **aria-busy** | This attribute is set to false when table content is loaded. |
- | **aria-multiselectable** | Defines more than one item has been selected. |

Keyboard interaction

The File Manager component followed the **keyboard interaction** guidelines, making it easy for people who use assistive technologies (AT) and those who completely rely on keyboard navigation. The following keyboard shortcuts are supported by the File Manager component.

- | **Press** | **To do this** |
- | --- | --- |
- | **Page Down** | Scrolls down to the next folder or file and selects the first item when files are loaded. |
- | **Page Up** | Scrolls up to previous folder and select the first item when files are loaded. |
- | **Enter** | Selects the focused item and navigate through the child elements. |
- | **Tab** | Focuses on the first element of toolbar and navigates through the next tab indexed element. |
- | **Esc(Escape)** | Closes the image when it is in open state. |
- | **Alt+N** | Creates a new folder dialog. |
- | **F5** | Refresh the file manager element. |
- | **Home** | Navigate through the first element of details view or large icons view. |
- | **End** | Navigate through the last element of details view or large icons view. |
- | **Move Left** | Scrolls left to the previous folder and select the first item when files are loaded |
- | **Move Right** | Scrolls right to the previous folder and select the first item when files are loaded |
- | **Alt+Enter** | Shows the get details info for selected folder. |
- | **Shift+Right** | Allows multiselection. Select the file or folder at the right of the previously selected folder. |
- | **Shift+Left** | Allows multiselection. Select the file or folder at the left of the previously selected folder. |
- | **Shift+Down** | Allows multiselection. Select the file or folder till the focused index. |

Shift+Delete	Permanently deletes the selected file or folder in the file manager element.	
Delete	Deletes the selected file or folder in the file manager element.	
Shift+Up	Allows multiselection. Select the file or folder till the focused index.	
Ctrl+C	Copies the selected file or folder in the file manager element.	
Ctrl+V	Pastes the copied/cut file or folder in the file manager element.	
Ctrl+X	Cuts the selected file or folder in the file manager element.	
Ctrl+A	Select all the files or folders in the details view or large icons view.	
F2	Creates a rename dialog for a selected file or folder in the file manager element.	
Shift+F10	Opens the context menu for the selected file or folder in the file manager element.	
Ctrl+D	Downloads the list of selected files or folders in the file manager element.	
Ctrl+Shift+1	Changes the file manager layout to details view.	
Ctrl+Shift+2	Changes the file manager layout to large icons view.	

Ensuring accessibility

The File Manager component's accessibility levels are ensured through an [accessibility-checker](#) and [axe-core](#) software tools during automated testing.

The accessibility compliance of the File Manager component is shown in the following sample. Open the [sample](#) in a new window to evaluate the accessibility of the File Manager component with accessibility tools.

See also

- [Accessibility in Syncfusion React components](#)

Access control in React File manager component

The [React FileManager](#) allows you to define access permissions for folders and files using a set of access rules to user(s).

- [Access Rules](#)
- [Permissions](#)

Access Rules

The FileAccessController allows you to define security permissions for folders and files using a set of folder or file access rules.

To set up access rules for folders (including their files and sub-folders) and individual files, use the SetRules() method in the controller. The following table represents the AccessRule properties available for file and folder:

Properties	Applicable for file	Applicable for folder	Description
---	---	---	---

Copy	Yes	Yes	Allows access to copy a file or folder.
Read	Yes	Yes	Allows access to read a file or folder.
Write	Yes	Yes	Allows permission to write a file or folder.
WriteContents	No	Yes	Allows permission to write the content of folder.
Download	Yes	Yes	Allows permission to download a file or folder.
Upload	No	Yes	Allows permission to upload to the folder.
Path	Yes	Yes	Specifies the path to apply the rules, which are defined.
Role	Yes	Yes	Specifies the role to which the rule is applied.
IsFile	Yes	Yes	Specifies whether the rule is specified for folder or file.

The following syntax represents the access Rules for Administrator using file or folder.

```
`ts
//Adminstrator
//Access Rules for File
new AccessRule { Path = "/.", Role = "Administrator", Read = Permission.Allow, Write =
Permission.Allow, Copy = Permission.Allow, Download = Permission.Allow, IsFile = true },
// Access Rules for folder
new AccessRule { Path = "**", Role = "Administrator", Read = Permission.Allow, Write = Permission.Allow,
Copy = Permission.Allow, WriteContents = Permission.Allow, Upload = Permission.Allow, Download =
Permission.Deny, IsFile = false },
`
```

The following syntax represent the access Rules for Default user using file or folder.

```
`ts
//Default User
//Access Rules for File
new AccessRule { Path = "/.", Role = "Default User", Read = Permission.Deny, Write = Permission.Deny,
Copy = Permission.Deny, Download = Permission.Deny, IsFile = true },
// Access Rules for folder
new AccessRule { Path = "**", Role = "Default User", Read = Permission.Deny, Write = Permission.Deny,
Copy = Permission.Deny, WriteContents = Permission.Deny, Upload = Permission.Deny, Download =
Permission.Deny, IsFile = false },
`
```

Permissions

It helps to explain how to apply security permission to file manager file or folder using access rules. The following table represent the value that determines the permission.

Value	Description
---	---

| Allow | Allows you to do read, write, copy, and download operations. |

| Deny | Denies you to do read, write, copy, and download operations. |

Use the `Role` property to apply created roles to the file manager. After that, the file manager displays folder or file and allow permission based on assigned roles.

The following syntax represent how to apply permission based on assigned roles

Permission denied for administrator to write a file or folder.

```
`ts
```

```
// For file
```

```
new AccessRule { Path = "/", Role = "Administrator", Read = Permission.Allow, Write = Permission.Deny, IsFile = true},
```

```
// For folder
```

```
new AccessRule { Path = "**", Role = "Administrator", Read = Permission.Allow, Write = Permission.Deny, IsFile = false},
```

```
,
```

The following syntax represent how to allow or deny permission based on file or folder access rule.

Permission denied for writing except for particular file or folder.

```
`ts
```

```
// Deny writing for particular folder
```

```
new AccessRule { Path = "/Documents", Role = "Document Manager", Read = Permission.Allow, Write = Permission.Deny, Copy = Permission.Allow, WriteContents = Permission.Deny, Upload = Permission.Deny, Download = Permission.Deny, IsFile = false },
```

```
// Deny writing for particular file
```

```
new AccessRule { Path = "/Pictures/Employees/Adam.png", Role = "Document Manager", Read = Permission.Allow, Write = Permission.Deny, Copy = Permission.Deny, Download = Permission.Deny, IsFile = true },
```

```
,
```

Permission denied for writing and uploading in root folder.

```
`ts
```

```
// Folder Rule
```

```
new AccessRule { Path = "/", Role = "Document Manager", Read = Permission.Allow, Write = Permission.Deny, Copy = Permission.Deny, WriteContents = Permission.Deny, Upload = Permission.Deny, Download = Permission.Deny, IsFile = false },
```

```
,
```

The following example demonstrate the file manager rendered with access control support.

APP.JSX

```
{% raw %}
```

```

import { DetailsView, FileManagerComponent, Inject, NavigationPane, Toolbar
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
  let fileObj;
  let hostUrl = "https://ej2-aspcore-service.azurewebsites.net/";
  return (<div>
    <div className="control-section">
      <FileManagerComponent ref={s => (fileObj = s)} id="file"
ajaxSettings={{
        downloadUrl: hostUrl + 'api/FileManagerAccess/Download',
        getImageUrl: hostUrl + 'api/FileManagerAccess/GetImage',
        uploadUrl: hostUrl + 'api/FileManagerAccess/Upload',
        url: hostUrl + 'api/FileManagerAccess/FileOperations'
      }} view={"Details"}>
        <Inject services={[NavigationPane, DetailsView, Toolbar]}>/>
      </FileManagerComponent>
    </div>
  </div>);
}
export default App;
{% endraw %}

```

APP.TSX

```

{% raw %}
import { DetailsView, FileManagerComponent, Inject, NavigationPane,
Toolbar} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
  let fileObj: FileManagerComponent;
  let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
  return (
    <div>
      <div className="control-section">
        <FileManagerComponent ref={ s => (fileObj = s as
FileManagerComponent)} id="file"
          ajaxSettings = {{
            downloadUrl: hostUrl + 'api/FileManagerAccess/Download',
            getImageUrl: hostUrl + 'api/FileManagerAccess/GetImage',
            uploadUrl: hostUrl + 'api/FileManagerAccess/Upload',
            url: hostUrl + 'api/FileManagerAccess/FileOperations'
          }} view={"Details"}>
          <Inject services={[ NavigationPane, DetailsView, Toolbar]} />
        </FileManagerComponent>
      </div>
    </div>
  );
}
export default App;{% endraw %}

```

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';

```

```
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render(<App />, document.getElementById('root') as HTMLElement);
```

How To

Adding custom item to context menu in React File manager component

The context menu can be customized using the [contextMenuSettings](#), [menuOpen](#), and [menuClick](#) events.

The following example shows adding a custom item in the context menu.

The [contextMenuSettings](#) is used to add new menu item. The [menuOpen](#) event is used to add the icon to the new menu item. The [menuClick](#) event is used to add an event handler to the new menu item.

APP.JSX

```
{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
  let fileObj;
  let hostUrl = "https://ej2-aspcore-service.azurewebsites.net/";
  function menuClick(args) {
    if (args.item.text === 'Custom') {
      alert('You have clicked custom menu item');
    }
  }
  function menuOpen(args) {
    for (const i in args.items) {
      if (args.items[i].id === fileObj.element.id + '_cm_custom') {
        args.items[i].iconCss = 'e-icons e-fe-tick';
      }
    }
  }
  return (<div>
    <div className="control-section">
      <FileManagerComponent ref={s => (fileObj = s)} id="file"
view="Details" ajaxSettings={{
        downloadUrl: hostUrl + 'api/FileManager/Download',
        getImageUrl: hostUrl + "api/FileManager/GetImage",
        uploadUrl: hostUrl + 'api/FileManager/Upload',
        url: hostUrl + "api/FileManager/FileOperations"
      }} contextMenuSettings={{
        file: ['Open', '|', 'Delete', 'Rename', '|', 'Details',
'Custom'],
        folder: ['Open', '|', 'Delete', 'Rename', '|', 'Details',
'Custom'],
        layout: ['SortBy', 'View', 'Refresh', '|', 'NewFolder',
'Upload', '|', 'Details', '|', 'SelectAll', 'Custom'],
```

```

        }} menuClick={menuClick} menuOpen={menuOpen}>
        <Inject services={[NavigationPane, DetailsView, Toolbar]}/>
    </FileManagerComponent>
</div>
</div>);
}
export default App;
{% endraw %}

```

APP.TSX

```

{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject } from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
    let fileObj: FileManagerComponent;
    let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
    function menuClick(args: any): void {
        if (args.item.text === 'Custom') {
            alert('You have clicked custom menu item')
        }
    }
    function menuOpen(args: any): void {
        for(const i in args.items) {
            if(args.items[i].id === fileObj.element.id + '_cm_custom') {
                args.items[i].iconCss= 'e-icons e-fe-tick';
            }
        }
    }
    return (
        <div>
            <div className="control-section">
                <FileManagerComponent ref={ s => (fileObj = s as
FileManagerComponent)} id="file" view="Details"
                    ajaxSettings = {{
                        downloadUrl: hostUrl + 'api/FileManager/Download',
                        getImageUrl: hostUrl + "api/FileManager/GetImage",
                        uploadUrl: hostUrl + 'api/FileManager/Upload',
                        url: hostUrl + "api/FileManager/FileOperations"
                    }}
                    contextMenuSettings = {{
                        file: ['Open', '|', 'Delete', 'Rename', '|', 'Details',
'Custom'],
                        folder: ['Open', '|', 'Delete', 'Rename', '|', 'Details',
'Custom'],
                        layout: ['SortBy', 'View', 'Refresh', '|', 'NewFolder',
'Upload', '|', 'Details', '|', 'SelectAll', 'Custom'],
                    }}
                    menuClick={menuClick} menuOpen={menuOpen} >
                <Inject services={[ NavigationPane, DetailsView, Toolbar]} />
            </FileManagerComponent>
        </div>
    </div>
    );
}

```



```
export default App;{% endraw %}
```

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render( <App />, document.getElementById('root') as HTMLElement);
```

Adding custom item to toolbar in React File manager component

You can modify the items displayed in the toolbar by utilizing the [toolbarItems](#) API. To display both default and customized items, it's essential to assign a unique **name** to each item. Additionally, you have the flexibility to alter the default items by adjusting properties such as **tooltipText**, **iconCss**, **Text**, **suffixIcon** and more. This level of customization allows you to tailor the toolbar to your specific requirements and design preferences. The names used in the code example below serve as unique identifiers for default toolbar items, while custom items can be assigned any unique name value to distinguish them from the defaults.

For instance, here's an example of how to add a custom checkbox to the toolbar using the **template** property. Here we have modified the default **New Folder** item and added a custom toolbar item for selection.

APP.JSX

```
{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject,
ToolbarItemsDirective, ToolbarItemDirective } from '@syncfusion/ej2-react-
filemanager';
import { CheckBoxComponent } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
function App() {
  let fileObj;
  let checkbox;
  let hostUrl = "https://ej2-aspcore-service.azurewebsites.net/";
  function checkboxTemplate() {
    return (
      <CheckBoxComponent ref={ scope => (checkbox = scope) }
label="Select All" checked={false} change={onChange} />
    );
  }

  function onChange(args) {
    if (args.checked) {
      fileObj.selectAll();
      checkbox.label = 'Unselect All';
    }
    else {

```

```

        fileObj.clearSelection();
        checkbox.label = 'Select All';
    }
}
return (<div>
    <div className="control-section">
        <FileManagerComponent ref={s => (fileObj = s)} id="file"
view="Details" ajaxSettings={{
    downloadUrl: hostUrl + 'api/FileManager/Download',
    getImageUrl: hostUrl + "api/FileManager/GetImage",
    uploadUrl: hostUrl + 'api/FileManager/Upload',
    url: hostUrl + "api/FileManager/FileOperations"
}}>
            <ToolbarItemsDirective>
                <ToolbarItemDirective name= 'NewFolder' text= 'Create
folder' prefixIcon= 'e-plus' tooltipText= 'Create folder' />
                <ToolbarItemDirective name= 'Upload' />
                <ToolbarItemDirective name= 'SortBy' />
                <ToolbarItemDirective name= 'Refresh' />
                <ToolbarItemDirective name= 'Cut' />
                <ToolbarItemDirective name= 'Copy' />
                <ToolbarItemDirective name= 'Paste' />
                <ToolbarItemDirective name= 'Delete' />
                <ToolbarItemDirective name= 'Download' />
                <ToolbarItemDirective name= 'Rename' />
                <ToolbarItemDirective name= 'Select' />
            </ToolbarItemsDirective>
            <ToolbarItemDirective name= 'Selection' />
            <ToolbarItemDirective name= 'View' />
            <ToolbarItemDirective name= 'Details' />
        </ToolbarItemsDirective>
        <Inject services={[NavigationPane, DetailsView, Toolbar]} />
    </FileManagerComponent>
    </div>
</div>);
}
export default App;
{% endraw %}

```

APP.TSX

```

{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject,
ToolbarItemsDirective, ToolbarItemDirective } from '@syncfusion/ej2-react-
filemanager';
import { CheckBoxComponent, ChangeEventArgs } from '@syncfusion/ej2-react-
buttons';
import * as React from 'react';
function App() {
    let fileObj: FileManagerComponent;
    let checkbox: CheckBoxComponent;
    let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
    function checkboxTemplate() {
        return (
            <CheckBoxComponent ref={ scope => ((checkbox as any) = scope as
CheckBoxComponent)} label="Select All" checked={false} change={onChange} />

```

```

    );
  }
  function onChange(args: ChangeEventArgs) {
    if (args.checked) {
      fileObj.selectAll();
      checkbox.label = 'Unselect All';
    }
    else {
      fileObj.clearSelection();
      checkbox.label = 'Select All';
    }
  }
  return (
    <div>
      <div className="control-section">
        <FileManagerComponent ref={ s => ((fileObj as any) = s as
FileManagerComponent)} id="file" view="Details"
          ajaxSettings = {{
            downloadUrl: hostUrl + 'api/FileManager/Download',
            getImageUrl: hostUrl + "api/FileManager/GetImage",
            uploadUrl: hostUrl + 'api/FileManager/Upload',
            url: hostUrl + "api/FileManager/FileOperations"
          }}>
          <ToolbarItemsDirective>
            <ToolbarItemDirective name= 'NewFolder' text= 'Create
folder' prefixIcon= 'e-plus' tooltipText= 'Create folder' />
            <ToolbarItemDirective name= 'Upload' />
            <ToolbarItemDirective name= 'SortBy' />
            <ToolbarItemDirective name= 'Refresh' />
            <ToolbarItemDirective name= 'Cut' />
            <ToolbarItemDirective name= 'Copy' />
            <ToolbarItemDirective name= 'Paste' />
            <ToolbarItemDirective name= 'Delete' />
            <ToolbarItemDirective name= 'Download' />
            <ToolbarItemDirective name= 'Rename' />
            <ToolbarItemDirective name= 'Select'
template={checkboxTemplate} />
            <ToolbarItemDirective name= 'Selection' />
            <ToolbarItemDirective name= 'View' />
            <ToolbarItemDirective name= 'Details' />
          </ToolbarItemsDirective>
          <Inject services={[ NavigationPane, DetailsView, Toolbar]}
/>
        </FileManagerComponent>
      </div>
    </div>
  );
}
export default App;{% endraw %}

```

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render( <App />, document.getElementById('root') as HTMLElement);
```

Enable disable toolbar item in React File manager component

The toolbar items can be enabled/disabled by specifying the items in [enableToolbarItems](#) or [disableToolbarItems](#) methods respectively.

The following example shows enabling and disabling toolbar items on button click.

APP.JSX

```
{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject
} from '@syncfusion/ej2-react-filemanager';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
function App() {
  let fileObj;
  let hostUrl = "https://ej2-aspcore-service.azurewebsites.net/";
  function onEnable() {
    fileObj.enableToolbarItems(["newfolder"]);
  }
  function onDisable() {
    fileObj.disableToolbarItems(["newfolder"]);
  }
  return (<div>
    <ButtonComponent id='enable' style={{ "margin": "10px" }}
    onClick={onEnable.bind(this)} cssClass='e-success'>Enable New Folder toolbar
    item</ButtonComponent>
    <ButtonComponent id='disable' style={{ "margin": "10px" }}
    onClick={onDisable.bind(this)} cssClass='e-danger'>Disable New Folder
    toolbar item</ButtonComponent>
    <div className="control-section">
      <FileManagerComponent ref={s => (fileObj = s)} id="file"
      height={"330px"} view="Details" ajaxSettings={{
        downloadUrl: hostUrl + 'api/FileManager/Download',
        getImageUrl: hostUrl + "api/FileManager/GetImage",
        uploadUrl: hostUrl + 'api/FileManager/Upload',
        url: hostUrl + "api/FileManager/FileOperations"
      }} toolbarSettings={{ items: ['NewFolder', 'Refresh', 'View',
      'Details'] }}>
        <Inject services={[NavigationPane, DetailsView, Toolbar]}/>
        </FileManagerComponent>
      </div>
    </div>);
}
export default App;
{% endraw %}
```

APP.TSX

```
{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject
} from '@syncfusion/ej2-react-filemanager';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
function App() {
  let fileObj: FileManagerComponent;
  let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
  function onEnable() {
    fileObj.enableToolbarItems(["newfolder"]);
  }
  function onDisable() {
    fileObj.disableToolbarItems(["newfolder"]);
  }
  return (
    <div>
      <ButtonComponent id='enable' style= {{"margin": "10px"}}
onClick={onEnable.bind(this)} cssClass='e-success'>Enable New Folder toolbar
item</ButtonComponent>
      <ButtonComponent id='disable' style= {{"margin": "10px"}}
onClick={onDisable.bind(this)} cssClass='e-danger'>Disable New Folder
toolbar item</ButtonComponent>
      <div className="control-section">
        <FileManagerComponent ref={ s => (fileObj = s as
FileManagerComponent)} id="file" height={"330px"} view="Details"
        ajaxSettings = {{
          downloadUrl: hostUrl + 'api/FileManager/Download',
          getImageUrl: hostUrl + "api/FileManager/GetImage",
          uploadUrl: hostUrl + 'api/FileManager/Upload',
          url: hostUrl + "api/FileManager/FileOperations"
        }}
        toolbarSettings = {
          { items: ['NewFolder', 'Refresh', 'View', 'Details']}
        } >
        <Inject services=[ NavigationPane, DetailsView, Toolbar]>
      />
    </FileManagerComponent>
  </div>
</div>
);
}
export default App;{% endraw %}
```

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render( <App />, document.getElementById('root') as HTMLElement);
```

Customize custom thumbnail in React File manager component

The default appearance of the file manager can customize with your own icon by using [showThumbnail](#) property.

The following example demonstrate how to add a custom icon in largeicons view.

APP.JSX

```
{% raw %}
import { FileManagerComponent, Inject, NavigationPane, Toolbar } from
 '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
  let fileObj;
  let hostUrl = "https://ej2-aspcore-service.azurewebsites.net/";
  return (<div>
    <div className="control-section">
      <FileManagerComponent ref={s => (fileObj = s)} id="file"
showThumbnail={false} ajaxSettings={{
        downloadUrl: hostUrl + 'api/FileManager/Download',
        getImageUrl: hostUrl + 'api/FileManager/GetImage',
        uploadUrl: hostUrl + 'api/FileManager/Upload',
        url: hostUrl + 'api/FileManager/FileOperations'
      }}>
        <Inject services={[NavigationPane, Toolbar]}/>
      </FileManagerComponent>
    </div>
  </div>);
}
export default App;
{% endraw %}
```

APP.TSX

```
{% raw %}
import { FileManagerComponent, Inject, NavigationPane, Toolbar} from
 '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
  let fileObj: FileManagerComponent;
  let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
  return (
    <div>
      <div className="control-section">
        <FileManagerComponent ref={ s => (fileObj = s as
FileManagerComponent)} id="file" showThumbnail={false}
          ajaxSettings = {{
            downloadUrl: hostUrl + 'api/FileManager/Download',
            getImageUrl: hostUrl + 'api/FileManager/GetImage',
            uploadUrl: hostUrl + 'api/FileManager/Upload',
            url: hostUrl + 'api/FileManager/FileOperations'
          }} >
          <Inject services={[ NavigationPane, Toolbar]} />
        </FileManagerComponent>
      </div>
    </div>
  );
}
```

```

    </div>
  );
}
export default App;{% endraw %}

```

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render( <App />, document.getElementById('root') as HTMLElement);

```

Nested items in React File manager component

FileManager can be rendered inside the other components like Tab, Dialog, and more.

- [Adding file manager inside the dialog](#)
- [Adding file manager inside the tab](#)

Adding file manager inside the dialog

The following example shows the file manager component rendered inside the dialog. Click the browse button in the Uploader element to open the File Manager inside the Dialog control.

APP.JSX

```

{% raw %}
import { DetailsView, Inject, FileManagerComponent, NavigationPane, Toolbar } from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
import { UploaderComponent } from '@syncfusion/ej2-react-inputs';
import { DialogComponent } from '@syncfusion/ej2-react-popups';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
function App() {
  let fileUploadObj;
  let dialogObj;
  let filemanagerObj;
  let animationSettings = { effect: 'None' };
  // 'Uploader' will be shown, if Dialog is closed
  function dialogClose() {
    document.getElementById('uploadFileManager').style.display = 'block';
  }
  // 'Uploader' will be hidden, if Dialog is opened
  function dialogOpen() {
    document.getElementById('uploadFileManager').style.display = 'none';
  }
  // File Manager's fileOpen event function
  function onFileOpen(args) {

```

```

    let file = args.fileDetails;
    if (file.isFile) {
        args.cancel = true;
        if (file.size <= 0) {
            file.size = 10000;
        }
        fileUploadObj.files = [{ name: file.name, size: file.size, type:
file.type }];
        dialogObj.hide();
    }
}
function btnClick() {
    dialogObj.show();
    filemanagerObj.path = "/";
    filemanagerObj.selectedItems = [];
    filemanagerObj.refresh();
}
let hostUrl = "https://ej2-aspcore-service.azurewebsites.net/";
let contextmenuItems = ['Open', '|', 'Cut', 'Copy', 'Delete', 'Rename',
'|', 'Details'];
return (<div>
    <div className="control-section">
        <div id='uploadFileManager' className="fileupload">
            <UploaderComponent id='fileUpload' type='file' ref={(scope) =>
{ fileUploadObj = scope; }}></UploaderComponent>
            <ButtonComponent id="openBtn"
onClick={btnClick.bind(this)}>File Browser</ButtonComponent>
        </div>
        <div id='target' className="control-section">
            <DialogComponent width='850px' id='dialog' target={'#target'}
ref={(scope) => { dialogObj = scope; }} header="Select a file"
showCloseIcon={true} visible={false} open={dialogOpen.bind(this)}
close={dialogClose.bind(this)} animationSettings={animationSettings}>
            <FileManagerComponent id="filemanager" ref={(scope) => {
filemanagerObj = scope; }} ajaxSettings={{
                url: hostUrl + "api/FileManager/FileOperations",
                getImageUrl: hostUrl + "api/FileManager/GetImage",
                uploadUrl: hostUrl + 'api/FileManager/Upload',
                downloadUrl: hostUrl + 'api/FileManager/Download'
            }} allowMultiSelection={false} toolbarSettings={{ items:
['NewFolder', 'Upload', 'Delete', 'Cut', 'Copy', 'Rename', 'SortBy',
'Refresh', 'Selection', 'View', 'Details'] }} contextMenuSettings={{ file:
contextmenuItems, folder: contextmenuItems }}
fileOpen={onFileOpen.bind(this)}>
            <Inject services={[NavigationPane, DetailsView,
Toolbar]}/>
        </FileManagerComponent>
    </DialogComponent>
    </div>
</div>
</div>);
}
export default App;
{% endraw %}

```

APP.TSX


```
{% raw %}
import { DetailsView, Inject, FileManagerComponent, NavigationPane, Toolbar
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
import { UploaderComponent } from '@syncfusion/ej2-react-inputs';
import { DialogComponent, AnimationSettingsModel } from '@syncfusion/ej2-
react-popups';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
function App() {
  let fileUploadObj: UploaderComponent;
  let dialogObj: DialogComponent;
  let filemanagerObj: FileManagerComponent;
  let animationSettings: AnimationSettingsModel = { effect: 'None' };
  // 'Uploader' will be shown, if Dialog is closed
  function dialogClose(): void {
    document.getElementById('uploadFileManager').style.display = 'block';
  }
  // 'Uploader' will be hidden, if Dialog is opened
  function dialogOpen(): void {
    document.getElementById('uploadFileManager').style.display = 'none';
  }
  // File Manager's fileOpen event function
  function onFileOpen(args: any): void {
    let file = (args as any).fileDetails;
    if (file.isFile) {
      args.cancel = true;
      if (file.size <= 0 ) { file.size = 10000; }
      fileUploadObj.files = [{name: file.name, size: file.size, type:
file.type }];
      dialogObj.hide();
    }
  }
  function btnClick(): void {
    dialogObj.show();
    filemanagerObj.path = "/";
    filemanagerObj.selectedItems = [];
    filemanagerObj.refresh();
  }
  let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
  let contextmenuItems: string[] = ['Open', '|', 'Cut', 'Copy', 'Delete',
'Rename', '|', 'Details'];
  return (
    <div>
      <div className="control-section">
        <div id='uploadFileManager' className="fileupload">
          <UploaderComponent id='fileUpload' type='file' ref = {(scope)
=> {fileUploadObj = scope}}></UploaderComponent>
          <ButtonComponent id="openBtn" onClick={ btnClick.bind(this)
}>File Browser</ButtonComponent>
        </div>
        <div id='target' className="control-section">
          <DialogComponent width='850px' id='dialog' target={'#target'}
ref={(scope) => {(dialogObj as any) = scope}} header="Select a file"
showCloseIcon={true}
          visible={false} open={dialogOpen.bind(this)}
close={dialogClose.bind(this)} animationSettings={animationSettings} >

```

```

        <FileManagerComponent id="filemanager" ref = {(scope) =>
        {(filemanagerObj as any) = scope}} ajaxSettings = {{
            url: hostUrl + "api/FileManager/FileOperations",
            getImageUrl: hostUrl + "api/FileManager/GetImage",
            uploadUrl: hostUrl + 'api/FileManager/Upload',
            downloadUrl: hostUrl + 'api/FileManager/Download'
        }} allowMultiSelection={false}
        toolbarSettings={{ items: ['NewFolder', 'Upload',
        'Delete', 'Cut', 'Copy', 'Rename', 'SortBy', 'Refresh', 'Selection', 'View',
        'Details'] }}
        contextMenuSettings={{ file: contextmenuItems, folder:
        contextmenuItems }} fileOpen={onFileOpen.bind(this)}>
        <Inject services={[ NavigationPane, DetailsView, Toolbar]}
    />
    </FileManagerComponent>
    </DialogComponent>
    </div>
    </div>
    </div>
    );
}
export default App;{% enddraw %}

```

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render( <App />, document.getElementById('root') as HTMLElement);

```

Adding file manager inside the tab

The following example demonstrate that the file manager component is placed inside the content area of tab element.

APP.JSX

```

{% raw %}
import * as React from 'react';
import { TabComponent, TabItemDirective, TabItemsDirective } from
'@syncfusion/ej2-react-navigations';
import { DetailsView, FileManagerComponent, Inject, NavigationPane, Toolbar
} from '@syncfusion/ej2-react-filemanager';
function App() {
    let fileObj;
    let tabObj;
    function select(args) {
        fileObj.refreshLayout();
    }
}

```

```
// Template for Pie Chart
function template1() {
    return (<div className="template">
        <div className="cnt-text">Overview</div>
        <div className="content">The file manager component contains
a context menu for performing file operations, large-icons view for
displaying the files and folders, and a breadcrumb for navigation. However,
these basic functionalities can be extended by using the additional feature
modules like toolbar, navigation pane, and details view to simplify the
navigation and file operations within the file system.</div>
        </div>);
}
function template2() {
    let hostUrl = "https://ej2-aspcore-service.azurewebsites.net/";
    return (<div className="template">
        <div className="content-title">
            <div className="cnt-text">File manager with default
functionalities</div>
        </div>
        <FileManagerComponent ref={s => (fileObj = s)} id="file"
allowDragAndDrop={true} ajaxSettings={{
            downloadUrl: hostUrl + 'api/FileManager/Download',
            getImageUrl: hostUrl + "api/FileManager/GetImage",
            uploadUrl: hostUrl + 'api/FileManager/Upload',
            url: hostUrl + "api/FileManager/FileOperations"
        }}>
            <Inject services={[NavigationPane, DetailsView,
Toolbar]}/>
        </FileManagerComponent>
    </div>);
}
let headertext;
headertext = [{ text: "Overview" }, { text: "File Manager" }];
return (<TabComponent ref={(tab) => { tabObj = tab; }}
showCloseButton={true} heightAdjustMode='None' height={320}
selected={select}>
    <TabItemsDirective>
        <TabItemDirective header={headertext[0]} content={template1}/>
        <TabItemDirective header={headertext[1]}
content={template2.bind(this)}/>
    </TabItemsDirective>
</TabComponent>);
}
export default App;
{% endraw %}
```

APP.TSX

```
{% raw %}
import * as React from 'react';
import { TabComponent, TabItemDirective, TabItemsDirective } from
'@syncfusion/ej2-react-navigations';
import { DetailsView, FileManagerComponent, Inject, NavigationPane, Toolbar
} from '@syncfusion/ej2-react-filemanager';
function App() {
    let fileObj: FileManagerComponent;
```

```

let tabObj: TabComponent;
function select(args: any): void {
    fileObj.refreshLayout();
}
// Template for Pie Chart
function template1(): JSX.Element {
    return(
        <div className="template" >
            <div className="cnt-text">Overview</div>
            <div className="content">The file manager component contains
a context menu for performing file operations, large-icons view for
displaying the files and folders, and a breadcrumb for navigation. However,
these basic functionalities can be extended by using the additional feature
modules like toolbar, navigation pane, and details view to simplify the
navigation and file operations within the file system.</div>
            </div>
        );
    }
    function template2(): JSX.Element {
        let hostUrl: string = "https://ej2-aspcore-
service.azurewebsites.net/";
        return(
            <div className="template" >
                <div className="content-title">
                    <div className="cnt-text">File manager with default
functionalities</div>
                </div>
                <FileManagerComponent ref={ s => (fileObj = s as
FileManagerComponent)} id="file" allowDragAndDrop={true}
                    ajaxSettings = {{
                        downloadUrl: hostUrl + 'api/FileManager/Download',
                        getImageUrl: hostUrl + "api/FileManager/GetImage",
                        uploadUrl: hostUrl + 'api/FileManager/Upload',
                        url: hostUrl + "api/FileManager/FileOperations"
                    }} >
                    <Inject services={[ NavigationPane, DetailsView, Toolbar]}
                />
                </FileManagerComponent>
            </div>
        );
    }
    let headertext: any;
    headertext = [{ text: "Overview" }, { text: "File Manager" }];
    return (
        <TabComponent ref={(tab) => { tabObj = tab }} showCloseButton={
true } heightAdjustMode='None' height={320} selected={select}>
            <TabItemsDirective>
                <TabItemDirective header={headertext[0]} content={ template1
as any } />
                <TabItemDirective header={headertext[1]} content={
template2.bind(this) as any }/>
            </TabItemsDirective>
        </TabComponent>
    );
}
export default App;{% endraw %}

```

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render( <App />, document.getElementById('root') as HTMLElement);
```

Create the custom file provider using NodeJS

Here we manipulate the Azure Blob Storage to supply the necessary data for the File Manager. We achieve this by utilizing NodeJS to fetch the required data from the Azure blob storage.

NodeJS acts as the bridge between the File Manager component and Azure Blob Storage, allowing seamless communication and data retrieval. Through this integration, the File Manager can access and interact with the data stored in Azure Blob Storage, enabling smooth file management operations.

Prerequisites

- Valid Azure blob storage account. (accountName, accountKey, endpointSuffix)
- Node version 14 above.

Introduction to Azure Blob Storage

Azure Blob Storage is a cloud-based object storage service provided by Microsoft Azure. It is designed to store and manage unstructured data, also known as "blobs" in the cloud. Blobs can be any type of data, such as images, videos, documents, backups, logs, and more.

Key concepts of Azure Blob Storage

Containers: In Azure Blob Storage, data is organized into containers. Containers are logical units that can hold one or more blobs. Think of them as directories or folders that help organize the data.

Blobs: Blobs are the actual data objects stored in Azure Blob Storage.

By understanding the fundamental concepts and use cases of Azure Blob Storage, you will be well-prepared to proceed with setting up and interacting with it using NodeJS in the custom File Provider.

Create NodeJS project

Following the steps to create the NodeJS project.

Create a new directory for your project and run the following command to initialize a new NodeJS project. This will create a package.json file.

```
`ts
```

```
npm init
```

```
,
```

Install the following packages.

- express
- @azure/storage-blob
- archiver
- body-parser
- cors
- esm
- multer

Open your text editor or integrated development environment (IDE) and create the index.js file start writing your NodeJS code. This file will serve as the entry point of your application.

```
`ts
const express = require('express');
const app = express();
const port = 3000;
app.get('/', (req, res) => {
  res.send('Hello, NodeJS!');
});
app.listen(port, () => {
  console.log(Server running on http://localhost:${port});
});
`
```

To start your NodeJS application, simply run the following command in your terminal, pointing to the entry point file:

```
`ts
node index.js
`
```

Initialize container client

We need to first get the BlobServiceClient. By using the connection string, we can obtain the BlobServiceClient. So, format the connection string as shown below.

```
`ts
Const connectionString =
DefaultEndpointsProtocol=https;AccountName=${accountName};AccountKey=${accountKey};E
ndpointSuffix=${EndpointSuffix};
`
```

We can obtain the BlobServiceClient and the **containerClient** using this connection String and the BlobServiceClient. the **containerName** is the container from your Azure blob storage account that you need to access.

```
`ts
```

```
import { BlobServiceClient } from "@azure/storage-blob";
const blobServiceClient = BlobServiceClient.fromConnectionString(connectionString);
const containerClient = blobServiceClient.getContainerClient(containerName);
`ts
```

File actions

Need to provide the following action to creating a new folder, copying and moving of files or folders, deleting, uploading, and downloading the files or folders in the file system

Read

Specify the directory name that needs to be accessed.

```
`ts
const directoryName = 'Files';
`
```

Create the **app.post** method with URL **‘/fileManager’**.

To identify the action by use this condition **req.body.action === ‘read’**

The following table represents the request parameters of **read** operations.

Parameter	Type	Default	Explanation
----	----	----	----
action	String	read	Name of the file operation.
path	String	-	Relative path from which the data has to be read.
showHiddenItems	Boolean	-	Defines show or hide the hidden items.
data	FileManagerDirectoryContent	-	Details about the current path (directory).

Example for request:

```
`ts
{
  action: "read",
  path: "/Videos/",
  showHiddenItems: false,
  data: [
    0:{
      name:"Videos",
      size:0,
      dateModified:"2023-09-14T14:28:27.000Z",
      dateCreated: "2023-09-14T11:16:57.000Z",
      hasChild:true,
```

```

isFile:false,
type:"Directory",
filterPath:"/",
fmicon: "e-fe-folder",
fmiconClass: "e-fe-folder",
fmid: "fetree0",
fmmodified: "September 14, 2023 19:58"
}
]
}
,

```

The following table represents the response parameters of **read** operations.

Parameter	Type	Default	Explanation
----	----	----	----
cwd	FileManagerDirectoryContent	-	Path (Current Working Directory) details.
files	FileManagerDirectoryContent[]	-	Details of files and folders present in given path or directory.
error	ErrorDetails	-	Error Details

The following table represents the contents of **FileManagerDirectoryContent** in the file manager request and response.

Parameter	Type	Default	Explanation	Is required
----	----	----	----	----
name	String	-	File name	Yes
dateCreated	String	-	Date in which file was created (UTC Date string).	Yes
dateModified	String	-	Date in which file was last modified (UTC Date string).	Yes
filterPath	String	-	Relative path to the file or folder.	Yes
hasChild	Boolean	-	Defines this folder has any child folder or not.	Yes
isFile	Boolean	-	Say whether the item is file or folder.	Yes
size	Number	-	File size	Yes
type	String	-	File extension	Yes
permission	AccessRules	-	File extension	Optional
caseSensitive	Boolean	-	Defines search is case sensitive or not.	Optional
action	String	read	Name of the file operation.	Optional

names	String[]	-	Name list of the items to be downloaded.	Optional
data	FileManagerDirectoryContent	-	Details of the download item.	Optional
uploadFiles	IList<IFormFile>	-	File that are uploaded.	Optional
newName	String	-	New name for the item.	Optional
searchString	String	-	String to be searched in the directory.	Optional
targetPath	String	-	Relative path where the items to be pasted are located.	Optional
targetData	FileManagerDirectoryContent	-	Details of the copied item.	Optional
renameFiles	String[]	-	Details of the renamed item.	Optional

The following table represents the **AccessRules** properties available for file and folder:

Properties	Applicable for file	Applicable for folder	Description
---	---	---	---
Copy	Yes	Yes	Allows access to copy a file or folder.
Read	Yes	Yes	Allows access to read a file or folder.
Write	Yes	Yes	Allows permission to write a file or folder.
WriteContents	No	Yes	Allows permission to write the content of folder.
Download	Yes	Yes	Allows permission to download a file or folder.
Upload	No	Yes	Allows permission to upload to the folder.
Path	Yes	Yes	Specifies the path to apply the rules, which are defined.
Role	Yes	Yes	Specifies the role to which the rule is applied.
IsFile	Yes	Yes	Specifies whether the rule is specified for folder or file.

Example for response:

```

`ts
{
  cwd:
  {
    filterPath: "/",
    hasChild: true,
    name: "Videos",
    size: 0,
    type: "File Folder"
  },
  files:[

```

```
0:{
  dateCreated: "2023-09-14T11:16:57.000Z"
  dateModified: "2023-09-14T11:16:57.000Z"
  filterPath: "/Videos/"
  hasChild: false
  isFile: true
  name: "about.txt"
  size: 29
  type: ".txt"
}
],
error:null
},
,
```

Get image

Create the **app.get** method with URL **‘/fileManager/GetImage’**.

The following table represents the request parameters of **GetImage** operations.

Parameter	Type	Default	Explanation
---- ---- ---- ----			
path	String	-	Relative path to the image file

The req.query.path contains the exact path of the images. For example: **"/Jack.png"**.

Download the blob (image) from Azure Blob Storage using the blobClient and stores the result in the downloadResponse variable.

Pipe the readableStreamBody from the blob to the res response. It means the image data will be streamed from the Azure Blob Storage directly to the client's browser when the image URL is accessed.

Handle the exception if the image is not available in the given path.

Download

Create the **app.post** method with URL **‘/fileManager/Download’**.

The following table represents the request parameters of *download* operations.

Parameter	Type	Default	Explanation
---- ---- ---- ----			
action	String	download	Name of the file operation
path	String	-	Relative path to location where the files to download are present.
names	String[]	-	Name list of the items to be downloaded.

|data| [FileManagerDirectoryContent](#)|-|Details of the download item.|

Example for request:

```
`ts
{
  action: 'download',
  path: '/Downloads/Testing/',
  names: [ 'About.txt' ],
  data: [
    0:{
      name: 'About.txt',
      type: '.txt',
      isFile: true,
      size: 29,
      dateModified: '2023-09-14T06:03:52.000Z',
      hasChild: false,
      filterPath: '/Downloads/Testing/',
      fmcreated: null,
      fmmodified: 'September 14, 2023 11:33',
      fmiconClass: 'e-fe-txt',
      fmicon: 'e-fe-txt'
    }
  ]
}
```

The **req.body.downloadInput** must be parsed to get the **downloadObj**. Download the blob from Azure Blob Storage using the blobClient.

Download the blob from Azure Blob Storage using the blobClient and Pipe the readableStreamBody to the response object.

Create the archive file to download the multiple Files, Folders and single folders, then pipe the archive to the response.

Upload

Create the **app.post** method with URL **'/fileManager/Upload'**.

The following table represents the request parameters of *Upload* operations.

Parameter	Type	Default	Explanation
-----------	------	---------	-------------

```
|----|----|----|----|
```

```
|action|String|Save|Name of the file operation.|
```

```
|path|String|-|Relative path to the location where the file has to be uploaded.|
```

```
|uploadFiles|IList<IFormFile>|-|File that are uploaded.|
```

Example for request:

```
`ts
{
  path: '/Pictures/',
  action: 'save',
  data: [
    0:{
      name: 'Pictures',
      type: 'File Folder',
      isFile: true,
      size: 0,
      dateModified: '2023-09-14T06:03:52.000Z',
      hasChild: true,
      filterPath: "",
      fmid: 'fetree1',
    }
  ],
  filename: 'bird (2).jpg'
}
```

Multer is a popular middleware used to handle file uploads in Express-based web applications. Create the Multer config to store the upload files in buffer.

```
`ts
const multerConfig = {
  storage: memoryStorage()
};
```

Need to handle the 3 cases here.

- Save

- Keep Both (action name will be **keepboth**)
- Replace (action name will be **replace**)

Create the **getBlockBlobClient** with the **req.body.filename**. If the blob does not exist, then upload the data to that blob. If the blob already exists, then create an error message containing "File Already Exists" and send the response.

Create a new folder

The following table represents the request parameters of *create* operations.

Parameter	Type	Default	Explanation
action	String	create	Name of the file operation.
path	String	-	Relative path in which the folder has to be created.
name	String	-	Name of the folder to be created.
data	FileManagerDirectoryContent	-	Details about the current path (directory).

Example for request:

```
`ts
action: "create",
data: [
  0:{
    filterPath: "/",
    hasChild: true,
    isFile: false,
    name: "files",
    nodeId: "fe_tree",
    size: 0,
    type: ""
  }
],
name: "Hello",
path: "/test/"
,
```

Check the existence of the folder, If the folder exists then send the error message containing "Folder already exists". If it does not exist, then create the folder. Create the folder by creating the file in that folder's path.

The following table represents the response parameters of *create* operations.

Parameter	Type	Default	Explanation
-----------	------	---------	-------------

```
|----|----|----|----|
|files|FileManagerDirectoryContent[]|-|Details of the created folder|
|error|ErrorDetails|-|Error Details|
```

Example for response:

```
`ts
{
  cwd: null,
  files: [
    0:{
      dateCreated: "2023-09-14T10:52:25.000Z",
      dateModified: "2023-09-14T10:52:25.000Z",
      filterPath: null,
      hasChild: false,
      isFile: false,
      name: "New",
      size: 0,
      type: "Directory"
    }
  ],
  details: null,
  error: null
}
```

[Rename](#)

The following table represents the request parameters of *rename* operations.

Parameter	Type	Default	Explanation
action	String	rename	Name of the file operation.
path	String	-	Relative path in which the item is located.
name	String	-	Current name of the item to be renamed.
newName	String	-	New name for the item.
data	FileManagerDirectoryContent	-	Details of the item to be renamed.

Example for request:

```
`ts
{
  action: "rename",
  data: [
    0:{
      dateCreated: "2023-09-14T10:41:17.000Z",
      filterPath: "/Pictures/Nature/",
      hasChild: false,
      iconClass: "e-fe-image",
      isFile: true,
      name: "seaviews.jpg",
      size: 95866,
      type: ".jpg"
    }
  ],
  newName: "seaview.jpg",
  name: "seaviews.jpg",
  path: "/Pictures/Nature/"
}
```

Renaming can be done by copy the folder or file from the source blob instance to target blob instance. If the file exists, then send the error message as response.

The following table represents the response parameters of *rename* operations.

Parameter	Type	Default	Explanation
files	FileManagerDirectoryContent[]	-	Details of the renamed item.
error	ErrorDetails	-	Error Details

Example for response:

```
`ts
{
  cwd:null,
  files:[
    0:{
```

```
name:"seaview.jpg",
size:95866,
dateModified:"2023-09-14T11:16:57.000Z",
dateCreated:"2023-09-14T10:41:17.000Z",
hasChild:false,
isFile:true,
type:".jpg",
filterPath:"/Pictures/Nature/"
}
],
error:null,
details:null
},
,
```

Delete

The following table represents the request parameters of *delete* operations.

Parameter	Type	Default	Explanation
----	----	----	----
action	String	delete	Name of the file operation.
path	String	-	Relative path where the items to be deleted are located.
names	String[]	-	List of the items to be deleted.
data	FileManagerDirectoryContent	-	Details of the item to be deleted.

Example for request:

```
`ts
{
  action: "delete",
  path: "/",
  names: ["bird.jpg"],
  data: [
    0:{
      dateModified: "2023-09-14T09:12:53.000Z",
      filterPath: "/",
      hasChild: false,
```



```
iconClass: "e-fe-image",
isFile: true,
name: "bird.jpg",
size: 102182,
type: ".jpg"
}
]
}
`
```

To delete the file, directly get the file instance and delete the file. To delete the folder, we need to get all files inside that folder and delete all those files.

Handle the null exception if file or folder is not available.

The following table represents the response parameters of *delete* operations.

Parameter	Type	Default	Explanation
----	----	----	----
files	FileManagerDirectoryContent[]	-	Details about the deleted item(s).
error	ErrorDetails	-	Error Details

Example for response:

```
`ts
{
  cwd: null,
  details: null,
  error: null,
  files: [
    0:{
      dateModified: "2023-09-14T09:12:53.000Z",
      filterPath: "/",
      hasChild: false,
      iconClass: "e-fe-image",
      isFile: true,
      name: "bird.jpg",
      size: 102182,
      type: ".jpg"
    }
  ]
}
```

```
}  
]  
}  
,
```

Details

The following table represents the request parameters of *details* operations.

Parameter	Type	Default	Explanation
----	----	----	----
action	String	details	Name of the file operation.
path	String	-	Relative path where the items are located.
names	String[]	-	List of the items to get details.
data	FileManagerDirectoryContent	-	Details of the selected item.

Example:

```
`ts  
{  
  action: "details",  
  path: "/FileContents/",  
  names: ["bird.jpg"],  
  data: [  
    0:{  
      dateModified: "2023-09-14T09:12:53.000Z",  
      filterPath: "/",  
      hasChild: false,  
      iconClass: "e-fe-image",  
      isFile: true,  
      name: "bird.jpg",  
      size: 102182,  
      type: ".jpg"  
    }  
  ]  
}
```

To get the file and folder details, iterate the **req.body.names** to get the details of files and folders. If the data is file, then get the file instance and get the properties using the **getProperties** method. If the data

is Folder, then get the blobs details under that folder using **listBlobsFlat** method. Get the required properties and send final response. Handled the null exception if the file or folder is not available.

The following table represents the response parameters of *details* operations.

Parameter	Type	Default	Explanation
----	----	----	----
details	FileManagerDirectoryContent	-	Details of the requested item(s).
error	ErrorDetails	-	Error Details

Example:

```
`ts
{
  cwd:null,
  files:null,
  error:null,
  details:
  {
    created: "2023-09-15T06:04:12.000Z"
    isFile: true
    location: "Files/bird.jpg"
    modified: "2023-09-15T06:04:12.000Z"
    multipleFiles: false
    name: "bird.jpg"
    size: "100.0 KB"
  }
}
```

[Search](#)

The following table represents the request parameters of *search* operations.

Parameter	Type	Default	Explanation
----	----	----	----
action	String	search	Name of the file operation.
path	String	-	Relative path to the directory where the files should be searched.
showHiddenItems	Boolean	-	Defines show or hide the hidden items.
caseSensitive	Boolean	-	Defines search is case sensitive or not.
searchString	String	-	String to be searched in the directory.

|data| [FileManagerDirectoryContent](#) |-| Details of the searched item. |

Example for request:

```
`ts
{
  action: "search",
  path: "/asia/",
  searchString: "nature",
  showHiddenItems: false,
  caseSensitive: false,
  data: [
    0:{
      filterPath: "/",
      hasChild: true,
      name: "asia",
      size: 0,
      type: "File Folder",
      fmid: "fetree1"
    }
  ]
}
```

Replace the '*' in the **req.body.searchString** and assign the result to new variable. Get all blobs under this directory and check that path contains the search string

The following table represents the response parameters of *search* operations.

Parameter	Type	Default	Explanation
-----------	------	---------	-------------

----	----	----	----
------	------	------	------

cwd	FileManagerDirectoryContent	-	Path (Current Working Directory) details.
-----	---	---	---

files	FileManagerDirectoryContent[]	-	Files and folders in the searched directory that matches the search input.
-------	-------------------------------	---	--

error	ErrorDetails	-	Error Details
-------	------------------------------	---	---------------

Example for response:

```
`ts
{
  cwd:
```

```
{
  name:"asia",
  size:0,
  dateModified:"2023-09-14T14:28:27.000Z",
  dateCreated:"2023-09-14T11:16:57.000Z",
  hasChild:true,
  isFile:false,
  type:"File Folder",
  filterPath:"/"
},
files:[
  0: {
    dateModified: "2023-09-15T06:22:00.000Z",
    filterPath: "/asia/",
    hasChild: false,
    isFile: true,
    name: "about.txt",
    size: 42,
    type: ".txt"
  }
],
error:null,
details:null
},
`
```

Copy and move

The following table represents the request parameters of *copy* operations.

Parameter	Type	Default	Explanation
---- ---- ---- ----			
action	String	copy	Name of the file operation.
path	String	-	Relative path to the directory where the files should be copied.
names	String[]	-	List of files to be copied.
targetPath	String	-	Relative path where the items to be pasted are located.

data	[FileManagerDirectoryContent](#)	-	Details of the copied item.
targetData	[FileManagerDirectoryContent](#)	-	Details of the copied item.
renameFiles	String[]	-	Details of the renamed item.

Example for request:

```
`ts
{
  action: "copy",
  path: "/",
  names: ["bird.jpg"],
  renameFiles: [],
  targetPath: "/asia/",
  targetData: {
    filterPath: "/",
    hasChild: true,
    name: "asia",
    size: 0,
    type: "File Folder",
    fmid: "fetree1",
  },
  data: [
    0:{
      dateCreated: "2023-09-15T06:04:12.000Z",
      dateModified: "2023-09-15T06:04:12.000Z",
      filterPath: "/",
      hasChild: false,
      isFile: true,
      name: "bird.jpg",
      size: 102182,
      type: ".jpg",
      fmcreated: "September 15, 2023 11:34",
      fmhtmlAttr: {class: "e-large-icon", title: "bird.jpg"},
      fmiconClass: "e-fe-image",
      fmimageAttr: {alt: "bird.jpg"},
```

```
fmimageUrl: "http://localhost:3000/GetImage?path=%2Fbird.jpg&time=1694760243307",
fmmodified: "September 15, 2023 11:34",
}
]
}
,
```

Action name will be **move** for move action.

The following table represents the response parameters of *copy* operations.

Parameter	Type	Default	Explanation
----	----	----	----
cwd	FileManagerDirectoryContent	-	Path (Current Working Directory) details.
files	FileManagerDirectoryContent[]	-	Details of copied files or folders
error	ErrorDetails	-	Error Details

Example for response:

```
`ts
{
  cwd:null,
  files:[
    0:{
      dateCreated: "2023-09-15T06:55:03.000Z"
      dateModified: "2023-09-15T06:55:03.000Z"
      filterPath: "/asia/"
      hasChild: false
      isFile: true
      name: "bird.jpg"
      previousName: null
      size: 102182
      type: ".jpg"
    }
  ],
  error:null,
  details:null
}
```

Need to handle two cases.

- Directory copy and move.
- File copy and move.

Create the **isRename** variable to store the is request is rename or not. If the **isRename** is false then check the existence of the folders, and if folder is existing, then send the error message. If **isRename** is true, then don't check the existence of the folder.

To move or copy the folders you need to get all the blobs from that folder and create the new path for each blob and copy the data from the old path to the new path. To move or copy the files copy the data from the source blob client to target client. If the action is move then delete the old blob.

Note: To get the complete project, refer to this [link](#)

Preselect the items in React File manager component

You can preselect the items in the File Manager component by utilizing the [fileLoad](#) event. The required file and folder names must be stated in the declared string array variable. In the event handler, we have to assign the array of file and folder names to the [selectedItems](#) property.

The following example shows how to preselect the items.

APP.JSX

```
{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject
} from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
  let fileObj;
  let fileNames = [
    'Documents',
    'EJ2 File Manager.docx',
    'EJ2 File Manager.pdf',
    'File Manager PPT.pptx'
  ];
  let hostUrl = "https://ej2-aspcore-service.azurewebsites.net/";
  function fileLoad(args) {
    // Set the array of file names to enable selection.
    fileObj.selectedItems = fileNames;
  }
  return (<div>
    <div className="control-section">
      <FileManagerComponent ref={s => (fileObj = s)} id="file"
view="Details" ajaxSettings={{
        downloadUrl: hostUrl + 'api/FileManager/Download',
        getImageUrl: hostUrl + "api/FileManager/GetImage",
        uploadUrl: hostUrl + 'api/FileManager/Upload',
        url: hostUrl + "api/FileManager/FileOperations"
      }} fileLoad={fileLoad}>
        <Inject services={[NavigationPane, DetailsView, Toolbar]}/>
      </FileManagerComponent>
    </div>
  </div>);
}
```



```

}
export default App;
{% endraw %}

```

APP.TSX

```

{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject,
FileLoadEventArgs } from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
  let fileObj: FileManagerComponent;
  let fileNames: string[] = [
    'EJ2 File Manager.docx',
    'EJ2 File Manager.pdf',
    'File Manager PPT.pptx',
    'Documents'
  ];
  let hostUrl: string = "https://ej2-aspcore-service.azurewebsites.net/";
  function fileLoad(args: FileLoadEventArgs) {
    // Set the array of file names to enable selection.
    fileObj.selectedItems = fileNames;
  }
  return (
    <div>
      <div className="control-section">
        <FileManagerComponent ref={ s => ((fileObj as any) = s as
FileManagerComponent)} id="file" view="Details"
          ajaxSettings = {{
            downloadUrl: hostUrl + 'api/FileManager/Download',
            getImageUrl: hostUrl + "api/FileManager/GetImage",
            uploadUrl: hostUrl + 'api/FileManager/Upload',
            url: hostUrl + "api/FileManager/FileOperations"
          }} fileLoad={fileLoad}>
          <Inject services={[ NavigationPane, DetailsView, Toolbar]}
        />
      </FileManagerComponent>
    </div>
  </div>
  );
}
export default App;
{% endraw %}

```

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';

```

```
import App from './App';
ReactDOM.render( <App />, document.getElementById('root') as HTMLElement);
```

Perform custom sorting in React FileManager component

The FileManager component provides a way to customize the default sort action for the LargeIconsView by defining the [sortComparer](#) property and for sorting individual columns in the DetailsView by defining the [sortComparer](#) property in the [columns](#) property.

Note: To achieve natural sorting like Windows Explorer, you can import the `SortComparer` function from the '@syncfusion/ej2-react-filemanager'. If you want to perform your own custom sorting, you can define your own [Link to the Video](#) function.

The following example demonstrates how to define custom sort comparer function to achieve natural sorting behavior for the LargeIconsView and name column in DetailsView.

APP.JSX

```
{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject,
sortComparer } from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
  let hostUrl = "https://ej2-aspcore-service.azurewebsites.net/";
  return (<div className="control-section">
    <FileManagerComponent id="file" ajaxSettings={{
      downloadUrl: hostUrl + 'api/NaturalSorting/Download',
      getImageUrl: hostUrl + "api/NaturalSorting/GetImage",
      uploadUrl: hostUrl + 'api/NaturalSorting/Upload',
      url: hostUrl + "api/NaturalSorting/FileOperations"
    }} detailsViewSettings={{
      columns: [
        { field: 'name', headerText: 'File Name', minWidth: 120, width:
'auto', sortComparer: sortComparer },
        { field: 'size', headerText: 'File Size', minWidth: 50, width:
'110', template: '${size}' },
        { field: '_fm_modified', headerText: 'Date Modified', minWidth: 50,
width: '190' }
      ]
    }} sortComparer={sortComparer}>
      <Inject services={[NavigationPane, DetailsView, Toolbar]} />
    </FileManagerComponent>
  </div>);
}
export default App;
{% endraw %}
```

APP.TSX

```
{% raw %}
import { DetailsView, FileManagerComponent, NavigationPane, Toolbar, Inject,
sortComparer } from '@syncfusion/ej2-react-filemanager';
import * as React from 'react';
function App() {
  let hostUrl : string = "https://ej2-aspcore-service.azurewebsites.net/";
  return (<div className="control-section">
```

```

<FileManagerComponent id="file" ajaxSettings={{
  downloadUrl: hostUrl + 'api/NaturalSorting/Download',
  getImageUrl: hostUrl + "api/NaturalSorting/GetImage",
  uploadUrl: hostUrl + 'api/NaturalSorting/Upload',
  url: hostUrl + "api/NaturalSorting/FileOperations"
}} detailsViewSettings={{
  columns: [
    { field: 'name', headerText: 'File Name', minWidth: 120, width:
'auto', sortComparer: sortComparer },
    { field: 'size', headerText: 'File Size', minWidth: 50, width:
'110', template: '${size}' },
    { field: '_fm_modified', headerText: 'Date Modified', minWidth: 50,
width: '190' }
  ]
  sortComparer={sortComparer}>
  <Inject services={[NavigationPane, DetailsView, Toolbar]} />
</FileManagerComponent>
</div>);
}
export default App;
{% endraw %}

```

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import App from './App';
ReactDOM.render( <App />, document.getElementById('root') as HTMLElement);

```

FloatingActionButton

Getting Started with React Floating Action Button Component

This section explains how to create a simple Floating Action Button and demonstrate the basic usage of the Floating Action Button component in a React environment.

To get start quickly with React Floating Action Button component, you can check on this video:

Dependencies

The list of dependencies required to use the Floating Action Button component in your application is given below:

```

`js
|-- @syncfusion/ej2-react-buttons
|-- @syncfusion/ej2-react-base
|-- @syncfusion/ej2-base

```

```
|-- @syncfusion/ej2-buttons
```

```
,
```

Installation and Configuration

You can use [Create-react-app](#) to setup

the applications. To install `create-react-app` run the following command.

```
`bash
```

```
npm install -g create-react-app
```

```
,
```

Start a new project using `create-react-app` command as follows

```
,
```

```
create-react-app quickstart --scripts-version=react-scripts-ts
```

```
cd quickstart
```

```
,
```

```
,
```

```
create-react-app quickstart
```

```
cd quickstart
```

```
,
```

'react-scripts-ts' is used for creating React app with typescript.

Adding Syncfusion packages

All the available Essential JS 2 packages are published in [npmjs.com](https://www.npmjs.com) public registry.

To install Floating Action Button component, use the following command

```
`bash
```

```
npm install @syncfusion/ej2-react-buttons --save
```

```
,
```

Adding Floating Action Button Component to the Application

To include the Floating Action Button component in your application import the `FabComponent` from `ej2-react-buttons` package in `App.tsx`.

Add the Floating Action Button component in application as shown in below code example.

```
`ts
```

```
{ / Import the Floating Action Button / }
```

```
import { FabComponent } from '@syncfusion/ej2-react-buttons';
```

```
import * as React from 'react';
```

```
import './App.css';
```

```
{ / To render Floating Action Button. / }
```

```
function App() {  
  return (  
    <FabComponent id='fab'></FabComponent>  
  );  
}  
  
export default App;  
`
```

Adding CSS reference

Import the Floating Action Button component's required CSS references as follows in `src/App.css`.

```
`css  
  
@import "../node_modules/@syncfusion/ej2-base/styles/material.css";  
@import "../node_modules/@syncfusion/ej2-buttons/styles/material.css";  
`
```

Running the application

Run the application in the browser using the following command:

```
`  
  
npm start  
`
```

The following example shows a basic Floating Action Button component.

APP.JSX

```
{% raw %}  
import { enableRipple } from '@syncfusion/ej2-base';  
import { FabComponent } from '@syncfusion/ej2-react-buttons';  
import * as React from 'react';  
import * as ReactDOM from 'react-dom';  
enableRipple(true);  
function App() {  
  return (<div>  
    <div id="targetElement" style={{ position: 'relative',  
minHeight: '350px', border: '1px solid' }}></div>  
    { /* To render Floating Action Button with position. */}  
    <FabComponent id='fab' content='Add'  
target='#targetElement'></FabComponent>  
    </div>);  
}  
export default App;  
ReactDOM.render(<App />, document.getElementById('button'));  
{% endraw %}
```

APP.TSX

```
{% raw %}  
import { enableRipple } from '@syncfusion/ej2-base';
```

```
import { FloatingActionButton } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
enableRipple(true);
function App() {
    return (
        <div>
            <div id="targetElement" style={{ position: 'relative',
minHeight: '350px', border: '1px solid' }}></div>
            /* To render Floating Action Button with position. */
            <FABComponent id='fab' content='Add'
target='#targetElement'></FABComponent>
        </div>
    );
}
export default App;
ReactDOM.render(<App />, document.getElementById('button'));
{% endraw %}
```

Click event

The floating action button control triggers the `onclick` event when you click on the floating action button. You can use this event to perform the required action.

APP.JSX

```
{% raw %}
import { FloatingActionButton } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
function App() {
    function onClick() {
        alert("Edit is clicked!");
    }
    return <div>
        <div id="targetElement" style={{ position: 'relative',
minHeight: '350px', border: '1px solid' }}></div>
        /* To render Floating Action Button */
        <FABComponent id='fab' iconCss='e-icons e-edit' content='Edit'
onClick={onClick} target='#targetElement'></FABComponent>
    </div>;
}
export default App;
ReactDOM.render(<App />, document.getElementById('button'));
{% endraw %}
```

APP.TSX

```
{% raw %}
import { FloatingActionButton } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
function App() {
    function onClick(): void {
        alert("Edit is clicked!");
    }
}
```

```

    return (
      <div>
        <div id="targetElement" style={{ position: 'relative',
minHeight: '350px', border: '1px solid' }}></div>
        { /* To render Floating Action Button */ }
        <FabComponent id='fab' iconCss='e-icons e-edit' content='Edit'
onClick={onClick} target='#targetElement'></FabComponent>
      </div>
    );
  }
  export default App;
  ReactDOM.render(<App />, document.getElementById('button'));
  {% endraw %}

```

INDEX.CSS

```

/* Represents the styles for loader */
#loader {
  color: #008cff;
  height: 40px;
  left: 45%;
  position: absolute;
  top: 45%;
  width: 30%;
}

```

Icons in React Floating action button component

You can customize the icon and text of React Floating Action Button(FAB) using [iconCss](#) and [content](#) properties.

FAB with icon

You can show icon only in Floating Action Button by setting [iconCss](#) property. You can show tooltip on hover to show additional details to end-user by setting `title` attribute.

`ts

```

import { FabComponent } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
function App() {
  return (
    { / To render Floating Action Button with icon only /}
    <FabComponent id='fab' iconCss='fab-icons fab-icon-people'></FabComponent>
  );
}
export default App;

```

FAB with icon and text

You can show icon along with text in Floating Action Button by setting [iconCss](#) and [content](#) properties.

`ts

```
import { FabComponent } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';

function App() {
  return (
    {/ To render Floating Action Button with icon and text / }
    <FabComponent id = 'fab' iconCss = 'fab-icons fab-icon-people' content = 'Contacts' ></FabComponent
    >
  );
}

export default App;
```

Icon position

You can change the position of icon when showing along with content by setting [iconPosition](#) property. By default, the icon is positioned on the left side together with text.

`ts

```
import { FabComponent } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';

function App() {
  return (
    {/ To render Floating Action Button with icon position. / }
    <FabComponent id='fab' iconCss='fab-icons fab-icon-people' content='Contacts'
    iconPosition='Right'></FabComponent>
  );
}

export default App;
```

Below example demonstrates a FAB with icon and text.

APP.JSX

```
{% raw %}
import { FabComponent } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
function App() {
  return (<div>
```



```

    <div id="targetElement" style={{ position: 'relative',
minHeight: '350px', border: '1px solid' }}></div>
    {/* To render Floating Action Button */}
    <FabComponent id='fab' iconCss='fab-icons fab-icon-people'
content='Contacts' iconPosition='Right'
target='#targetElement'></FabComponent>
    </div>);
}
export default App;
ReactDOM.render(<App />, document.getElementById('button'));
{% endraw %}

```

APP.TSX

```
{% raw %}
import { FabComponent } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
function App() {
  return (
    <div>
      <div id="targetElement" style={{ position: 'relative',
minHeight: '350px', border: '1px solid' }}></div>
      {/* To render Floating Action Button */}
      <FabComponent id='fab' iconCss='fab-icons fab-icon-people'
content='Contacts' iconPosition='Right'
target='#targetElement'></FabComponent>
    </div>
  );
}
export default App;
ReactDOM.render(<App />, document.getElementById('button'));
{% endraw %}
```

INDEX.CSS

```

/* Represents the styles for loader */
#loader {
  color: #008cff;
  height: 40px;
  left: 45%;
  position: absolute;
  top: 45%;
  width: 30%;
}

/* Represents the styles for fab icon */
@font-face {
  font-family: 'fab-icons';
  src: url(data:application/x-font-ttf;charset=utf-
8;base64,AAEAAAAKAIAAAwAgTlMvMjltSgIAAAEoAAAVmNtYXdnYOfNAAABYAAAAFZnbHlmkFZ
LRAAAAkgAABBoaGVhZCF5f3EAAADQAAAAANmhoZWEIUQQTAAAArAAAAACRobXR4SAAAAAAAYAAAB
IbG9jYtVeNR4AAAIgAAAAJm1heHABIQIXAAABCAAAACBuYw1lkWSegQAAGTAAAAIXcG9zdKkfPwY
AABtkAAAAzQABAAAEAAAAAFwEAAAAAAD9AABAAAAAAAAAAAAAAAAAAAAAEgABAAAAQAAbzQqW18
PPPUACwQAAAAAN8znUAAAAA3zOdQAAAAAAD9AP0AAAAACAACAAAAAAAAAAAAEAAAAASAgSABQAAAA
AAgAAAAoACgAAAP8AAAAAAAAAAAAAQQAABQAAAAokCzAAAAI8CiQLMAAAB6wAyAQgAAAIABQMAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAUGZFZABA5wDnEAQAAAAAXAQAAAAAAAAABAAAAAAAAAAAAAAAAOAAA

```

EAAAAABAAAAAQAAAAEAAAAABAAAAAQAAAAEAAAAABAAAAAQAAAAEAAAAABAAAAAQAAAAEAAAAABAAAAAQ
AAAAEAAAAAAAAAgAAAAAMAAUAAMAAQAAABQABABCAAAABAAEAAEAOCQ//8AAOCa//8AAAABAAQ
AAAABAAIAAwAEAAUABgAHAAGACQAKAAsADAANAA4ADwAQABEAAAAAAAAABpAPmBFQEggSaBK4FQAX
sBrgG1AfcCBAI5gj8CR4KPA0AAAABAAAAAAD9APoAD0AewC5AXAAACUfCRUPDiMvDjU/Dh8CAR8
LFQ80Iy8PPw4XAR8LHQEPDi8OPQE/DDMXJw8KHQEfAgUvCSsBDw4VHw4zPwcBDwEdAR8NPw41Lw4
jDwkBNzUvASUfCTM/DT0BLw4rAQ8BA5AGBgYFBAQDAgIBAQECAwMFBaUGBgCHBwgHCaCIBwCHBgY
GBQQEAwICAQEBAgMDBQQGBQYHBwckCwoJCv0nBwcGBgYFBAQDAwIBAQECAgQEBQUFBGcHBwCHCac
ICaCHBgYGBQQEAwMBAQEBAQIDAQEGBgUGBwkICQoLaTwhBwcGBQUFBAMCAgEBAgMDBAUFBgYGBwg
HBwgIBwcIBwYGBQUFBAMCAgEBAgMDBAUFBQcGCQkJCQxMDAsKCQgHBgUDAgEBAQP+HwYHCagICQk
KDQ4ODQ4NDawMCwoJCACHBAQCAQIDBQYHCagKCwwMDQoLCgoREBAPDg0MCgHdAgICAgQGBggJCQs
MEBESERMSDQwMCwsJCAgGBQQCAQIDBAYGCAkJCwwMDQ0NDQ4NDgoKCQkJCACH/h4CAQMB4gcOBwg
JCQkKCwoLEBAQEAsLCwkIBwYFAwMCAwUFBwgJCgsLDA0KCgoKEREQ2QEBQYGBgYHBwCHBwCHBwY
HBQUFBAMDAgIBAQECAgEBAUFBgYHBwCHBwCHBwYHBgYFBAQEAWICAQECAwFvAgMEBAUGBQcGBwC
HBwCHBwCHBgUFBQQEAwICAQEBAgIDBAQFBQYGBwCHBwCHBwCHBgYGBQUEBAMDAQEBAV0DAwQEBQU
GBgCHBgHBwCHBgGBgUEBQMDAwEBAQEBAgIEAwUEBgYGBgCHBwCHBwCHBwYFBQUEBAMDAgEsBwc
ICgoLCwwKCQkKCQkJCeoHBgYFBQUEAwMDAgMEBQCHCAkLCgwNDA0NDA0MDAwLCwkJBwCGBAMCAQE
CBQYICQsM/v8IERAJCAGNCwsLCQkIBwgFAwEBAwQFBggICQoLDAwMDA0NDA0MDAsLCQkIBwYEBAI
BAgIDBAQFBgYHBwEDDg0NDewHDAUFBAQDAwIBAQMEBwYICakKCwwMDA0NDA0MDAwLCwkJCAYGBAM
CAQMEAAAABQAAAAAD7wP0AD8AfwEQAVACCgAAARUPDSsBLw4/DjsBHw0FFQ8NKwEvDT0BPw07AR8
NAR8QFQcvAiMPDx8HDwcjLwc/By8PDwMvAj8QHw8/DycVDw0rAS8NPQE/DTsBHw0nDxUdAR8DDwg
fDjsBPwIfDjsBPw4fAjSBPw4vCD8CPQEvLSMPDgOxAgIDBAUFBwYHCagJCQkKCQoJCAgIBwCGBgQ
EAWMBAQEBAwMEBAYGBwCICAgJCgkKCQkJCAGHBgCFBQQDAgL9WQEDAwQFBQYHBwgICakKCQoJCQk
ICACHBgUFBAMCAgICAwQFBQYHBwgICQkJCgkKCQgICACHBgUFBAMDAQGEDg0aGRcWFBMSDw4MCQg
GAwEDDAwMDBAPDw4ODQwLCgkIBwUEAgEBAgMFBGcIDRAaGhwCHR4eHh4dHR0bGxoQDQgHBgUDAgE
BAgQFBwgJCgsMDQ4ODw8QDAwMDAECAQEEDBQcJCgwODxETExULFxkQBgYGBggICQkKCgsLDAwMDA4
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ICQkJCgkKCQgICACHBgUFBAMDAQEDAwQFBQYHBwgICakKCQoJCQkICACHBgUFBAMCAgICAwQFBQY
HBwgICQkJCgkKCQgICACHBgUFBAMDAQEDAwQFBQYHBwgICakKAigGBg4PERMUFhYZGRobHBwdHRs
bAwICAQIEBQcICQoLDA0NDw8PEA8PDg0NDQsPCw8NCwkHBAICBAcJCwwPCxALDQ0NDg8PEA8PDw0
NDAsKCQgHBQQAQEBAgMKFhYbGxsaGhkYFxyVFBMRCA8OBxALCgkJCQgHBgYFBAMDAQEBAgIEBQY
GCAGJCgoLCwwOJgoJCQkICACHBgUFBAMCAgICAwQFBQYHBwgICQkJCgkKCQgICACHBgUFBAMDAQE
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OEBAQDw8PDQ0MCwUYFRUWEhESERERERAREA8QDw8ODg4NDQ0MDAsKCgoJCAgIBgkQDQwMCwoKCAg
HBwUEAwIBAgMEBgYICAoKCwsNDA4AAAMAAAAA/QD9AAHACoAUAAACQEVmWERIRElMx8ODwCBBzU
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GBwCHB1o1/TUDijkJBwYGBAMBAQIDAUGCagMCwsMDQ0ODg0ODQ0MCwsDWP4QwAhZ/a8DD10BAgI
DBAQFBgYFBGcGBGcGBwYGBgYFBv2oAWgCVgUEAwICARY1/HYCzjoKCgsLDAwMDAwMDAwLCwoKDAg
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DAwQeNRkZFxcVFRMSEA8ODaoC8QoMDg8QEHMVFRcXGRkaGxsDBwcCagEBAQMDAwUDQwLCwoKCag
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BDwMvBj0BLwUrAg8FASgBAwUHCAoMDQ4QEBISExQUBQTEhIQEA4NDAoIBwUDAQEDBQcICgWNDhA
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HBQMBAMFBwgKDA0OEBASEhMUFBUQExISEBAODQwKCacFAwEBAwUHCAoMDQ4QEBISExQBx30ECQw
HBwhbAgIBAQEBAGJSagQEBQUEBANXDROODQ4PDwICawQEBQVwBgUEAwMCAg4cHA0ND1oEBAUEBQQ
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DABAAKQADAAEECQAEABAAQADAAEECQAFABYAsQADAAEECQAGABAAxwADAAEECQAKAFgAlwADAAE
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uc0ZvbnQgZ2VuZXJhdGVkIHVzaW5nIFN5bmNmdXNpb24gTWV0cm8gU3R1ZG1vd3d3LnN5bmNmdXN
pb24uY29tACAacwBiAC0AaQBJAG8AbgBzAFIAZQBnAHUAbABhAHIAcWBiAC0AaQBJAG8AbgBzAHM
AYgAtAGkAYwBvAG4AcwBWAGUAcgBzAGkAbwBuACAAMQAuADAACwBiAC0AaQBJAG8AbgBzAEYAbwB

```

uAHQAIABnAGUAbgB1AHITAYQB0AGUAZAAGAHUAcwBpAG4AZwAgAFMAeQBuAGMAZgB1AHMAaQBvAG4
AIABNAGUAdABYAG8AIABTAHQAdQBkAGkAbwB3AHcAdwAuAHMAeQBuAGMAZgB1AHMAaQBvAG4ALgB
jAG8AbQAAAAACAAAAAaAAAAAaAAAAAaAAAAAaAAAAAaAAAAAaAAAAAaAAAAAaAAAAAaAAAAAaAAAAAa
JAQoBCwEMAQ0BDgEPARABEQESARMABXNoYXJlCHNoYXJlLTAxBGVkaXQHZWRpdC0wMQNhZGQhdxB
hcnJvdwVoZWYdANTYXAMdm9pY2Utc2VhcmNoCWZhdm9yaXRlcwtjaGF0LXB1cnNvbGhib29rbWF
yawhzaG9wcGluZwRwbGF5BXBhdXNlCHJlbWluZGVyCHNldHRpbmdzAAAAAA=)
format('true type');
font-weight: normal;
font-style: normal;
}
[class^="fab-icon-"],
[class*=" fab-icon-"] {
  font-family: 'fab-icons' !important;
  speak: none;
  font-size: 55px;
  font-style: normal;
  font-weight: normal;
  font-variant: normal;
  text-transform: none;
  line-height: 1;
  -webkit-font-smoothing: antialiased;
  -moz-osx-font-smoothing: grayscale;
}
.fab-icon-people:before {
  content: "\e70a";
}

```

Styles in React Floating action button component

This section explains the different styles of Floating Action Button.

FAB styles

The React Floating Action Button supports the following predefined styles that can be defined using the [cssClass](#) property. You can customize by replacing the `cssClass` property with the below defined class.

cssClass	Description
-----	-----
e-primary	Used to represent a primary action.
e-outline	Used to represent an appearance of button with outline.
e-info	Used to represent an informative action.
e-success	Used to represent a positive action.
e-warning	Used to represent an action with caution.
e-danger	Used to represent a negative action.

APP.JSX

```

{% raw %}
import { FloatingActionButton } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
function App() {
  return (
    <div>

```

```

        <div id="targetElement" style={{ position: 'relative',
minHeight: '350px', border: '1px solid' }}> </div>
        /* To render Floating Action Button with applied warning style
*/
        <FabComponent id='fab' iconCss='e-icons e-edit' cssClass='e-
warning' target='#targetElement'></FabComponent>
    </div>);
}
export default App;
ReactDOM.render(<App />, document.getElementById('button'));
{% endraw %}

```

APP.TSX

```

{% raw %}
import { FabComponent } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
function App() {
    return (
        <div>
            <div id="targetElement" style={{ position: 'relative',
minHeight: '350px', border: '1px solid' }}> </div>
            /* To render Floating Action Button with applied warning style
*/
            <FabComponent id='fab' iconCss='e-icons e-edit' cssClass='e-
warning' target='#targetElement'></FabComponent>
        </div>
    );
}
export default App;
ReactDOM.render(<App />, document.getElementById('button'));
{% endraw %}

```

INDEX.CSS

```

/* Represents the styles for loader */
#loader {
    color: #008cff;
    height: 40px;
    left: 45%;
    position: absolute;
    top: 45%;
    width: 30%;
}

```

Predefined Floating Action Button styles provide only the visual indication. So, Floating Action Button [content](#) property should define the Floating Action Button style for the users of assistive technologies such as screen readers.

Styles customization

To modify the Floating Action Button appearance, you need to override the default CSS of Floating Action Button component. Please find the list of CSS classes and its corresponding section in Floating

Action Button component. Also, you have an option to create your own custom theme for the components using our [Theme Studio](#).

| CSS Class | Purpose of Class |

|-----|-----|

|.e-fab.e-btn|To customize the FAB.|

|.e-fab.e-btn:hover|To customize the FAB on hover.|

|.e-fab.e-btn:focus|To customize the FAB on focus.|

|.e-fab.e-btn:active|To customize the FAB on active.|

|.e-fab.e-btn-icon|To customize the style of FAB icon.|

Show text on hover

By using [cssClass](#), you can customize the Floating Action Button to show text on hover with applied transition effect. For detailed information, refer [index.css](#) file below.

The content will behave the same , when the `enableHtmlSanitizer` is enabled. Since we are adding only the valid tags in content, sanitizing the content will not affect it.

APP.JSX

```
{% raw %}
import { FloatingActionButton } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
function App() {
  return (
    <div>
      <div id="targetElement" style={{ position: 'relative',
minHeight: '350px', border: '1px solid' }}></div>
      { /* To render Floating Action Button */ }
      <FABComponent id='fab' iconCss='e-icons e-edit' content='<span
class="text-container"><span class="textEle">Edit</span></span>'
cssClass='fab-hover' target='#targetElement'></FABComponent>
    </div>);
}
export default App;
ReactDOM.render(<App />, document.getElementById('button'));
{% endraw %}
```

APP.TSX

```
{% raw %}
import { FloatingActionButton } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
function App() {
  return (
    <div>
      <div id="targetElement" style={{ position: 'relative',
minHeight: '350px', border: '1px solid' }}></div>
      { /* To render Floating Action Button */ }
    </div>);
}
export default App;
ReactDOM.render(<App />, document.getElementById('button'));
```

```

        <FabComponent id='fab' iconCss= 'e-icons e-edit' content='<span
class="text-container"><span class="textEle">Edit</span></span>' cssClass=
'fab-hover' target='#targetElement'></FabComponent>
      </div>
    );
  }
  export default App;
  ReactDOM.render(<App />, document.getElementById('button'));
  {% endraw %}

```

INDEX.CSS

```

/* Represents the styles for loader */
#loader {
  color: #008cff;
  height: 40px;
  left: 45%;
  position: absolute;
  top: 45%;
  width: 30%;
}
/* start of onhover customization */
.e-fab.e-btn.fab-hover {
  padding: 6px 0px 10px 10px;
}
.fab-hover .text-container {
  overflow: hidden;
  width: 0;
  margin: 0;
  transition: width .5s linear 0s, margin .2s linear .5s;
}
.fab-hover:hover .text-container {
  width: 35px;
  margin: 0 5px;
  transition: width .5s linear .2s, margin .2s linear 0s;
}
/* end of onhover customization */

```

Positions in React Floating action button component

The floating action button can be positioned anywhere on the [target](#) using the [position](#) property. If the [target](#) is not defined, then FAB is positioned based on the browser viewport.

The position values of Floating Action Button are as follows:

- TopLeft
- TopCenter
- TopRight
- MiddleLeft
- MiddleCenter
- MiddleRight
- BottomLeft
- BottomCenter
- BottomRight

```

`ts
import { FabComponent } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
function App() {
  return (
    {/ To render Floating Action Button in BottomLeft Position. /}
    <FabComponent id='fab' content='Add' position='BottomLeft'></FabComponent>
  );
}
export default App;

```

Below example demonstrates different supported positions of FAB.

APP.JSX

```

{% raw %}
import { FabComponent } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
function App() {
  return (
    <div>
      <div id="target" style={{ position: 'relative', minHeight:
        '350px', border: '1px solid' }}></div>
      <FabComponent id="fab1" iconCss='fab-icons fab-icon-people'
        position='TopLeft' target='#target'></FabComponent>
      <FabComponent id="fab2" iconCss='fab-icons fab-icon-people'
        position='TopCenter' target='#target'></FabComponent>
      <FabComponent id="fab3" iconCss='fab-icons fab-icon-people'
        position='TopRight' target='#target'></FabComponent>
      <FabComponent id="fab4" iconCss='fab-icons fab-icon-people'
        position='MiddleLeft' target='#target'></FabComponent>
      <FabComponent id="fab5" iconCss='fab-icons fab-icon-people'
        position='MiddleCenter' target='#target'></FabComponent>
      <FabComponent id="fab6" iconCss='fab-icons fab-icon-people'
        position='MiddleRight' target='#target'></FabComponent>
      <FabComponent id="fab7" iconCss='fab-icons fab-icon-people'
        position='BottomLeft' target='#target'></FabComponent>
      <FabComponent id="fab8" iconCss='fab-icons fab-icon-people'
        position='BottomCenter' target='#target'></FabComponent>
      <FabComponent id="fab9" iconCss='fab-icons fab-icon-people'
        position='BottomRight' target='#target'></FabComponent>
    </div>);
}
export default App;
ReactDOM.render(<App />, document.getElementById('button'));
{% endraw %}

```

APP.TSX


```
{% raw %}
import { FabComponent } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
function App() {
  return (
    <div>
      <div id="target" style={{ position: 'relative', minHeight:
'350px', border: '1px solid' }}></div>
      <FabComponent id="fab1" iconCss='fab-icons fab-icon-people'
position='TopLeft' target='#target'></FabComponent>
      <FabComponent id="fab2" iconCss='fab-icons fab-icon-people'
position='TopCenter' target='#target'></FabComponent>
      <FabComponent id="fab3" iconCss='fab-icons fab-icon-people'
position='TopRight' target='#target'></FabComponent>
      <FabComponent id="fab4" iconCss='fab-icons fab-icon-people'
position='MiddleLeft' target='#target'></FabComponent>
      <FabComponent id="fab5" iconCss='fab-icons fab-icon-people'
position='MiddleCenter' target='#target'></FabComponent>
      <FabComponent id="fab6" iconCss='fab-icons fab-icon-people'
position='MiddleRight' target='#target'></FabComponent>
      <FabComponent id="fab7" iconCss='fab-icons fab-icon-people'
position='BottomLeft' target='#target'></FabComponent>
      <FabComponent id="fab8" iconCss='fab-icons fab-icon-people'
position='BottomCenter' target='#target'></FabComponent>
      <FabComponent id="fab9" iconCss='fab-icons fab-icon-people'
position='BottomRight' target='#target'></FabComponent>
    </div>
  );
}
export default App;
ReactDOM.render(<App />, document.getElementById('button'));
{% endraw %}
```

INDEX.CSS

```
/* Represents the styles for loader */  
#loader {  
    color: #008cff;  
    height: 40px;  
    left: 45%;  
    position: absolute;  
    top: 45%;  
    width: 30%;  
}  
  
/* Represents the styles for fab icon */  
@font-face {  
    font-family: 'fab-icons';  
    src: url(data:application/x-font-ttf;charset=utf-  
8;base64,AAEAAAAKAIAAwAgTlMvMj1tSgIAAAEoAAAAMVmtYXDNyOfNAAABYAAAAFZnbHlmkFZ  
LRAAAAKgAABboaGVhZCF5f3EAAADQAAANmhoZWElUQTAAARAAAACRobXR4SAAAAAAAAAYAAAB  
IbG9jYTvenNR4AAAIgAAAAJmlheHABIQIXAAABCAAAACBuYWllkwSegQAAGTAAAIxcG9zdKKfPWy  
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PPPUACwQAAAAAN8znUAAAAA3zOdQAAAAAAD9AP0AAAACAACAAAAAAAAAAAAEAASAgSABQAAAAA  
AAgAAAAoACgAAAP8AAAAAAAAAAQQAAZAABQAAAOcCzAAAAI8CiQLMAAB6wAyAQgAAAIABQMAAAA  
AAAAAAAAAAAAAAAAAAAAAAAAAUGZFZABA5wDnEOAAAAAAAAAQAAAAAAAAABAAAAAAAAAAAAAAAAOAAAA
```

EAAAAABAAAAAQAAAAEAAAAABAAAAAQAAAAEAAAAABAAAAAQAAAAEAAAAABAAAAAQAAAAEAAAAABAAAAAQ
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DAQEBAQICAwMEHjUZGRcXFRUTEhAPDgwKAQMMDAwNDg4dHh8gIQ0MCwoJCQgHBwUFBAMCAQEBAGM
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```

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yawhzaG9wcGluZwRwbGF5BXBhdXNlCHJlbWluZGVyCHNldHRpbmdzAAAAAa=)
format('true type');
font-weight: normal;
font-style: normal;
}
[class^="fab-icon-"],
[class*=" fab-icon-"] {
  font-family: 'fab-icons' !important;
  speak: none;
  font-size: 55px;
  font-style: normal;
  font-weight: normal;
  font-variant: normal;
  text-transform: none;
  line-height: 1;
  -webkit-font-smoothing: antialiased;
  -moz-osx-font-smoothing: grayscale;
}
.fab-icon-people:before {
  content: "\e70a";
}

```

Custom position

You can define the custom position of the Floating Action Button by override the **top**, **left**, **right**, and **bottom** CSS properties using [cssClass](#). For detailed information, refer [index.css](#) file below.

APP.JSX

```

{% raw %}
import { FloatingActionButton } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
function App() {
  return (
    <div>
      <div id="targetElement" style={{ position: 'relative',
minHeight: '350px', border: '1px solid' }}></div>
      { /* To render Floating Action Button */ }
      <FABComponent id='fab' iconCss='e-icons e-edit'
cssClass='custom-position' target='#targetElement'></FABComponent>
    </div>);
}
export default App;
ReactDOM.render(<App />, document.getElementById('button'));
{% endraw %}

```

APP.TSX

```

{% raw %}
import { FloatingActionButton } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';

```

```
import * as ReactDOM from 'react-dom';
function App() {
  return (
    <div>
      <div id="targetElement" style={{ position: 'relative',
minHeight: '350px', border: '1px solid' }}></div>
      {/* To render Floating Action Button */}
      <FabComponent id='fab' iconCss= 'e-icons e-edit' cssClass=
'custom-position' target='#targetElement'></FabComponent>
    </div>
  );
}
export default App;
ReactDOM.render(<App />, document.getElementById('button'));
{% endraw %}
```

INDEX.CSS

```
/* Represents the styles for loader */
#loader {
  color: #008cff;
  height: 40px;
  left: 45%;
  position: absolute;
  top: 45%;
  width: 30%;
}
/* Represents the styles for button positioning */
.e-fab.e-btn.custom-position {
  left: 40px;
  top: 40px;
  bottom: unset;
  right: unset;
}
```

Events in React Floating action button component

This section explains the available events in Floating Action Button component.

created

Event triggers after the creation of Floating Action Button.

`ts

```
import { FabComponent } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
function App() {
  function onCreate(): void {
    //Your required action here
  }
  return (
```

```

{/ To render Floating Action Button /}
<FabComponent id='fab' iconCss='e-icons e-edit' content='Edit' created={onCreate}></FabComponent>
);
}

export default App;
`

```

onclick

Event triggers when the Floating Action Button is clicked.

```

`ts
import { FloatingActionButton } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';

function App() {
  function onClick(): void {
    //Your required action here
  }

  return (
    {/ To render Floating Action Button /}
    < FloatingActionButton id = 'fab' iconCss = 'e-icons e-edit' content = 'Edit' onClick = {onClick}></ FloatingActionButton >
  );
}

export default App;
`

```

Below example demonstrates the click event of the Floating Action Button.

APP.JSX

```

{% raw %}
import { FloatingActionButton } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
function App() {
  function onClick() {
    alert("Edit is clicked!");
  }
  return (
    <div>
      <div id="targetElement" style={{ position: 'relative',
minHeight: '350px', border: '1px solid' }}></div>
      {/ To render Floating Action Button */}
      < FloatingActionButton id='fab' iconCss='e-icons e-edit' content='Edit'
onClick={onClick} target='#targetElement'></ FloatingActionButton >
    </div>
  );
}

```

```
}  
export default App;  
ReactDOM.render(<App />, document.getElementById('button'));  
{% endraw %}
```

APP.TSX

```
{% raw %}  
import { FloatingActionButton } from '@syncfusion/ej2-react-buttons';  
import * as React from 'react';  
import * as ReactDOM from 'react-dom';  
function App() {  
  function onClick(): void {  
    alert("Edit is clicked!");  
  }  
  return (  
    <div>  
      <div id="targetElement" style={{ position: 'relative',  
minHeight: '350px', border: '1px solid' }}></div>  
      { /* To render Floating Action Button */ }  
      <FABComponent id='fab' iconCss='e-icons e-edit' content='Edit'  
onClick={onClick} target='#targetElement'></FABComponent>  
    </div>  
  );  
}  
export default App;  
ReactDOM.render(<App />, document.getElementById('button'));  
{% endraw %}
```

INDEX.CSS

```
/* Represents the styles for loader */  
#loader {  
  color: #008cff;  
  height: 40px;  
  left: 45%;  
  position: absolute;  
  top: 45%;  
  width: 30%;  
}
```

Accessibility in React Floating action button component

The Floating action button component followed the accessibility guidelines and standards, including [ADA](#), [Section 508](#), [WCAG 2.2](#) standards, and [WCAG roles](#) that are commonly used to evaluate accessibility.

The accessibility compliance for the Floating action button component is outlined below.

| Accessibility Criteria | Compatibility |

| -- | -- |

| [WCAG 2.2](#) Support | |

```
| Section 508 Support |  |  
  
| Screen Reader Support |  |  
  
| Right-To-Left Support |  |  
  
| Color Contrast |  |  
  
| Mobile Device Support |  |  
  
| Keyboard Navigation Support |  |  
  
| Accessibility Checker Validation |  |  
  
| Axe-core Accessibility Validation |  |  
<style>  
.post .post-content img {  
display: inline-block;  
margin: 0.5em 0;  
}  
</style>  
<div> - All  
features of the component meet the requirement.</div>  
<div> - Some features of the component do not meet the requirement.</div>  
<div> - The component does not meet the requirement.</div>
```

WAI-ARIA attributes

The Floating action button component followed the [WAI-ARIA](#) patterns to meet the accessibility. The following ARIA attributes are used in the Floating action button component:

```
| Attributes | Purpose |  
| --- | --- |  
| aria-label | Provides an accessible name for the icon only floating action button. |
```

Keyboard interaction

The Floating action button component followed the [keyboard interaction](#) guideline, making it easy for people who use assistive technologies (AT) and those who completely rely on keyboard navigation. The following keyboard shortcuts are supported by the Floating action button component.

| Press | To do this |

| --- | --- |

| Space | When the floating action button has focus, pressing the space key changes the state of the floating action button. |

Ensuring accessibility

The Floating action button component's accessibility levels are ensured through an [accessibility-checker](#) and [axe-core](#) software tools during automated testing.

The accessibility compliance of the Floating action button component is shown in the following sample. Open the [sample](#) in a new window to evaluate the accessibility of the Floating action button component with accessibility tools.

See also

- [Accessibility in Syncfusion React components](#)

Form Validator

Creating a Next.js Application Using Syncfusion React Components

This section provides a step-by-step guide for setting up a Next.js application and integrating the Syncfusion React Form components.

What is Next.js?

[Next.js](#) is a React framework that makes it easy to build fast, SEO-friendly, and user-friendly web applications. It provides features such as server-side rendering, automatic code splitting, routing, and API routes, making it an excellent choice for building modern web applications.

Prerequisites

Before getting started with the Next.js application, ensure the following prerequisites are met:

- [Node.js 18.17](#) or later.
- The application is compatible with macOS, Windows, and Linux operating systems.

Create a Next.js application

To create a new **Next.js** application, use one of the commands that are specific to either NPM or Yarn.

NPM

```
npx create-next-app@latest
```

YARN

```
yarn create next-app
```

Using one of the above commands will lead you to set up additional configurations for the project as below:

1. Define the project name: Users can specify the name of the project directly. Let's specify the name of the project as **ej2-nextjs-form**.

CMD

```
✓ What is your project named? » ej2-nextjs-form
```

2. Select the required packages.

CMD

```
✓ What is your project named? ... ej2-nextjs-form
✓ Would you like to use TypeScript? ... No / `Yes`
✓ Would you like to use ESLint? ... No / `Yes`
✓ Would you like to use Tailwind CSS? ... `No` / Yes
✓ Would you like to use `src/` directory? ... No / `Yes`
✓ Would you like to use App Router? (recommended) ... No / `Yes`
✓ Would you like to customize the default import alias? ... `No` / Yes
Creating a new Next.js app in D:\ej2-nextjs-form.
```

3. Once complete the above mentioned steps to create `ej2-nextjs-form`, navigate to the directory using the below command:

CMD

```
cd ej2-nextjs-form
```

The application is ready to run with default settings. Now, let's add Syncfusion components to the project.

Install Syncfusion React packages

Syncfusion React component packages are available at [npmjs.com](https://www.npmjs.com). To use Syncfusion React components in the project, install the corresponding npm package.

Here, the React Form components is used in the project. To install the React Form components, use the following command:

NPM

```
npm install @syncfusion/ej2-react-inputs @syncfusion/ej2-react-calendars
@syncfusion/ej2-react-buttons @syncfusion/ej2-react-dropdowns
```

YARN

```
yarn add @syncfusion/ej2-react-inputs @syncfusion/ej2-react-calendars
@syncfusion/ej2-react-buttons @syncfusion/ej2-react-dropdowns
```

Import Syncfusion CSS styles

Syncfusion React components come with [built-in themes](#), which are available in the installed packages. It's easy to adapt the Syncfusion React components to match the style of your application by referring to one of the built-in themes.

Import the `Material` theme into the `src/app/globals.css` file and removed the existing styles in that file, as shown below:

GLOBALS.CSS

```
@import '../..//node_modules/@syncfusion/ej2-base/styles/material.css';
@import '../..//node_modules/@syncfusion/ej2-popups/styles/material.css';
@import "../..//node_modules/@syncfusion/ej2-react-
buttons/styles/material.css";
@import "../..//node_modules/@syncfusion/ej2-react-
inputs/styles/material.css";
@import "../..//node_modules/@syncfusion/ej2-react-
calendars/styles/material.css";
@import "../..//node_modules/@syncfusion/ej2-react-
dropdowns/styles/material.css";
.control_wrapper.textbox-form {
max-width: 400px;
margin: auto;
border: 0.5px solid #bebebe;
box-shadow: 0 1px 3px 0 rgb(0 0 0 / 36%);
padding: 1% 4% 2%;
background: #f9f9f9;
}
.form-title {
text-align: center;
}
.submitBtn {
text-align: center;
margin: 30px;
}
#container {
margin: 20px auto 0;
width:450px;
}
.form-group {
padding-top: 11px;
}
.e-custom-label {
color: rgba(0, 0, 0, 0.54);
font-size: 13px;
font-weight: 500;
padding-top: 15px;
padding-bottom: 20px;
}
```

To know more about built-in themes and CSS reference for individual components, refer to the [themes](#) section.

Add Syncfusion React component

Follow the below steps to add the React Form components to the Next.js project:

1.Before adding the Form components to your markup, import the From components in the **src/app/page.tsx** file.

PAGE.TSX

```
'use client'
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { TextBoxComponent, FormValidator, MaskedTextBoxComponent,
UploaderComponent, FormValidatorModel } from '@syncfusion/ej2-react-inputs';
import { DatePickerComponent } from '@syncfusion/ej2-react-calendars';
```

```
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
```

2. Then, define the Form components in the `src/app/page.tsx` file, as shown below:

PAGE.TSX

```
'use client'
import { useState, useEffect, useRef, useReducer } from 'react';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { TextBoxComponent, FormValidator, MaskedTextBoxComponent,
UploaderComponent, FormValidatorModel } from '@syncfusion/ej2-react-inputs';
import { DatePickerComponent } from '@syncfusion/ej2-react-calendars';
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
let formObject: FormValidator;
export default function Form() {
  const userNameRef = useRef(null);
  const [dateOfBirth, setDateOfBirth] = useState('');
  const initialState = { email: '', password: '' };
  const reducer = (state: any, action: any) => {
    switch (action.type) {
      case 'update':
        return { ...state, [action.field]: action.value };
      default:
        return initialState;
    }
  };
  const [state, dispatch] = useReducer(reducer, initialState);
  const handleChange = (event: any) => {
    setDateOfBirth(event.value);
  };
  const update = (field: any) => (event: any) => {
    //update action is dispatched to update the email and password state value
    dispatch({ type: 'update', field, value: event.value });
  };
  // checks the length of mask value and returns corresponding boolean value
  const customFn: (args: { [key: string]: string }) => boolean = (args: {
    [key: string]: string }) => {
    const argsLength = (args.element as any).ej2_instances[0].value.length;
    return argsLength >= 10;
  };
  useEffect(() => {
    (userNameRef.current as any).focusIn();
    const options: FormValidatorModel = {
      // validation rules
      rules: {
        name: {
          required: [true, '* Please enter your full name'],
        },
        email: {
          required: [true, '* Please enter your email'],
        },
        password: {
          required: [true, '* Please enter your password'],
        },
        mask_value: {
          numberValue: [customFn, '* Please enter your phone number']
        }
      }
    };
    formObject = new FormValidator(formObject, options);
  }, []);
}
```

```
    },
    date: {
      required: [true, '* Please enter your date of birth'],
    },
    dropdown: {
      required: [true, '* Please select your gender']
    },
    Address: {
      required: [true, '* Please enter your address']
    }
  },
};
// Initialize the form validator
formObject = new FormValidator('#form1', options);
}, []);
const onSubmit = () => {
  formObject.validate();
  if (formObject.validate()) {
    formObject.element.reset();
  }
};
const genderData: string[] = ['Male', 'Female', 'Others'];
return <>
<div id="container">
<h2>Syncfusion React From Component</h2>
<div>
<div className="control_wrapper" id="control_wrapper">
<h3 className="form-title">Personal Details</h3>
<div className="control_wrapper textbox-form">
<form id="form1" method="post">
<div className="form-group">
<TextBoxComponent ref={userNameRef} name="name" value={state.email}
change={update('name')} placeholder="Full Name" floatLabelType="Auto" data-
msg-containerid="errorForName" />
<div id="errorForName" />
</div>
<div className="form-group">
<TextBoxComponent type="email" name="email" value={state.email}
change={update('email')} placeholder="Email" floatLabelType="Auto" data-msg-
containerid="errorForEmail" />
<div id="errorForEmail" />
</div>
<div className="form-group">
<TextBoxComponent type="password" name="password" value={state.password}
change={update('password')} placeholder="Password" floatLabelType="Auto"
data-msg-containerid="errorForPassword" />
<div id="errorForPassword" />
</div>
<div className="form-group">
<DatePickerComponent name="date" value={dateOfBirth as any}
change={dateChangeHandler} placeholder="Date of Birth" floatLabelType="Auto"
data-msg-containerid="errorForDateOfBirth" />
<div id="errorForDateOfBirth" />
</div>
<div className="form-group">
```

```
<DropDownListComponent name='dropdown' placeholder='Choose a gender'
floatLabelType='Auto' dataSource={genderData} data-msg-
containerid="errorForGender" />
<div id="errorForGender" />
</div>
<div className="form-group">
<MaskedTextBoxComponent mask="000-000-0000" id="mask" name="mask_value"
placeholder="Phone Number" floatLabelType="Always" data-msg-
containerid="errorForPhone" />
<label className='e-error' htmlFor='mask_value' />
</div>
<div className="form-group">
<div className="e-float-input">
<textarea className="address-field" id="Address" name="Address" />
<span className="e-float-line" />
<label className="e-float-text e-label-top">Address</label>
</div>
</div>
<div className="form-group">
<div className="e-float-text e-custom-label">Upload Photo (optional)</div>
<UploaderComponent name="upload" type="file" multiple={false} data-msg-
containerid="errorForUpload" />
</div>
</form>
<div className="submitBtn">
<ButtonComponent onClick={onSubmit}>Submit</ButtonComponent>
</div>
</div>
</div>
</div>
</div>
</>;
}
```

Run the application

To run the application, use the following command:

NPM

```
npm run dev
```

YARN

```
yarn run dev
```

To know about the functionality of the react hooks, refer to the [documentation](#).

[View the NEXT.js Form sample in the GitHub repository.](#)

Validation rules in React Form validator component

Default Rules

The **FormValidator** has following default validation rules, which are used to validate the form.

Rules	Description	Example
-------	-------------	---------

| ----- | ----- | ----- |

| **required** | The form input element must have any input values | a or 1 or - |

| **email** | The form input element must have valid **email** format values | **form@syncfusion.com** |

| **url** | The form input element must have valid **url** format values | **http://syncfusion.com/** |

| **date** | The form input element must have valid **date** format values | 05/15/2017 |

| **dateISO** | The form input element must have valid **dateISO** format values | 2017-05-15 |

| **number** | The form input element must have valid **number** format values | 1.0 or 1 |

| **digits** | The form input element must have valid **digits** values | 1 |

| **maxLength** | Input value must have less than or equal to **maxLength** character length | if **maxLength**: 5, **check** is valid and **checking** is invalid |

| **minLength** | Input value must have greater than or equal to **minLength** character length | if **minLength**: 5, **testing** is valid and **test** is invalid |

| **rangeLength** | Input value must have value between **rangeLength** character length | if **rangeLength**: [4,5], **test** is valid and **key** is invalid |

| **range** | Input value must have value between **range** number | if **range**: [4,5], **4** is valid and **6** is invalid |

| **max** | Input value must have less than or equal to **max** number | if **max**: 3, **3** is valid and **4** is invalid |

| **min** | Input value must have greater than or equal to **min** number | if **min**: 4, **5** is valid and **2** is invalid |

Error messages in React Form validator component

The **FormValidator** provides default error messages for all default validation rules.

It is tabulated as follows

| Rules | message |

| ----- | ----- |

| **required** | This field is required. |

| **email** | Please enter a valid email address. |

| **url** | Please enter a valid URL. |

| **date** | Please enter a valid date. |

| **dateISO** | Please enter a valid date (ISO). |

| **number** | Please enter a valid number. |

| **digit** | Please enter only digits. |

| **maxLength** | Please enter no more than {0} characters. |

| **minLength** | Please enter at least {0} characters. |

| **rangeLength** | Please enter a value between {0} and {1} characters long. |

| **range** | Please enter a value between {0} and {1}. |

| **max** | Please enter a value less than or equal to {0}. |

| **min** | Please enter a value greater than or equal to {0}. |

| **regex** | Please enter a correct value. |

Customizing Error Messages

The default error message for a rule can be customizable by defining it along with concern rule object as follows.

INDEX.JSX

```
import { FormValidator } from '@syncfusion/ej2-inputs';
import { DialogComponent } from '@syncfusion/ej2-react-popups';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
export default class Validation extends React.Component {
  dialogInstance;
  formObject;
  animationSettings = { effect: 'Zoom' };
  // Dialog will be closed, while clicking on overlay
  onOverlayClick() {
    this.dialogInstance.hide();
  }
  componentDidMount() {
    const options = {
      // validation rules
      rules: {
        'email': {
          required: [true, '* Enter your email']
        },
        'password': {
          required: [true, '* Enter your password']
        },
      },
    };
    // Initialize the form validator
    this.formObject = new FormValidator('#form1', options);
  }
  onSubmitClick() {
    if (this.formObject.validate()) {
      this.formObject.element.reset();
      this.dialogInstance.show();
    }
  }
  render() {
    return (
      <div className='control-pane'>
        <div className='control-section col-lg-12'>
          <div className='validation_wrapper'>
            <div className="control_wrapper" id="control_wrapper">
              <form id="form1" method="post">
                <div className="form-group">
                  <div className="e-float-input">
```



```

        <input type="email" id="Email" name="email" data-msg-
containerid="mailError"/>
        <span className="e-float-line"/>
        <label className="e-float-text e-label-top"
htmlFor="email">Email</label>
    </div>
    <div id="mailError"/>
</div>
<div className="form-group">
    <div className="e-float-input">
        <input type="password" id="number" name="password" data-msg-
containerid="noError"/>
        <span className="e-float-line"/>
        <label className="e-float-text e-label-top"
htmlFor="password">Password</label>
    </div>
    <div id="noError"/>
</div>
</form>
<br />
<br />
<div className="submitBtn">
    <button className="submit-btn e-btn" onClick={this.onSubmitClick =
this.onSubmitClick.bind(this)} id="submit-btn">Submit</button>
</div>
<div id="confirmationDialog"/> </div>
</div>
<DialogComponent id="defaultdialog" isModal={true} visible={false}
content='Your details has been updated successfully, Thank you'
animationSettings={this.animationSettings} width={'50%'} ref={dialog =>
this.dialogInstance = dialog} target={'control-section'}
overlayClick={this.onOverlayClick = this.onOverlayClick.bind(this)}/>
</div>;
    }
}
ReactDOM.render(<Validation />, document.getElementById('form-element'));

```

INDEX.TSX

```

import { select } from '@syncfusion/ej2-base';
import { FormValidator, FormValidatorModel } from '@syncfusion/ej2-inputs';
import { DialogComponent } from '@syncfusion/ej2-react-popups';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
export default class Validation extends React.Component<{}, {}> {
    public dialogInstance: DialogComponent;
    public formObject: FormValidator;
    private animationSettings: object = { effect: 'Zoom' };
    // Dialog will be closed, while clicking on overlay
    public onOverlayClick() {
        this.dialogInstance.hide();
    }
    public componentDidMount(): void {
        const options: FormValidatorModel = {
            // validation rules

```

```

        rules: {
            'email': {
                required: [true, '* Enter your email']
            },
            'password': {
                required: [true, '* Enter your password']
            },
        }
    };
    // Initialize the form validator
    this.formObject = new FormValidator('#form1', options);
}

public onSubmitClick(): void {
    if(this.formObject.validate()) {
        this.formObject.element.reset();
        this.dialogInstance.show();
    }
}

public render(): JSX.Element {
    return (
        <div className = 'control-pane'>
            <div className='control-section col-lg-12'>
                <div className='validation_wrapper'>
                    <div className="control_wrapper" id="control_wrapper">
                        <form id="form1" method="post">
                            <div className="form-group">
                                <div className="e-float-input">
                                    <input type="email" id="Email" name="email" data-msg-
containerid="mailError"/>
                                    <span className="e-float-line"/>
                                    <label className="e-float-text e-label-top" htmlFor="email"
>Email</label>
                                </div>
                                <div id="mailError"/>
                            </div>
                            <div className="form-group" >
                                <div className="e-float-input">
                                    <input type="password" id="number" name="password" data-msg-
containerid="noError" />
                                    <span className="e-float-line"/>
                                    <label className="e-float-text e-label-top"
htmlFor="password" >Password</label>
                                </div>
                                <div id="noError"/>
                            </div>
                        </form>
                        <br/>
                        <br/>
                        <div className="submitBtn">
                            <button className="submit-btn e-btn" onClick={this.onSubmitClick =
this.onSubmitClick.bind(this)} id="submit-btn">Submit</button>
                        </div>
                        <div id="confirmationDialog"/> </div>
                    </div>
                    <DialogComponent id="defaultdialog" isModal={true} visible = {false}
content = 'Your details has been updated successfully, Thank you'

```

```

animationSettings={this.animationSettings} width={'50%'} ref={dialog =>
  this.dialogInstance = dialog!}
  target={'control-section'}
overlayClick={this.onOverlayClick=this.onOverlayClick.bind(this)} />
</div> }
}
ReactDOM.render(<Validation />, document.getElementById('form-element'));

```

Validation events in React Form validator component

Validation events have two types of events. These are

- validationBegin
- validationComplete

Validation Begin

validationBegin event triggers before the validation starts and also it invoke for each rules in validation process. Please find the below code snippet.

```

`ts
validationBegin: function(args) {
// ("Validation begin");
},
,

```

The following values are passed in **args**. You can use this values in event validation.

Fields	Description
element	Specifies the input element
name	Specifies the event name (validationBegin)
param	Specifies the param value (true/false)
value	Specifies the input value

Validation Complete

validationComplete event triggered after validation is completed and also it invoke for each rules in validation process. Please find the below code snippet.

```

`ts
validationComplete: function(args) {
// ("Validation complete");
}
,

```

The following values are passed in **args**. You can use this values in event validation.

Fields	Description
----- -----	
element	Specifies the input element
name	Specifies the event name (validationComplete)
param	Specifies the param value (true/false)
value	Specifies the input value
status	Specifies the status (success/failure)
inputName	Specifies the type of input

Please find the simple sample for validation events.

INDEX.JSX

```
import { enableRipple } from '@syncfusion/ej2-base';
import { FormValidator } from '@syncfusion/ej2-inputs';
import { TimePickerComponent } from '@syncfusion/ej2-react-calendars';
import * as React from "react";
import * as ReactDOM from "react-dom";
// enable ripple effect
enableRipple(true);
export default class App extends React.Component {
  componentDidMount() {
    // add the rules for validation
    const options = {
      // validation begin event
      validationBegin: (args) => {
        const span = document.createElement("span");
        span.innerHTML = "Validation begin <hr>";
        const log = document.getElementById("EventLog");
        log.insertBefore(span, log.firstChild);
      },
      // validation complete event
      validationComplete: (args) => {
        if (args.status === "success") {
          const span = document.createElement("span");
          span.innerHTML = "Validation complete success <hr>";
          const log = document.getElementById("EventLog");
          log.insertBefore(span, log.firstChild);
        }
        else {
          const span = document.createElement("span");
          span.innerHTML = "Validation complete failure <hr>";
          const log = document.getElementById("EventLog");
          log.insertBefore(span, log.firstChild);
        }
      },
    };
    // initialize the form validator
    const formObject = new FormValidator("#form1", options);
    formObject.addRules('timepicker', { required: true });
    document.getElementById('clear').addEventListener('click', () => {
      document.getElementById("EventLog").innerHTML = "";
    });
  }
}
```

```

    });
  }
  render() {
    return (<div>
      <div id='sample'>
        <form id='form1' method="post">
          <div className='content-wrapper'>
            <TimePickerComponent id="timepicker"
placeholder="Select a Time"/>
          </div>
          <label className='e-error' id='timepickerError'
htmlFor='timepicker'/>
        </form>
      </div>
      <div id="list_event">
        <h4><b>Event Trace</b></h4>
        <div id="evt">
          <div className="eventarea">
            { /*Event log element */}
            <span className="EventLog" id="EventLog"/>
          </div>
          <div className="evtbtn">
            { /*clear button element */}
            <button className='e-btn' id="clear"> Clear </button>
          </div>
        </div>
      </div>
    </div>);
  }
}
ReactDOM.render(<App />, document.getElementById('form-element'));

```

INDEX.TSX

```

import { enableRipple } from '@syncfusion/ej2-base';
import { FormEventArgs, FormValidator, FormValidatorModel, ValidArgs } from
 '@syncfusion/ej2-inputs';
import { TimePickerComponent } from '@syncfusion/ej2-react-calendars';
import * as React from "react";
import * as ReactDOM from "react-dom";
// enable ripple effect
enableRipple(true);
export default class App extends React.Component<{}, {}> {
  public componentDidMount(): void {
    // add the rules for validation
    const options: FormValidatorModel = {
      // validation begin event
      validationBegin: (args: ValidArgs) => {
        const span = document.createElement("span");
        span.innerHTML = "Validation begin <hr>";
        const log = document.getElementById("EventLog") as
HTMLInputElement;
        log.insertBefore(span, log.firstChild);
      },
      // validation complete event
      validationComplete: (args: FormEventArgs) => {

```

```

        if (args.status === "success") {
            const span = document.createElement("span");
            span.innerHTML = "Validation complete success <hr>";
            const log = document.getElementById("EventLog") as
HTMLInputElement;
            log.insertBefore(span, log.firstChild);
        } else {
            const span = document.createElement("span");
            span.innerHTML = "Validation complete failure <hr>";
            const log = document.getElementById("EventLog") as
HTMLInputElement;
            log.insertBefore(span, log.firstChild);
        }
    },
    };
    // initialize the form validator
    const formObject: FormValidator = new FormValidator('#form1',
options);
    formObject.addRules('timepicker', {required: true});
    (document.getElementById('clear') as
HTMLInputElement).addEventListener('click', () => {
        (document.getElementById("EventLog") as HTMLInputElement).innerHTML =
"";
    });
}
    public render() {
        return (
            <div>
                <div id='sample'>
                    <form id='form1' method="post">
                        <div className='content-wrapper'>
                            <TimePickerComponent id="timepicker"
placeholder="Select a Time"/>
                        </div>
                        <label className='e-error' id='timepickerError'
htmlFor='timepicker' />
                    </form>
                </div>
                <div id="list_event">
                    <h4><b>Event Trace</b></h4>
                    <div id="evt">
                        <div className="eventarea" >
                            { /*Event log element */}
                            <span className="EventLog" id="EventLog"/>
                        </div>
                        <div className="evtbtn">
                            { /*clear button element */}
                            <button className='e-btn' id="clear"> Clear </button>
                        </div>
                    </div>
                </div>
            </div>
        );
    }
}
ReactDOM.render(<App />, document.getElementById('form-element'));

```

Localization in React Form validator component

The [Localization](#) library allows users to localize the default error message contents of the `formValidator` to different cultures using the `locale` property.

The FormValidator provides default error messages for all default validation rules. It is tabulated as follows:

Rules	message
required	This field is required.
email	Please enter a valid email address.
url	Please enter a valid URL.
date	Please enter a valid date.
dateIso	Please enter a valid date (ISO).
number	Please enter a valid number.
digit	Please enter only digits.
maxLength	Please enter no more than {0} characters.
minLength	Please enter at least {0} characters.
rangeLength	Please enter a value between {0} and {1} characters long.
range	Please enter a value between {0} and {1}.
max	Please enter a value less than or equal to {0}.
min	Please enter a value greater than or equal to {0}.
regex	Please enter a correct value.

Loading translations

To load translation object in your application use `load` function of `L10n` class.

The following example demonstrates the FormValidator in **Arabic** culture with error message for email.

INDEX.JSX

```
import { L10n } from '@syncfusion/ej2-base';
import { FormValidator } from '@syncfusion/ej2-inputs';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
L10n.load({
  'ar-AR': {
    'formValidator': {
      'creditcard': "يرجى إدخال رقم بطاقة صالح",
      'date': "أرجوك ادخل تاريخ صحيح",
      'dateIso': "الرجاء إدخال تاريخ صالح (ISO)",
      'digits': "الرجاء إدخال الأرقام فقط",
      'email': "أدخل بريد إلكتروني صالح",
    }
  }
});
```

```

        "equalTo": "يرجى إدخال نص مطابقة صحيح",
        "max": "الرجاء إدخال قيمة أقل من أو تساوي {0}",
        "maxLength": "الرجاء إدخال ما لا يزيد عن {0} حرف",
        "min": "الرجاء إدخال قيمة أكبر من أو تساوي {0}",
        "minLength": "الرجاء إدخال أحرف {0} على الأقل",
        "number": "من فضلك أدخل رقما صالحا",
        "pattern": "الرجاء إدخال قيمة نمط صحيح",
        "range": "يرجى إدخال قيمة بين {0} و {1}",
        "rangeLength": "يرجى إدخال قيمة بين {0} و {1} من الأحرف",
        "regex": "يرجى إدخال قيمة صحيحة",
        "required": "هذه الخانة مطلوبة",
        "tel": "يرجى إدخال رقم هاتف صالح",
        "url": "أدخل رابط صحيح من فضلك"
    }
}
});
export default class Validation extends React.Component {
    dialogInstance;
    formObject;
    // Dialog will be closed, while clicking on overlay
    onOverlayClick() {
        this.dialogInstance.hide();
    }
    componentDidMount() {
        const options = {
            locale: "ar-AR",
            rules: {
                email: { email: true },
            }
        };
        this.formObject = new FormValidator('#form1', options);
    }
    onSubmitClick() {
        if (this.formObject.validate()) {
            this.formObject.element.reset();
            this.dialogInstance.show();
        }
    }
    render() {
        return (
            <div className='control-pane'>
                <div className='control-section col-lg-12'>
                    <div className='validation_wrapper'>
                        <div className="control_wrapper" id="control_wrapper">
                            <form id="form1" method="post">
                                <div className="form-group">
                                    <div className="e-float-input">
                                        <input type="email" id="Email" name="email"
data-msg-containerid="mailError"/>
                                        <span className="e-float-line"/>
                                        <label className="e-float-text e-label-top"
htmlFor="email">Email</label>
                                    </div>
                                    <div id="mailError"/>
                                </div>
                            </form>
                        </div>
                    </div>
                </div>
            </div>
        );
    }
}

```



```

        </div>
      </div>);
    }
  }
  ReactDOM.render(<Validation />, document.getElementById('form-element'));

```

INDEX.TSX

```

import { L10n, select } from '@syncfusion/ej2-base';
import { FormValidator, FormValidatorModel } from '@syncfusion/ej2-inputs';
import { DialogComponent } from '@syncfusion/ej2-react-popups';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
L10n.load({
  'ar-AR': {
    'formValidator': {
      'creditcard': "يرجى إدخال رقم بطاقة صالح",
      'date': "ارجوك ادخل تاريخ صحيح",
      'dateIso': "الرجاء إدخال تاريخ صالح (ISO)",
      'digits': "الرجاء إدخال الأرقام فقط",
      'email': "أدخل بريد إلكتروني صالح",
      'equalTo': "يرجى إدخال نص مطابقة صحيح",
      'max': "الرجاء إدخال قيمة أقل من أو تساوي 0",
      'maxLength': "الرجاء إدخال ما لا يزيد عن 0 {حرف}",
      'min': "الرجاء إدخال قيمة أكبر من أو تساوي 0",
      'minLength': "الرجاء إدخال أحرف 0 {على الأقل}",
      'number': "من فضلك أدخل رقما صالحا",
      'pattern': "الرجاء إدخال قيمة نمط صحيح",
      'range': "يرجى إدخال قيمة بين 0 {و 1}",
      'rangeLength': "يرجى إدخال قيمة بين 0 {و 1 {من الأحرف}",
      'regex': "يرجى إدخال قيمة صحيحة",
      'required': "هذه الخانة مطلوبة",
      'tel': "يرجى إدخال رقم هاتف صالح",
      'url': "أدخل رابط صحيح من فضلك"
    }
  }
});
export default class Validation extends React.Component<{}, {}> {
  public dialogInstance: DialogComponent;
  public formObject: FormValidator;
  // Dialog will be closed, while clicking on overlay
  public onOverlayClick() {
    this.dialogInstance.hide();
  }
  public componentDidMount(): void {
    const options: FormValidatorModel = {
      locale: "ar-AR",
      rules: {
        email: { email: true },
      }
    };
    this.formObject = new FormValidator('#form1', options);
  }
  public onSubmitClick(): void {
    if(this.formObject.validate()) {
      this.formObject.element.reset();
    }
  }
}

```

```

        this.dialogInstance.show();
    }
}
public render(): JSX.Element {
    return (
        <div className = 'control-pane'>
            <div className='control-section col-lg-12'>
                <div className='validation_wrapper'>
                    <div className="control_wrapper" id="control_wrapper">
                        <form id="form1" method="post">
                            <div className="form-group">
                                <div className="e-float-input">
                                    <input type="email" id="Email" name="email"
data-msg-containerid="mailError"/>
                                    <span className="e-float-line"/>
                                    <label className="e-float-text e-label-top"
htmlFor="email" >Email</label>
                                </div>
                                <div id="mailError"/>
                            </div>
                        </form>
                    </div>
                </div>
            </div>
        </div>
    );
}
ReactDOM.render(<Validation />, document.getElementById('form-element'));

```

React functional component in React Form validator component

This article provides a step-by-step instructions on using the React functional Hooks in a simple HTML form with the FormValidator component.

The following is a list of React Hooks methods to utilize while performing form validation.

| Hooks | Description |

| ----- | ----- |

| **useState** | The useState is a Hook that allows the state to be defined in the functional components. If the initial state is passed to this function, then it will return a state variable with a value and a function to update this state value. |

| **useEffect** | The useEffect is a Hook that executes code after rendering and re-rendering the component. |

| **useRef** | The useRef is a Hook function that allows the functional component to create a direct reference to the DOM element. |

| **useReducer** | The useReducer is a Hook function that accepts a reducer function and an initial state as arguments. It returns a state value and another function to dispatch an action. |

Create a React form with Syncfusion form components

To create a React application with Syncfusion components, refer to the [Getting Started](#) section. Once the application is set up, replace the components with React form and Syncfusion form components to create a simple form.

In the following example, a login form is created with Syncfusion components such as TextBox, DatePicker, and Button. This form is validated using the React FormValidator component.

- [TextBox](#) - To get the user's email and password
- [DatePicker](#) - To get the user's date of birth

APP.JSX

```
import { useState, useEffect, useRef, useReducer } from 'react';
import * as React from "react";
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { FormValidator } from '@syncfusion/ej2-inputs';
import { TextBoxComponent } from '@syncfusion/ej2-react-inputs';
import { DatePickerComponent } from '@syncfusion/ej2-react-calendars';
let formObject;
function App() {
    const userNameRef = useRef(null);
    const [dateOfBirth, setDateOfBirth] = useState('');
    const initialState = { email: '', password: '' };
    const reducer = (state, action) => {
        switch (action.type) {
            case 'update':
                return { ...state, [action.field]: action.value };
            default:
                return initialState;
        }
    };
    const [state, dispatch] = useReducer(reducer, initialState);
    const dateChangeHandler = (event) => {
        setDateOfBirth(event.value);
    };
    const update = (field) => (event) => {
        //update action is dispatched to update the email and password state
        value
        dispatch({ type: 'update', field, value: event.value });
    };
    useEffect(() => {
        userNameRef.current.focusIn();
        const options = {
            // validation rules
            rules: {
                email: {
                    required: [true, '* Please enter your email'],
                },
                password: {
                    required: [true, '* Please enter your password'],
                },
                date: {
                    required: [true, '* Please enter your date of birth'],
                },
            },
        };
        // Initialize the form validator
        formObject = new FormValidator('#form1', options);
    }, []);
    const onSubmit = () => {
```

```

        formObject.validate();
        if (formObject.validate()) {
            formObject.element.reset();
        }
    };
    return (<div>
        <div className="control_wrapper" id="control_wrapper">
            <h3 className="form-title">User Login</h3>
            <div className="control_wrapper textbox-form">
                <form id="form1" method="post">
                    <div className="form-group">
                        <TextBoxComponent ref={userNameRef} type="email" name="email"
value={state.email} change={update('email')} placeholder="Username"
floatLabelType="Auto" data-msg-containerid="erroForEmail"/>
                        <div id="erroForEmail"/>
                    </div>
                    <div className="form-group">
                        <TextBoxComponent type="password" name="password"
value={state.password} change={update('password')} placeholder="Password"
floatLabelType="Auto" data-msg-containerid="erroForPassword"/>
                        <div id="erroForPassword"/>
                    </div>
                    <div className="form-group">
                        <DatePickerComponent name="date" value={dateOfBirth}
change={dateChangeHandler} placeholder="Date of Birth" floatLabelType="Auto"
data-msg-containerid="erroForDateOfBirth"/>
                        <div id="erroForDateOfBirth"/>
                    </div>
                </form>
                <div className="submitBtn">
                    <ButtonComponent onClick={onSubmit}>Submit</ButtonComponent>
                </div>
            </div>
            <br />
            <br />
        </div>
    </div>);
}
export default App;

```

APP.TSX

```

import { useState, useEffect, useRef, useReducer } from 'react';
import * as React from "react";
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { FormValidator } from '@syncfusion/ej2-inputs';
import { TextBoxComponent } from '@syncfusion/ej2-react-inputs';
import { DatePickerComponent } from '@syncfusion/ej2-react-calendars';
let formObject;
function App() {
    const userNameRef = useRef(null);
    const [dateOfBirth, setDateOfBirth] = useState('');
    const initialState = { email: '', password: '' };
    const reducer = (state, action) => {
        switch (action.type) {
            case 'update':

```

```

        return { ...state, [action.field]: action.value };
      default:
        return initialState;
      }
    };
    const [state, dispatch] = useReducer(reducer, initialState);
    const dateChangeHandler = (event) => {
      setDateOfBirth(event.value);
    };
    const update = (field) => (event) => {
      //update action is dispatched to update the email and password state
      value
      dispatch({ type: 'update', field, value: event.value });
    };
    useEffect(() => {
      userNameRef.current.focusIn();
      const options = {
        // validation rules
        rules: {
          email: {
            required: [true, '* Please enter your email'],
          },
          password: {
            required: [true, '* Please enter your password'],
          },
          date: {
            required: [true, '* Please enter your date of birth'],
          },
        },
      };
      // Initialize the form validator
      formObject = new FormValidator('#form1', options);
    }, []);
    const onSubmit = () => {
      formObject.validate();
      if (formObject.validate()) {
        (formObject as any).element.reset();
      }
    };
    return (
      <div>
        <div className="control_wrapper" id="control_wrapper">
          <h3 className="form-title">User Login</h3>
          <div className="control_wrapper textbox-form">
            <form id="form1" method="post">
              <div className="form-group">
                <TextBoxComponent
                  ref={userNameRef}
                  type="email"
                  name="email"
                  value={state.email}
                  change={update('email')}
                  placeholder="Username"
                  floatLabelType="Auto"
                  data-msg-containerid="errroForEmail"
                />
                <div id="errroForEmail" />
              </div>
            </form>
          </div>
        </div>
      </div>
    );
  }
}

```

```

    </div>
    <div className="form-group">
      <TextBoxComponent
        type="password"
        name="password"
        value={state.password}
        change={update('password')}
        placeholder="Password"
        floatLabelType="Auto"
        data-msg-containerid="errroForPassword"
      />
      <div id="errroForPassword" />
    </div>
    <div className="form-group">
      <DatePickerComponent
        name="date"
        value={dateOfBirth}
        change={dateChangeHandler}
        placeholder="Date of Birth"
        floatLabelType="Auto"
        data-msg-containerid="errroForDateOfBirth"
      />
      <div id="errroForDateOfBirth" />
    </div>
  </form>
  <div className="submitBtn">
    <ButtonComponent onClick={onSubmit}>Submit</ButtonComponent>
  </div>
</div>
<br />
<br />
</div>
</div>
);
}
export default App;

```

Perform validation

For the input validation, specify rules for the email, password, and date of birth fields. The form validation will be initiated using the `useEffect` Hook.

```

`javascript
useEffect(() => {
  const options = {
    // add the rules for validation
    rules: {
      email: {
        required: [true, '* Please enter your email'],
      },
      password: {

```

```
required: [true, '* Please enter your password'],
},
date: {
  required: [true, '* Please enter your date of birth'],
},
}
};
// initialize the form validator
this.formObject = new FormValidator('#form1', options);
}, []);
`
```

Check out the [validation rules](#) section to learn more about the validation rules.

Here, the `useState` Hook is used to store the value of the date of birth field.

```
`javascript
const [dateOfBirth, setDateOfBirth] = useState("");
`
```

The `useReducer` Hook is used to update the email and password state values.

```
`javascript
const initialState = { email: "", password: "" };
const reducer = (state, action) => {
  switch (action.type) {
    case 'update':
      return { ...state, [action.field]: action.value };
    default:
      return initialState;
  }
};
const [state, dispatch] = useReducer(reducer, initialState);
`
```

Here, the `useRef` Hook is used to focus the username field at initial loading.

```
`javascript
const userNameRef = useRef(null);
useEffect(() => {
```

```
userNameRef.current.focusIn();  
}  
`
```

Run the Application

Run the application in the browser using the following command.

`

```
npm run start
```

[Link to the Video`](#)

Gantt

Getting Started

Getting started

This section explains you the steps required to create a simple Essential JS 2 Gantt in a React application and demonstrates its basic features.

To get started quickly with React Gantt Chart the following video explains the project configuration and basic Gantt chart features behaviours:

Dependencies

Following is the list of minimum dependencies required to use the Gantt.

```
`javascript  
|-- @syncfusion/ej2-react-gantt  
|-- @syncfusion/ej2-grids  
|-- @syncfusion/ej2-gantt  
|-- @syncfusion/ej2-layouts  
|-- @syncfusion/ej2-treegrid  
`
```

Setup for Local Development

You can use [create-react-app](#) to setup the applications.

To install create-react-app run the following command.

`

```
npm install -g create-react-app
```

`

- To setup basic React sample use following commands.

```
<div class='tsx'>
```

`

```
create-react-app quickstart --scripts-version=react-scripts-ts
```



```

`
</div>
<div class='jsx'>
`

cd quickstart
`

</div>

```

Adding Syncfusion packages

All the available Essential JS 2 packages are published in [npmjs.com](https://www.npmjs.com) public registry. To install Gantt component, use the following command

```
npm install @syncfusion/ej2-react-gantt --save
```

Adding CSS reference

Add components style as given below in src/App.css.

```

`css
@import '../node_modules/@syncfusion/ej2-base/styles/material.css';
@import '../node_modules/@syncfusion/ej2-buttons/styles/material.css';
@import '../node_modules/@syncfusion/ej2-calendars/styles/material.css';
@import '../node_modules/@syncfusion/ej2-dropdowns/styles/material.css';
@import '../node_modules/@syncfusion/ej2-gantt/styles/material.css';
@import '../node_modules/@syncfusion/ej2-grids/styles/material.css';
@import '../node_modules/@syncfusion/ej2-inputs/styles/material.css';
@import '../node_modules/@syncfusion/ej2-layouts/styles/material.css';
@import '../node_modules/@syncfusion/ej2-lists/styles/material.css';
@import '../node_modules/@syncfusion/ej2-navigations/styles/material.css';
@import '../node_modules/@syncfusion/ej2-popups/styles/material.css';
@import '../node_modules/@syncfusion/ej2-richtexteditor/styles/material.css';
@import '../node_modules/@syncfusion/ej2-treegrid/styles/material.css';
`

```

To refer App.css in the application then import it in the src/App.tsx file.

Adding Gantt component

Now, you can start adding React Gantt component in the application. For getting started, add the Gantt component in `src/App.tsx` file using following code.

Place the following gantt code in the src/App.tsx.

```
`ts
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import './App.css';
const GanttData: object[] = [
{
  TaskID: 1,
  TaskName: 'Project Initiation',
  StartDate: new Date('04/02/2019'),
  EndDate: new Date('04/21/2019'),
  subtasks: [
    { TaskID: 2, TaskName: 'Identify Site location', StartDate: new Date('04/02/2019'), Duration: 4, Progress: 50 },
    { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new Date('04/02/2019'), Duration: 4, Progress: 50 },
    { TaskID: 4, TaskName: 'Soil test approval', StartDate: new Date('04/02/2019'), Duration: 4, Progress: 50 },
  ],
},
{
  TaskID: 5,
  TaskName: 'Project Estimation',
  StartDate: new Date('04/02/2019'),
  EndDate: new Date('04/21/2019'),
  subtasks: [
    { TaskID: 6, TaskName: 'Develop floor plan for estimation', StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
    { TaskID: 7, TaskName: 'List materials', StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
    { TaskID: 8, TaskName: 'Estimation approval', StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
  ],
},
];
function App () {
```

```
const taskFields: any = {
  id: 'TaskID',
  name: 'TaskName',
  startDate: 'StartDate',
  duration: 'Duration',
  progress: 'Progress',
  child: 'subtasks',
};

return (
  <GanttComponent dataSource={GanttData} height="450px" taskFields={taskFields}/>
);
}

ReactDOM.render(<App />, document.getElementById('root'));
`ts

import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import './App.css';
const GanttData = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 2, TaskName: 'Identify Site location', StartDate: new Date('04/02/2019'), Duration: 4, Progress: 50 },
      { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new Date('04/02/2019'), Duration: 4, Progress: 50 },
      { TaskID: 4, TaskName: 'Soil test approval', StartDate: new Date('04/02/2019'), Duration: 4, Progress: 50 },
    ]
  },
];
```

```

{
  TaskID: 5,
  TaskName: 'Project Estimation',
  StartDate: new Date('04/02/2019'),
  EndDate: new Date('04/21/2019'),
  subtasks: [
    { TaskID: 6, TaskName: 'Develop floor plan for estimation', StartDate: new Date('04/04/2019'), Duration:
    3, Progress: 50 },
    { TaskID: 7, TaskName: 'List materials', StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
    { TaskID: 8, TaskName: 'Estimation approval', StartDate: new Date('04/04/2019'), Duration: 3, Progress:
    50 }
  ]
},
];

function App() {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks',
  };

  return (<GanttComponent dataSource={GanttData} height="450px" taskFields={taskFields}/>);
}

ReactDOM.render(<App />, document.getElementById('root'));

```

Binding Gantt with data

Bind data with the Gantt control by using the [dataSource](#) property. It accepts an array of JavaScript object or the DataManager instance.

```

<!DOCTYPE html>
<html lang="en">
<head>

```

```

<title>Syncfusion React Gantt</title>
<meta charset="utf-8" />
<meta name="viewport" content="width=device-width, initial-scale=1.0" />
<meta name="description" content="Essential JS 2 for React Components" />
<meta name="author" content="Syncfusion" />
<link href="https://cdn.syncfusion.com/ej2/23.1.44/material.css" rel="stylesheet" type="text/css"/>
<link href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css" rel="stylesheet" />
<script src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></script>
<script src="systemjs.config.js"></script>
<style>
loader {
color: #008cff;
height: 40px;
left: 45%;
position: absolute;
top: 45%;
width: 30%;
}
</style>
</head>
<body>
<div id='root'>
<div id='loader'>Loading....</div>
</div>
</body>
</html>
`

```

Place the following code in the `src/App.tsx`.

```

`ts
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import './App.css';

```

```
const GanttData: object[] = [
{
  TaskID: 1,
  TaskName: 'Project Initiation',
  StartDate: new Date('04/02/2019'),
  EndDate: new Date('04/21/2019'),
  subtasks: [
    { TaskID: 2, TaskName: 'Identify Site location', StartDate: new Date('04/02/2019'), Duration: 4, Progress: 50 },
    { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new Date('04/02/2019'), Duration: 4, Progress: 50 },
    { TaskID: 4, TaskName: 'Soil test approval', StartDate: new Date('04/02/2019'), Duration: 4, Progress: 50 },
  ],
},
{
  TaskID: 5,
  TaskName: 'Project Estimation',
  StartDate: new Date('04/02/2019'),
  EndDate: new Date('04/21/2019'),
  subtasks: [
    { TaskID: 6, TaskName: 'Develop floor plan for estimation', StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
    { TaskID: 7, TaskName: 'List materials', StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
    { TaskID: 8, TaskName: 'Estimation approval', StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
  ],
},
];

function App () {
  return (
    <GanttComponent dataSource={GanttData} />
  );
}

ReactDOM.render(<App />, document.getElementById('root'));
```

```
,  
  
'ts  
import { GanttComponent } from '@syncfusion/ej2-react-gantt';  
import * as React from 'react';  
import * as ReactDOM from 'react-dom';  
import './App.css';  
const GanttData = [  
  {  
    TaskID: 1,  
    TaskName: 'Project Initiation',  
    StartDate: new Date('04/02/2019'),  
    EndDate: new Date('04/21/2019'),  
    subtasks: [  
      { TaskID: 2, TaskName: 'Identify Site location', StartDate: new Date('04/02/2019'), Duration: 4, Progress: 50 },  
      { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new Date('04/02/2019'), Duration: 4, Progress: 50 },  
      { TaskID: 4, TaskName: 'Soil test approval', StartDate: new Date('04/02/2019'), Duration: 4, Progress: 50 },  
    ],  
  },  
  {  
    TaskID: 5,  
    TaskName: 'Project Estimation',  
    StartDate: new Date('04/02/2019'),  
    EndDate: new Date('04/21/2019'),  
    subtasks: [  
      { TaskID: 6, TaskName: 'Develop floor plan for estimation', StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },  
      { TaskID: 7, TaskName: 'List materials', StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },  
      { TaskID: 8, TaskName: 'Estimation approval', StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },  
    ],  
  },  
];
```

```
function App() {  
  return (<GanttComponent dataSource={GanttData}/>);  
}  
ReactDOM.render(<App />, document.getElementById('root'));  
`
```

Mapping task fields

The data source fields that are required to render the tasks are mapped to the Gantt component using the [taskFields](#) property.

```
`ts  
import { GanttComponent } from '@syncfusion/ej2-react-gantt';  
import * as React from 'react';  
import * as ReactDOM from 'react-dom';  
import './App.css';  
const GanttData: object[] = [  
  {  
    TaskID: 1,  
    TaskName: 'Project Initiation',  
    StartDate: new Date('04/02/2019'),  
    EndDate: new Date('04/21/2019'),  
    subtasks: [  
      { TaskID: 2, TaskName: 'Identify Site location', StartDate: new Date('04/02/2019'), Duration: 4, Progress: 50 },  
      { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new Date('04/02/2019'), Duration: 4, Progress: 50 },  
      { TaskID: 4, TaskName: 'Soil test approval', StartDate: new Date('04/02/2019'), Duration: 4, Progress: 50 },  
    ],  
  },  
  {  
    TaskID: 5,  
    TaskName: 'Project Estimation',  
    StartDate: new Date('04/02/2019'),  
    EndDate: new Date('04/21/2019'),  
    subtasks: [  
      { TaskID: 6, TaskName: 'Estimate project cost', StartDate: new Date('04/02/2019'), Duration: 4, Progress: 50 },  
      { TaskID: 7, TaskName: 'Obtain project approval', StartDate: new Date('04/02/2019'), Duration: 4, Progress: 50 },  
    ],  
  },  
]
```



```

{ TaskID: 6, TaskName: 'Develop floor plan for estimation', StartDate: new Date('04/04/2019'), Duration:
3, Progress: 50 },
{ TaskID: 7, TaskName: 'List materials', StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
{ TaskID: 8, TaskName: 'Estimation approval', StartDate: new Date('04/04/2019'), Duration: 3, Progress:
50 }
]
},
];
function App (){
const taskFields: any = {
id: 'TaskID',
name: 'TaskName',
startDate: 'StartDate',
duration: 'Duration',
progress: 'Progress',
child: 'subtasks',
};
return (
<GanttComponent dataSource={GanttData} height="450px" taskFields={taskFields}/>
);
}
ReactDOM.render(<App />, document.getElementById('root'));
`ts
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import './App.css';
const GanttData = [
{
TaskID: 1,
TaskName: 'Project Initiation',
StartDate: new Date('04/02/2019'),
EndDate: new Date('04/21/2019'),

```

```
subtasks: [  
  { TaskID: 2, TaskName: 'Identify Site location', StartDate: new Date('04/02/2019'), Duration: 4, Progress: 50 },  
  { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new Date('04/02/2019'), Duration: 4, Progress: 50 },  
  { TaskID: 4, TaskName: 'Soil test approval', StartDate: new Date('04/02/2019'), Duration: 4, Progress: 50 },  
]  
,  
{  
  TaskID: 5,  
  TaskName: 'Project Estimation',  
  StartDate: new Date('04/02/2019'),  
  EndDate: new Date('04/21/2019'),  
  subtasks: [  
    { TaskID: 6, TaskName: 'Develop floor plan for estimation', StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },  
    { TaskID: 7, TaskName: 'List materials', StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },  
    { TaskID: 8, TaskName: 'Estimation approval', StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },  
  ],  
},  
];  
  
function App() {  
  const taskFields = {  
    id: 'TaskID',  
    name: 'TaskName',  
    startDate: 'StartDate',  
    duration: 'Duration',  
    progress: 'Progress',  
    child: 'subtasks',  
  };  
  
  return (<GanttComponent dataSource={GanttData} height="450px" taskFields={taskFields}/>);  
}  
  
ReactDOM.render(<App />, document.getElementById('root'));
```

Defining columns

Gantt has an option to define columns as an array. You can customize the Gantt columns using the following properties:

- **field**: Maps the data source fields to the columns.
- **headerText**: Changes the title of columns.
- **textAlign**: Changes the alignment of columns. By default, columns will be left aligned. To change the columns to right align, set **textAlign** to right.
- **format**: Formats the number and date values to standard or custom formats. Here, it is defined for the conversion of numeric values to currency.

```
`ts
```

```
import { GanttComponent, ColumnsDirective, ColumnDirective } from '@syncfusion/ej2-react-gantt';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import './App.css';
const GanttData: object[] = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 2, TaskName: 'Identify Site location', StartDate: new Date('04/02/2019'), Duration: 4, Progress: 50 },
      { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new Date('04/02/2019'), Duration: 4, Progress: 50 },
      { TaskID: 4, TaskName: 'Soil test approval', StartDate: new Date('04/02/2019'), Duration: 4, Progress: 50 },
    ],
  },
  {
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
```

```

subtasks: [
{ TaskID: 6, TaskName: 'Develop floor plan for estimation', StartDate: new Date('04/04/2019'), Duration:
3, Progress: 50 },
{ TaskID: 7, TaskName: 'List materials', StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
{ TaskID: 8, TaskName: 'Estimation approval', StartDate: new Date('04/04/2019'), Duration: 3, Progress:
50 }
]
},
];
function App (){
const taskFields: any = {
id: 'TaskID',
name: 'TaskName',
startDate: 'StartDate',
duration: 'Duration',
progress: 'Progress',
child: 'subtasks',
};
return (
<GanttComponent dataSource={GanttData} height="450px" taskFields={taskFields}>
<ColumnsDirective>
<ColumnDirective field='TaskID' width='50' />
<ColumnDirective field='TaskName' headerText='Job Name' />
<ColumnDirective field='StartDate' />
<ColumnDirective field='Duration' />
</ColumnsDirective>
</GanttComponent>
);
}
ReactDOM.render(<App />, document.getElementById('root'));
`ts
import { GanttComponent, ColumnsDirective, ColumnDirective } from '@syncfusion/ej2-react-gantt';
import * as React from 'react';

```

```
import * as ReactDOM from 'react-dom';
import './App.css';
const GanttData = [
{
  TaskID: 1,
  TaskName: 'Project Initiation',
  StartDate: new Date('04/02/2019'),
  EndDate: new Date('04/21/2019'),
  subtasks: [
    { TaskID: 2, TaskName: 'Identify Site location', StartDate: new Date('04/02/2019'), Duration: 4, Progress: 50 },
    { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new Date('04/02/2019'), Duration: 4, Progress: 50 },
    { TaskID: 4, TaskName: 'Soil test approval', StartDate: new Date('04/02/2019'), Duration: 4, Progress: 50 },
  ],
},
{
  TaskID: 5,
  TaskName: 'Project Estimation',
  StartDate: new Date('04/02/2019'),
  EndDate: new Date('04/21/2019'),
  subtasks: [
    { TaskID: 6, TaskName: 'Develop floor plan for estimation', StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
    { TaskID: 7, TaskName: 'List materials', StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
    { TaskID: 8, TaskName: 'Estimation approval', StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
  ],
},
];
function App() {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
```

```

startDate: 'StartDate',
duration: 'Duration',
progress: 'Progress',
child: 'subtasks',
};
return (<GanttComponent dataSource={GanttData} height="450px" taskFields={taskFields}>
<ColumnsDirective>
<ColumnDirective field='TaskID' width='50' />
<ColumnDirective field='TaskName' headerText='Job Name' />
<ColumnDirective field='StartDate' />
<ColumnDirective field='Duration' />
</ColumnsDirective>
</GanttComponent>);
}
ReactDOM.render(<App />, document.getElementById('root'));
`

```

Module Injection

Gantt component features are segregated into individual feature-wise modules. In order to use a particular feature, you need to inject its feature service in the App. In the current application, we are going to use editing, sorting and filtering feature of Gantt. Please find relevant feature service name and description as follows.

- [Edit](#): Inject this module to use the editing feature.
- [Filter](#): Inject this module to use the filtering feature.
- [Sort](#): Inject this module to use the sorting feature.

These modules should be injected into the gantt using the Inject directive.

Enable editing

The editing feature enables you to edit the tasks in the Gantt component. It can be enabled by using the [editSettings.allowEditing](#) and [editSettings.allowTaskbarEditing](#) properties.

The following editing options are available to update the tasks in Gantt,

- Cell
- Dialog
- Taskbar
- Connector line

Cell editing

Modify the task details through cell editing by setting the edit mode to **Auto**. Inject the [Edit](#) module as follows. If the [Edit](#) module is not injected, you cannot edit the cell when a grid cell is clicked.

INDEX.JSX

```
import { GanttComponent, Inject, Edit, Selection } from '@syncfusion/ej2-react-gantt';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { data } from './datasource';
function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks',
    };
    const editSettings = {
        allowEditing: true,
        mode: 'Auto',
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
allowSelection={true} editSettings={editSettings} height='400px'>
        <Inject services={[Edit, Selection]} />
    </GanttComponent>;
}
;
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import { GanttComponent, Inject, Edit, Selection } from '@syncfusion/ej2-react-gantt';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { data } from './datasource';
function App () {
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks',
    };
    const editSettings: any = {
        allowEditing: true,
        mode: 'Auto',
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
allowSelection={true}
        editSettings={editSettings} height = '400px'>
        <Inject services={[Edit, Selection]} />
    </GanttComponent>;
}
```

```

    </GanttComponent>
  };
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/23.1.44/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Note: When the edit mode is set to **Auto**, you can change the cells to editable mode by double-clicking anywhere at the TreeGrid and edit the task details in the edit dialog by double-clicking anywhere at the chart.

Dialog editing

Modify the task details through dialog by setting the edit mode to **Dialog**. Inject the [Edit](#) module as follows. If the [Edit](#) module is not injected, you cannot edit the task details through the edit dialog.

INDEX.JSX

```

import { GanttComponent, Inject, Edit, Selection } from '@syncfusion/ej2-
react-gantt';
import * as React from 'react';

```



```
import * as ReactDOM from 'react-dom';
import { data } from './datasource';
function App() {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const editSettings = {
    allowEditing: true,
    mode: 'Dialog'
  };
  return <GanttComponent dataSource={data} taskFields={taskFields}
allowSelection={true} editSettings={editSettings} height='400px'>
    <Inject services={[Edit, Selection]} />
  </GanttComponent>;
}
;
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import { GanttComponent, Inject, Edit, Selection } from '@syncfusion/ej2-react-gantt';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { data } from './datasource';
function App () {
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const editSettings: any = {
    allowEditing: true,
    mode: 'Dialog'
  };
  return <GanttComponent dataSource={data} taskFields={taskFields}
allowSelection={true}
    editSettings={editSettings} height = '400px'>
    <Inject services={[Edit, Selection]} />
  </GanttComponent>
  };
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
```

```

<title>Syncfusion React Gantt</title>
<meta charset="utf-8" />
<meta name="viewport" content="width=device-width, initial-scale=1.0" />
<meta name="description" content="Essential JS 2 for React Components"
/>
<meta name="author" content="Syncfusion" />
<link href="https://cdn.syncfusion.com/ej2/23.1.44/material.css"
rel="stylesheet" type="text/css"/>
<link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
<script src="systemjs.config.js"></script>
<style>
    #loader {
        color: #008cff;
        height: 40px;
        left: 45%;
        position: absolute;
        top: 45%;
        width: 30%;
    }
</style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Note: In dialog editing mode, the edit dialog will appear while performing double-click action in both TreeGrid and chart sides.

Taskbar editing

Modify the task details through user interaction such as resizing and dragging the taskbar by enabling the [allowTaskbarEditing](#) property. Inject the [Edit](#) module as follows. If the [Edit](#) module is not injected, you cannot edit the task details while dragging the taskbar.

INDEX.JSX

```

import { GanttComponent, Inject, Edit } from '@syncfusion/ej2-react-gantt';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { data } from './datasource';
function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
};

```

```

    const editSettings = {
      allowTaskbarEditing: true
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
editSettings={editSettings} height='400px'>
      <Inject services={[Edit]} />
    </GanttComponent>;
  }
;
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import { GanttComponent, Inject, Edit } from '@syncfusion/ej2-react-gantt';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { data } from './datasource';
function App () {
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const editSettings: any = {
    allowTaskbarEditing: true
  };
  return <GanttComponent dataSource={data} taskFields={taskFields}
editSettings={editSettings} height = '400px'>
    <Inject services={[Edit]} />
  </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/23.1.44/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>

```

```

<style>
  #loader {
    color: #008cff;
    height: 40px;
    left: 45%;
    position: absolute;
    top: 45%;
    width: 30%;
  }
</style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Dependency editing

Modify the task dependencies using mouse interactions by enabling the [allowTaskbarEditing](#) property along with mapping the task dependency data source field to the [dependency](#) property.

INDEX.JSX

```

import { GanttComponent, Inject, Edit } from '@syncfusion/ej2-react-gantt';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
const data = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
      { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50, Predecessor: '2FS' },
      { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
    ]
  },
  {
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
      { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 },
      { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50, Predecessor: '7SS' }
    ]
  },
]

```

```

];
function App() {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks',
    dependency: 'Predecessor'
  };
  const editSettings = {
    allowTaskbarEditing: true
  };
  return <GanttComponent dataSource={data} taskFields={taskFields}
editSettings={editSettings} height='400px'>
    <Inject services={[Edit]}/>
  </GanttComponent>;
}
;
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import { GanttComponent, Inject, Edit } from '@syncfusion/ej2-react-gantt';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
const data: object[] = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 2, TaskName: 'Identify Site location', StartDate:
new Date('04/02/2019'), Duration: 4, Progress: 50 },
      { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50,Predecessor:'2FS' },
      { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
    ]
  },
  {
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
      { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 },
      { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50,Predecessor:'7SS' }
    ]
  },
],

```

```

    ];
    function App() {
        const taskFields: any = {
            id: 'TaskID',
            name: 'TaskName',
            startDate: 'StartDate',
            duration: 'Duration',
            progress: 'Progress',
            child: 'subtasks',
            dependency: 'Predecessor'
        };
        const editSettings: any = {
            allowTaskbarEditing: true
        };
        return <GanttComponent dataSource={data} taskFields={taskFields}
            editSettings={editSettings} height = '400px'>
            <Inject services={[Edit]} />
            </GanttComponent>
        );
    };
    ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/23.1.44/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008cff;
            height: 40px;
            left: 45%;
            position: absolute;
            top: 45%;
            width: 30%;
        }
    </style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>

```

```
</body>
</html>
```

Enabling predecessors or task relationships

Predecessor or task dependency in the Gantt component is used to depict the relationship between the tasks.

- Start to Start (SS): You cannot start a task until the dependent task starts.
- Start to Finish (SF): You cannot finish a task until the dependent task finishes.
- Finish to Start (FS): You cannot start a task until the dependent task completes.
- Finish to Finish (FF): You cannot finish a task until the dependent task completes.

You can show the relationship in tasks by using the [dependency](#) property as shown in the following code example.

INDEX.JSX

```
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
const data = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
      { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50, Predecessor: '2FS' },
      { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
    ]
  },
  {
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
      { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 },
      { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50, Predecessor: '7SS' }
    ]
  },
];
function App() {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
```

```

        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        dependency: 'Predecessor',
        child: 'subtasks'
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
height='400px' />;
}
;
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
const data: object[] = [
    {
        TaskID: 1,
        TaskName: 'Project Initiation',
        StartDate: new Date('04/02/2019'),
        EndDate: new Date('04/21/2019'),
        subtasks: [
            { TaskID: 2, TaskName: 'Identify Site location', StartDate:
new Date('04/02/2019'), Duration: 4, Progress: 50 },
            { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50,Predecessor:'2FS' },
            { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
        ]
    },
    {
        TaskID: 5,
        TaskName: 'Project Estimation',
        StartDate: new Date('04/02/2019'),
        EndDate: new Date('04/21/2019'),
        subtasks: [
            { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
            { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 },
            { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50,Predecessor:'7SS' }
        ]
    },
];
function App() {
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        dependency: 'Predecessor',
        child: 'subtasks'
    };
}

```



```

    };
    return <GanttComponent dataSource={data} taskFields={taskFields} height
= '400px' />
    };
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/23.1.44/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Assigning resources

You can display and assign the resource for each task in the Gantt control. Create a collection of JSON object, which contains id, name, unit and group of the resources and assign it to the [resources](#) property. Map these fields to the Gantt control using the [resourceFields](#) property.

INDEX.JSX

```

const projectResources = [
  { resourceId: 1, resourceName: 'Martin Tamer' },
  { resourceId: 2, resourceName: 'Rose Fuller' },
  { resourceId: 3, resourceName: 'Margaret Buchanan' },

```

```

    { resourceId: 4, resourceName: 'Fuller King' }
  ];
  const data = [
    {
      TaskID: 1,
      TaskName: 'Project Initiation',
      StartDate: new Date('04/02/2019'),
      EndDate: new Date('04/21/2019'),
      subtasks: [
        { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50, resources: [2, 3] },
        { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50, resources: [2] },
        { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50, resources: [1] }
      ]
    },
    {
      TaskID: 5,
      TaskName: 'Project Estimation',
      StartDate: new Date('04/02/2019'),
      EndDate: new Date('04/21/2019'),
      subtasks: [
        { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
        { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50, resources: [1, 3, 5] },
        { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 }
      ]
    },
  ],
];
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
function App() {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks',
    resourceInfo: 'resources'
  };
  const labelSettings = {
    rightLabel: 'resources'
  };
  const resourceFields = {
    id: 'resourceId',
    name: 'resourceName',
  };
  return <GanttComponent dataSource={data} taskFields={taskFields}
labelSettings={labelSettings} resourceFields={resourceFields}
resources={projectResources} height='450px' />;
}
;

```

```
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
const projectResources: object[] = [
  { resourceId: 1, resourceName: 'Martin Tamer' },
  { resourceId: 2, resourceName: 'Rose Fuller' },
  { resourceId: 3, resourceName: 'Margaret Buchanan' },
  { resourceId: 4, resourceName: 'Fuller King' }
];
const data: object[] = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 2, TaskName: 'Identify Site location', StartDate:
new Date('04/02/2019'), Duration: 4, Progress: 50,resources: [2, 3] },
      { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50,resources: [2] },
      { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50,resources: [1] }
    ]
  },
  {
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
      { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50,resources: [1, 3, 5] },
      { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 }
    ]
  },
];
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
function App () {
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks',
    resourceInfo: 'resources'
  };
  const labelSettings: any = {
    rightLabel: 'resources'
  };
};
```

```

const resourceFields: any = {
  id: 'resourceId',
  name: 'resourceName',
};

return <GanttComponent dataSource={data} taskFields={taskFields}
labelSettings={labelSettings}
resourceFields={resourceFields} resources={projectResources} height =
'450px' />
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/23.1.44/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Enable filtering

The filtering feature enables you to view the reduced amount of records based on filter criteria. Gantt provides the menu filtering support for each column. It can be enabled by setting the [allowFiltering](#) property to true along with injecting the [Filter](#) module as shown in the following code example. Filtering feature can also be customized using the [filterSettings](#) property.

INDEX.JSX

```
import { GanttComponent, Inject, Filter } from '@syncfusion/ej2-react-gantt';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { data } from './datasource';
function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
allowFiltering={true} height='400px'>
        <Inject services={[Filter]} />
    </GanttComponent>;
}
;
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import { GanttComponent, Inject, Filter } from '@syncfusion/ej2-react-gantt';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { data } from './datasource';
function App(){
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
        allowFiltering={true} height = '400px'>
        <Inject services={[Filter]} />
    </GanttComponent>
    };
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
```

```

    <meta name="description" content="Essential JS 2 for React Components"
  />
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/23.1.44/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>
      #loader {
        color: #008cff;
        height: 40px;
        left: 45%;
        position: absolute;
        top: 45%;
        width: 30%;
      }
    </style>
  </head>
  <body>
    <div id='root'>
      <div id='loader'>Loading....</div>
    </div>
  </body>
</html>

```

Enable sorting

The sorting feature enables you to order the records. It can be enabled by setting the [allowSorting](#) property to `true`. Inject the [Sort](#) module as follows. If the [Sort](#) module is not injected, you cannot sort the records when a header is clicked. The sorting feature can be customized using the [sortSettings](#) property.

INDEX.JSX

```

import { GanttComponent, Inject, Sort } from '@syncfusion/ej2-react-gantt';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { data } from './datasource';
function App() {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  return <GanttComponent dataSource={data} taskFields={taskFields}
allowSorting={true} height='400px'>
    <Inject services={[Sort]}/>
    </GanttComponent>;
}

```

```
;
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import { GanttComponent, Inject, Sort } from '@syncfusion/ej2-react-gantt';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { data } from './datasource';
function App () {
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
        allowSorting={true} height='400px'>
        <Inject services={[Sort]} />
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/23.1.44/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008cff;
            height: 40px;
            left: 45%;
            position: absolute;
            top: 45%;
            width: 30%;
        }
    </style>
</head>
```

```
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>
```

Run the application

The [create-react-app](#) will pre-configure the project to compile and run the application in browser. Use the following command to run the application.

```
npm start
```

Output will be appears as follows.

INDEX.JSX

```
const projectResources = [
  { resourceId: 1, resourceName: 'Project Manager' },
  { resourceId: 2, resourceName: 'Software Analyst' },
  { resourceId: 3, resourceName: 'Developer' },
  { resourceId: 4, resourceName: 'Testing Engineer' }
];
const data = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50, resources: [2, 3] },
      { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50, resources: [2] },
      { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Predecessor: '3FS', Progress: 50,
resources: [1] },
    ]
  },
  {
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
      { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50, resources: [1, 3, 5] },
      { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Predecessor: '7SS', Progress: 50 }
    ]
  },
]
```



```

];
import { GanttComponent, Inject, Edit, Filter, Sort } from '@syncfusion/ej2-react-gantt';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks',
        dependency: 'Predecessor',
        resourceInfo: 'resources'
    };
    const labelSettings = {
        rightLabel: 'resources'
    };
    const editSettings = {
        allowEditing: true,
        editMode: 'Auto',
        allowTaskbarEditing: true
    };
    const resourceFields = {
        id: 'resourceId',
        name: 'resourceName',
    };
    return <GanttComponent dataSource={data} allowFiltering={true}
allowSorting={true} taskFields={taskFields} editSettings={editSettings}
labelSettings={labelSettings} resourceFields={resourceFields}
resources={projectResources} height='400px'>
        <Inject services={[Edit, Filter, Sort]}/>
    </GanttComponent>;
}
;
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

const projectResources: object[] = [
    { resourceId: 1, resourceName: 'Project Manager' },
    { resourceId: 2, resourceName: 'Software Analyst' },
    { resourceId: 3, resourceName: 'Developer' },
    { resourceId: 4, resourceName: 'Testing Engineer' }
];
const data: object[] = [
    {
        TaskID: 1,
        TaskName: 'Project Initiation',
        StartDate: new Date('04/02/2019'),
        EndDate: new Date('04/21/2019'),
        subtasks: [
            { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50, resources: [2, 3] },

```

```

        { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50, resources: [2] },
        { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Predecessor: '3FS', Progress: 50,
resources: [1] },
    ]
},
{
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
        { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
        { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50, resources: [1, 3, 5] },
        { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Predecessor: '7SS', Progress: 50 }
    ]
},
];
import { GanttComponent, Inject, Edit, Filter, Sort } from '@syncfusion/ej2-
react-gantt';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
function App () {
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks',
        dependency: 'Predecessor',
        resourceInfo: 'resources'
    };
    const labelSettings: any = {
        rightLabel: 'resources'
    };
    const editSettings: any = {
        allowEditing: true,
        editMode: 'Auto',
        allowTaskbarEditing: true
    };
    const resourceFields: any = {
        id: 'resourceId',
        name: 'resourceName',
    };
    return <GanttComponent dataSource={data} allowFiltering={true}
allowSorting={true} taskFields={taskFields} editSettings={editSettings}
labelSettings={labelSettings}
        resourceFields={resourceFields} resources={projectResources}
height='400px'>
        <Inject services={[Edit, Filter, Sort]} />
        </GanttComponent>
    };
};

```

```
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>
```

You can refer to our [React Gantt Chart](#) feature tour page for its groundbreaking feature representations. You can also explore our [React Gantt Chart example](#) that shows how to render the Gantt Chart in React.

Creating a Next.js Application Using Syncfusion React Components

This section provides a step-by-step guide for setting up a Next.js application and integrating the Syncfusion React Gantt component.

What is Next.js?

[Next.js](#) is a React framework that makes it easy to build fast, SEO-friendly, and user-friendly web applications. It provides features such as server-side rendering, automatic code splitting, routing, and API routes, making it an excellent choice for building modern web applications.

Prerequisites

Before getting started with the Next.js application, ensure the following prerequisites are met:

- [Node.js 16.8](#) or later.
- The application is compatible with macOS, Windows, and Linux operating systems.

Create a Next.js application

To create a new Next.js application, use one of the commands that are specific to either NPM or Yarn.

NPM

```
npx create-next-app@latest
```

YARN

```
yarn create next-app
```

Using one of the above commands will lead you to set up additional configurations for the project as below:

1. Define the project name: Users can specify the name of the project directly. Let's specify the name of the project as `ej2-nextjs-gantt`.

CMD

```
√ What is your project named? » ej2-nextjs-gantt
```

2. Select the required packages.

CMD

```
√ What is your project named? ... ej2-nextjs-gantt
√ Would you like to use TypeScript? ... No / `Yes`
√ Would you like to use ESLint? ... No / `Yes`
√ Would you like to use Tailwind CSS? ... `No` / Yes
√ Would you like to use `src/` directory? ... No / `Yes`
√ Would you like to use App Router? (recommended) ... No / `Yes`
√ Would you like to customize the default import alias? ... `No` / Yes
Creating a new Next.js app in D:\ej2-nextjs-gantt.
```

3. Once complete the above mentioned steps to create `ej2-nextjs-gantt`, navigate to the directory using the below command:

CMD

```
cd ej2-nextjs-gantt
```

The application is ready to run with default settings. Now, let's add Syncfusion components to the project.

Install Syncfusion React packages

Syncfusion React component packages are available at [npmjs.com](https://www.npmjs.com). To use Syncfusion React components in the project, install the corresponding npm package.

Here, the [React Gantt component](#) is used in the project. To install the React Gantt component, use the following command:

NPM

```
npm install @syncfusion/ej2-react-gantt --save
```

YARN

```
yarn add @syncfusion/ej2-react-gantt
```

Import Syncfusion CSS styles

Syncfusion React components come with [built-in themes](#), which are available in the installed packages. It's easy to adapt the Syncfusion React components to match the style of your application by referring to one of the built-in themes.

Import the **Material** theme into the **src/app/globals.css** file and removed the existing styles in that file, as shown below:

GLOBALS.CSS

```
@import '../..//node_modules/@syncfusion/ej2-base/styles/material.css';
@import '../..//node_modules/@syncfusion/ej2-buttons/styles/material.css';
@import '../..//node_modules/@syncfusion/ej2-calendars/styles/material.css';
@import '../..//node_modules/@syncfusion/ej2-dropdowns/styles/material.css';
@import '../..//node_modules/@syncfusion/ej2-inputs/styles/material.css';
@import '../..//node_modules/@syncfusion/ej2-
navigations/styles/material.css';
@import '../..//node_modules/@syncfusion/ej2-lists/styles/material.css';
@import '../..//node_modules/@syncfusion/ej2-layouts/styles/material.css';
@import '../..//node_modules/@syncfusion/ej2-popups/styles/material.css';
@import '../..//node_modules/@syncfusion/ej2-
splitbuttons/styles/material.css';
@import '../..//node_modules/@syncfusion/ej2-grids/styles/material.css';
@import '../..//node_modules/@syncfusion/ej2-
richtexteditor/styles/material.css';
@import '../..//node_modules/@syncfusion/ej2-treegrid/styles/material.css';
@import "../..//node_modules/@syncfusion/ej2-react-
gantt/styles/material.css";
```

To know more about built-in themes and CSS reference for individual components, refer to the [themes](#) section.

Add Syncfusion React component

Follow the below steps to add the React Gantt component to the Next.js project:

1. Before adding the Gantt component to your markup, create a **datasource.tsx** file within the **src/app/** folder and add the Gantt component data.

DATASOURCE.TSX

```
export const projectResources: object[] = [
  { resourceId: 1, resourceName: 'Project Manager' },
  { resourceId: 2, resourceName: 'Software Analyst' },
  { resourceId: 3, resourceName: 'Developer' },
  { resourceId: 4, resourceName: 'Testing Engineer' }
];
export const data: object[] = [
```

```
{
  TaskID: 1,
  TaskName: 'Project Initiation',
  StartDate: new Date('04/02/2019'),
  EndDate: new Date('04/21/2019'),
  subtasks: [
    { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
      Date('04/02/2019'), Duration: 4, Progress: 50, resources: [2, 3] },
    { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
      Date('04/02/2019'), Duration: 4, Progress: 50, resources: [2] },
    { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
      Date('04/02/2019'), Duration: 4, Predecessor: '3FS', Progress: 50,
      resources: [1] },
  ],
},
{
  TaskID: 5,
  TaskName: 'Project Estimation',
  StartDate: new Date('04/02/2019'),
  EndDate: new Date('04/21/2019'),
  subtasks: [
    { TaskID: 6, TaskName: 'Develop floor plan for estimation', StartDate: new
      Date('04/04/2019'), Duration: 3, Progress: 50 },
    { TaskID: 7, TaskName: 'List materials', StartDate: new Date('04/04/2019'),
      Duration: 3, Progress: 50, resources: [1, 3, 5] },
    { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
      Date('04/04/2019'), Duration: 3, Predecessor: '7SS', Progress: 50 }
  ],
},
];
```

2. Then, import and define the Gantt component in the **src/app/page.tsx** file, as shown below:

PAGE.TSX

```
'use client'
import { GanttComponent, Inject, Edit, Filter, Sort } from '@syncfusion/ej2-react-gantt';
import { projectResources, data } from '../datasource';
export default function Home() {
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks',
    dependency: 'Predecessor',
    resourceInfo: 'resources'
  };
  const labelSettings: any = {
    rightLabel: 'resources'
  };
  const editSettings: any = {
    allowEditing: true,
    editMode: 'Auto',
```

```
allowTaskbarEditing: true
};
const resourceFields: any = {
  id: 'resourceId',
  name: 'resourceName',
};
return (
  <>
  <h2>Syncfusion React Gantt Component</h2>
  <GanttComponent dataSource={data} allowFiltering={true} allowSorting={true}
    taskFields={taskFields} editSettings={editSettings}
    labelSettings={labelSettings}
    resourceFields={resourceFields} resources={projectResources} height='400px'>
    <Inject services={[Edit, Filter, Sort]} />
  </GanttComponent>
  </>
)
}
```

Run the application

To run the application, use the following command:

NPM

```
npm run dev
```

YARN

```
yarn run dev
```

To learn more about the functionality of the Gantt component, refer to the [documentation](#).

[View the NEXT.js Gantt sample in the GitHub repository.](#)

Getting Started with the React Gantt Component in the Preact Framework

This article provides a step-by-step guide for setting up a [Preact](#) project and integrating the Syncfusion React Gantt component.

Preact is a fast and lightweight JavaScript library for building user interfaces. It's often used as an alternative to larger frameworks like React. The key difference is that Preact is designed to be smaller in size and faster in performance, making it a good choice for projects where file size and load times are critical factors.

Prerequisites

[System requirements for Syncfusion React UI components](#)

Set up the Preact project

To create a new **Preact** project, use one of the commands that are specific to either NPM or Yarn.

```
`bash
```

```
npm init preact
```

```
,
```

or

```
`bash
```

```
yarn init preact
```

```
`
```

Using one of the above commands will lead you to set up additional configurations for the project, as below:

1\ Define the project name: We can specify the name of the project directly. Let's specify the name of the project as `my-project` for this article.

```
`bash
```

```
T Preact - Fast 3kB alternative to React with the same modern API
```

```
|
```

- Project directory:

```
| my-project
```

```
—
```

```
`
```

2\ Choose `JavaScript` as the framework variant to build this Preact project using JavaScript and React.

```
`bash
```

```
T Preact - Fast 3kB alternative to React with the same modern API
```

```
|
```

- Project language:

```
| > JavaScript
```

```
| TypeScript
```

```
—
```

```
`
```

3\ Then configure the project as below for this article.

```
`bash
```

```
T Preact - Fast 3kB alternative to React with the same modern API
```

```
|
```

- Use router?

```
| Yes / > No
```

```
—
```

```
|
```


- Prerender app (SSG)?

| Yes / > No

—

|

- Use ESLint?

| Yes / > No

—

,

5\ Upon completing the aforementioned steps to create `my-project`, run the following command to jump into the project directory:

```
`bash
```

```
cd my-project
```

,

Now that `my-project` is ready to run with default settings, let's add Syncfusion components to the project.

Add the Syncfusion React packages

Syncfusion React component packages are available at [npmjs.com](https://www.npmjs.com). To use Syncfusion React components in the project, install the corresponding npm package.

This article uses the [React Gantt component](#) as an example. To use the React Gantt component in the project, the `@syncfusion/ej2-react-gantt` package needs to be installed using the following command:

```
`bash
```

```
npm install @syncfusion/ej2-react-gantt --save
```

,

or

```
`bash
```

```
yarn add @syncfusion/ej2-react-gantt
```

,

Import Syncfusion CSS styles

You can import themes for the Syncfusion React component in various ways, such as using CSS or SASS styles from npm packages, CDN, CRG and [Theme Studio](#). Refer to [themes topic](#) to know more about built-in themes and different ways to refer to theme's in a React project.

In this article, the `Material 3` theme is applied using CSS styles, which are available in installed packages. The necessary `Material 3` CSS styles for the Gantt component and its dependents were imported into the `src/style.css` file.

`~/SRC/STYLE.CSS`

```
@import '../node_modules/@syncfusion/ej2-base/styles/material3.css';
@import '../node_modules/@syncfusion/ej2-buttons/styles/material3.css';
@import '../node_modules/@syncfusion/ej2-calendars/styles/material3.css';
@import '../node_modules/@syncfusion/ej2-dropdowns/styles/material3.css';
@import '../node_modules/@syncfusion/ej2-gantt/styles/material3.css';
@import '../node_modules/@syncfusion/ej2-grids/styles/material3.css';
@import '../node_modules/@syncfusion/ej2-inputs/styles/material3.css';
@import '../node_modules/@syncfusion/ej2-layouts/styles/material3.css';
@import '../node_modules/@syncfusion/ej2-lists/styles/material3.css';
@import '../node_modules/@syncfusion/ej2-navigations/styles/material3.css';
@import '../node_modules/@syncfusion/ej2-popups/styles/material3.css';
@import '../node_modules/@syncfusion/ej2-richtexteditor/styles/material3.css';
@import '../node_modules/@syncfusion/ej2-treegrid/styles/material3.css';
```

The order of importing CSS styles should be in line with its dependency graph.

Add the Syncfusion React component

Follow the below steps to add the React Gantt component to the Vite project:

1\ Before adding the Gantt component to your markup, import the Gantt component in the **src/index.jsx** file.

~/SRC/INDEX.JSX

```
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
```

2\ Then, define the Gantt component with the [dataSource](#) property. Declare the values for the **dataSource** property.

~/SRC/INDEX.JSX

```
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { render } from 'preact';
import './style.css';
function App () {
  const GanttData = [
    {
      TaskID: 1,
      TaskName: 'Project Initiation',
      StartDate: new Date('04/02/2019'),
      EndDate: new Date('04/21/2019'),
      subtasks: [
        { TaskID: 2, TaskName: 'Identify Site location', StartDate: new Date('04/02/2019'), Duration: 4, Progress: 50 },
        { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new Date('04/02/2019'), Duration: 4, Progress: 50 },
        { TaskID: 4, TaskName: 'Soil test approval', StartDate: new Date('04/02/2019'), Duration: 4, Progress: 50 },
      ]
    },
    {
      TaskID: 5,
      TaskName: 'Project Estimation',
      StartDate: new Date('04/02/2019'),
      EndDate: new Date('04/21/2019'),
    }
  ]
}
```

```

subtasks: [
  { TaskID: 6, TaskName: 'Develop floor plan for estimation', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 },
  { TaskID: 7, TaskName: 'List materials', StartDate: new Date('04/04/2019'),
Duration: 3, Progress: 50 },
  { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 }
],
},
];
const taskFields= {
id: 'TaskID',
name: 'TaskName',
startDate: 'StartDate',
duration: 'Duration',
progress: 'Progress',
child: 'subtasks',
};
return (
<GanttComponent dataSource={GanttData} height="450px"
taskFields={taskFields}/>
);
}
render(<App />, document.querySelector('#app'));

```

Run the project

To run the project, use the following command:

```
`bash
```

```
npm run dev
```

```
,
```

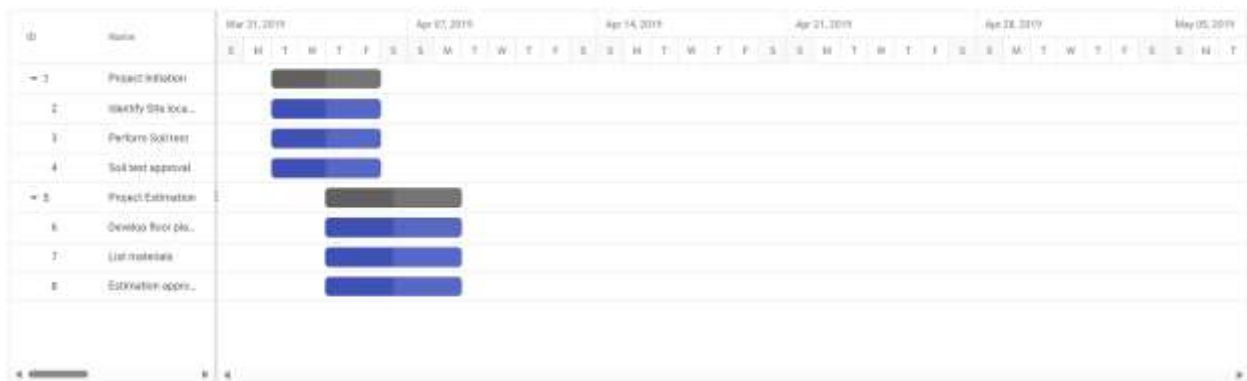
or

```
`bash
```

```
yarn run dev
```

```
,
```

The output will appear as follows:



See also

[Getting Started with the Syncfusion React UI Component](#)

Module in React Gantt component

The modules that are available in Gantt are as follows.

Module	Description
-----	-----
Sort	Inject this module to use sorting feature.
Filter	Inject this module to use filtering feature.
Reorder	Inject this module to use reorder feature.
ExcelExport	Inject this module to use excel export feature.
PdfExport	Inject this module to use PDF export feature.
RowDD	Inject this module to use row drag and drop feature.
Resize	Inject this module to use resize feature.
Toolbar	Inject this module to use toolbar feature.
Edit	Inject this module is use editing feature.
Selection	Inject this module to use selection feature.
DayMarkers	Inject this module to use event markers.
ContextMenu	Inject this module to use context menu feature.
ColumnMenu	Inject this module to use column menu feature.
VirtualScroll	Inject this module to use virtual scroll feature.
CriticalPath	Inject this module to use critical path feature.

These modules should be injected into the Gantt using the **Gantt.Inject** method.

Data binding in React Gantt component

The Gantt component uses **DataManager** for binding the data source, which supports both RESTful JSON data services and local JavaScript object array. The [Link to the Video](#) property can be assigned either with the instance of DataManager or JavaScript object array collection. The Gantt component supports binding two types of data:

- Local data
- Remote data

The following video explains about the types of data binding and how to use it on the Gantt Chart component:

Local data

To bind local data to Gantt, you can assign a JavaScript object array to the [dataSource](#) property. The local data source can also be provided as an instance of the **DataManager**.

In local data binding, the data source for rendering the Gantt component is retrieved from the same application locally.

The following are the two types of data binding possible with the Gantt component:

- Hierarchical data binding.
- Self-referential data binding (Flat data).

Hierarchical data binding

The [child](#) property is used to map the child records in hierarchical data.

The following code example shows how to bind the hierarchical local data into the Gantt component.

INDEX.JSX

```
let HierarchyData = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
      { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
      { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
    ]
  },
  {
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
      { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 },
      { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 }
    ]
  }
];
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
function App () {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
```

```

};
return <GanttComponent dataSource={HierarchyData} taskFields={taskFields}
height = '400px'>
  </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

let HierarchyData: Object[] = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
      { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
      { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
    ]
  },
  {
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
      { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 },
      { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 }
    ]
  }
];
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
function App () {
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  return <GanttComponent dataSource={HierarchyData} taskFields={taskFields}
height = '400px'>
    </GanttComponent>
  };
  ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Self-referential data binding (Flat data)

The Gantt component can be bound with self-referential data by mapping the data source field values to the [id](#) and [parentID](#) properties.

- ID field: This field contains unique values used to identify each individual task and it is mapped to the [id](#) property.
- Parent ID field: This field contains values that indicate parent tasks and it is mapped to the [parentID](#) property.

INDEX.JSX

```

let SelfReferenceData = [
  { TaskID: 1, TaskName: 'Project Initiation', StartDate: new
Date('04/02/2019'), EndDate: new Date('04/21/2019') },

```

```

    { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50, ParentId: 1 },
    { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50, ParentId: 1 },
    { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50, ParentId: 1 },
    { TaskID: 5, TaskName: 'Project Estimation', StartDate: new
Date('04/02/2019'), EndDate: new Date('04/21/2019') },
    { TaskID: 6, TaskName: 'Develop floor plan for estimation', StartDate:
new Date('04/04/2019'), Duration: 3, Progress: 50, ParentId: 5 },
    { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50, ParentId: 5 },
    { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50, ParentId: 5 }
];
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
function App () {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    parentID: 'ParentId'
  };
  return <GanttComponent dataSource={SelfReferenceData}
taskFields={taskFields} height = '450px'>
</GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

let SelfReferenceData: Object[] = [
  { TaskID: 1, TaskName: 'Project Initiation', StartDate: new
Date('04/02/2019'), EndDate: new Date('04/21/2019') },
  { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50, ParentId: 1 },
  { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50, ParentId: 1 },
  { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50, ParentId: 1 },
  { TaskID: 5, TaskName: 'Project Estimation', StartDate: new
Date('04/02/2019'), EndDate: new Date('04/21/2019') },
  { TaskID: 6, TaskName: 'Develop floor plan for estimation', StartDate:
new Date('04/04/2019'), Duration: 3, Progress: 50, ParentId: 5 },
  { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50, ParentId: 5 },
  { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50, ParentId: 5 }
];
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';

```



```
function App () {
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    parentID: 'ParentId'
  };
  return <GanttComponent dataSource={SelfReferenceData}
    taskFields={taskFields} height = '450px'>
    </GanttComponent>
  };
  ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>
```

Remote data

To bind remote data to the Gantt component, assign service data as an instance of **DataManager** to the [dataSource](#) property.

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { DataManager, WebApiAdaptor } from '@syncfusion/ej2-data';
function App () {
    const taskFields = {
        id: 'TaskId',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        dependency: 'Predecessor',
        child: 'SubTasks'
    };
    const dataSource = new DataManager({
        url: 'https://ej2services.syncfusion.com/production/web-
services/api/GanttData',
        adaptor: new WebApiAdaptor,
        crossDomain: true
    });
    return <GanttComponent dataSource={dataSource} taskFields={taskFields}
height = '450px'>
        </GanttComponent>
    };
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { DataManager, WebApiAdaptor } from '@syncfusion/ej2-data';
function App () {
    const taskFields: any = {
        id: 'TaskId',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        dependency: 'Predecessor',
        child: 'SubTasks'
    };
    const dataSource: DataManager = new DataManager({
        url: 'https://ej2services.syncfusion.com/production/web-
services/api/GanttData',
        adaptor: new WebApiAdaptor,
        crossDomain: true
    });
    return <GanttComponent dataSource={dataSource} taskFields={taskFields}
height = '450px'>
        </GanttComponent>
    };
};
```

```
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>
```

URL Adaptor

In Gantt, we can fetch data from SQL database using ADO.NET Entity Data Model and update the changes on CRUD action to the server by using DataManager support. To communicate with the remote data we are using UrlAdaptor of DataManager property to call the server method and get back resultant data in JSON format. We can know more about UrlAdaptor from [here](#).

Please refer the [link](#) to create the ADO.NET Entity Data Model in Visual Studio,

We can define data source for Gantt as instance of DataManager using url property of DataManager. Please Check the below code snippet to assign data source to Gantt.

```
`ts
```

```
import * as React from 'react';
```

```

import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { DataManager, UrlAdaptor } from '@syncfusion/ej2-data';
class App extends React.Component<{}, {}>{
  public taskFields: any = {
    id: 'TaskId',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    dependency: 'Predecessor',
    child: 'SubTasks'
  };
  public dataSource: DataManager = new DataManager({
    url: '/Home/UrlDatasource',
    adaptor: new UrlAdaptor
  });
  render() {
    return <GanttComponent dataSource={this.dataSource} taskFields={this.taskFields} height = '450px'>
    </GanttComponent>
  }
};
ReactDOM.render(<App />, document.getElementById('root'));
`ts
GanttDataSourceEntities db = new GanttDataSourceEntities();
public ActionResult UrlDatasource(DataManagerRequest dm)
{
  List<GanttData>DataList = db.GanttDatas.ToList();
  var count = DataList.Count();
  return Json(new { result = DataList, count = count });
}
`

```

Remote Save Adaptor

You may need to perform all Gantt Actions on the client-side except the CRUD operations, which should be interacted with the server-side to persist data. It can be achieved in Gantt by using

RemoteSaveAdaptor.

Datasource must be set to the **json** property and set **RemoteSaveAdaptor** to the **adaptor** property. CRUD operations can be mapped to the server-side using the **batchUrl** properties.

You can use the following code example to use **RemoteSaveAdaptor** in Gantt.

```
`ts
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { DataManager, RemoteSaveAdaptor } from '@syncfusion/ej2-data';
class App extends React.Component<{}, {}>{
  public taskFields: any = {
    id: 'taskId',
    name: 'taskName',
    startDate: 'startDate',
    duration: 'duration',
    progress: 'progress',
    parentID: 'parentID',
    dependency: 'predecessor',
  },
  toolbar: ['Add', 'Edit', 'Update', 'Delete', 'Cancel', 'ExpandAll', 'CollapseAll', 'Indent', 'Outdent'],
  editSettings: {
    allowAdding: true,
    allowEditing: true,
    allowDeleting: true,
    allowTaskbarEditing: true,
    showDeleteConfirmDialog: true
  },
  public dataSource: DataManager = new DataManager({
    batchUrl: '/Home/BatchUpdate',
    adaptor: new RemoteSaveAdaptor
  });
};
```

```
render() {  
  return <GanttComponent dataSource={this.dataSource} taskFields={this.taskFields} height = '450px'>  
</GanttComponent>  
}  
};  
ReactDOM.render(<App />, document.getElementById('root'));  
、
```

The following code example describes the CRUD operations handled at server-side.

```
public IActionResult BatchUpdate([FromBody] CRUDModel batchmodel)  
{  
  public class CRUDModel  
  {  
    public List<GanttDataSource> added { get; set; }  
    public List<GanttDataSource> changed { get; set; }  
    public List<GanttDataSource> deleted { get; set; }  
    public object key { get; set; }  
    public string action { get; set; }  
    public string table { get; set; }  
  }  
  public IActionResult BatchUpdate([FromBody] CRUDModel batchmodel)  
  {  
    if (batchmodel.changed != null)  
    {  
      for (var i = 0; i < batchmodel.changed.Count(); i++)  
      {  
        var value = batchmodel.changed[i];  
        GanttDataSource result = DataList.Where(or => or.taskId == value.taskId).FirstOrDefault();  
        result.taskId = value.taskId;  
        result.taskName = value.taskName;  
        result.startDate = value.startDate;  
        result.endDate = value.endDate;  
        result.duration = value.duration;  
      }  
    }  
  }  
}
```

```
result.progress = value.progress;
result.parentID = value.parentID;
}
}
if (batchmodel.deleted != null)
{
for (var i = 0; i < batchmodel.deleted.Count(); i++)
{
DataList.Remove(DataList.Where(or => or.taskId.Equals(batchmodel.deleted[i].taskId)).FirstOrDefault());
RemoveChildRecords(batchmodel.deleted[i].taskId);
}
}
if (batchmodel.added != null)
{
for (var i = 0; i < batchmodel.added.Count(); i++)
{
DataList.Add(batchmodel.added[i]);
}
}
return Json(new { addedRecords = batchmodel.added, changedRecords = batchmodel.changed,
deletedRecords = batchmodel.deleted });
}

public void RemoveChildRecords(int key)
{
var childList = DataList.Where(x => x.parentID == key).ToList();
foreach (var item in childList)
{
DataList.Remove(item);
RemoveChildRecords(item.taskId);
}
}

return Json(new { addedRecords = batchmodel.added, changedRecords = batchmodel.changed,
deletedRecords = batchmodel.deleted });
}
```

Load child on demand

To render child records on demand, assign a remote service URL in the instance of `DataManager` to the `url` property. To interact with the remote data source, provide the endpoint URL and also define the [hasChildMapping](#) property in taskFields of Gantt Chart.

The `hasChildMapping` property maps the field name in the data source, which denotes whether the current record holds any child records. This is useful internally to show expand icon while binding child data on demand.

When [loadChildOnDemand](#) is disabled, all the root nodes are rendered in a collapsed state at initial load. On expanding the root node, the child nodes will be loaded from the remote server.

When `enableVirtualization` is enabled and `loadChildOnDemand` is disabled, only the current viewport root nodes are rendered in a collapsed state.

When a root node is expanded, its child nodes are rendered and maintained in a collection locally, such that on consecutive expand/collapse actions on the root node, the child nodes are loaded locally instead of from the remote server.

When the `loadChildOnDemand` is enabled, parent records are rendered in an expanded state.

`ts

```
import { DataManager, WebApiAdaptor } from '@syncfusion/ej2-data';
import { Selection, VirtualScroll } from '@syncfusion/ej2-react-gantt';
import * as React from 'react';

function App() {
  const dataSource: DataManager = new DataManager({
    url: 'https://services.syncfusion.com/react/production/api/GanttLoadOnDemand',
    adaptor: new WebApiAdaptor,
    crossDomain: true
  });

  const taskFields: any = {
    id: 'taskId',
    name: 'taskName',
    startDate: 'startDate',
    endDate: 'endDate',
    duration: 'duration',
    progress: 'progress',
    hasChildMapping: 'isParent',
    parentID: 'parentID',
```



```

expandState:'IsExpanded'
};
const projectStartDate: Date = new Date('01/02/2000');
const projectEndDate: Date = new Date('12/01/2002');
return <GanttComponent id='LoadOnDemand' dataSource={dataSource} treeColumnIndex={1}
taskFields={taskFields} enableVirtualization={true} loadChildOnDemand={false} height='460px'
projectStartDate={projectStartDate} projectEndDate={projectEndDate}>
<ColumnsDirective>
<ColumnDirective field='taskId' width='80' ></ColumnDirective>
<ColumnDirective field='taskName' headerText='Job Name' width='250'
clipMode='EllipsisWithTooltip'></ColumnDirective>
<ColumnDirective field='startDate'></ColumnDirective>
<ColumnDirective field='duration'></ColumnDirective>
<ColumnDirective field='progress'></ColumnDirective>
</ColumnsDirective>
<Inject services={[Selection, VirtualScroll]} />
</GanttComponent>
};
export default App;
`

```

The following code example describes handling of Load on demand at server end.

```

`ts
public object Get()
{
DataOperations operation = new DataOperations();
var queryString = Request.Query;
if (tree.Count == 0)
tree = TreeData.GetTree();
if (queryString.Keys.Contains("$filter") && !queryString.Keys.Contains("$stop"))
{
StringValues filter;
queryString.TryGetValue("$filter", out filter);
int? fltr;

```

```
if (filter[0].ToString().Split("eq")[1] == " null")
{
    fltr = null;
}
else
{
    fltr = Int32.Parse(filter[0].ToString().Split("eq")[1]);
}
IQueryable<TreeData> data1 = tree.Where(f => f.parentID == fltr).AsQueryable();
return new { result = data1.ToList(), count = data1.Count() };
}

StringValues expand;
queryString.TryGetValue("$expand", out expand);
if (queryString.Keys.Contains("$expand")) // setting the ExpandStateMapping property whether is true
or false
{
    if (expand[0].ToString().Split(",")[0] == "ExpandingAction")
    {
        var val = TreeData.GetTree().Where(ds => ds.taskId ==
int.Parse(expand[0].ToString().Split(",")[1])).FirstOrDefault();
        val.IsExpanded = true;
    }
    else if (expand[0].ToString().Split(",")[0] == "CollapsingAction")
    {
        var val = TreeData.GetTree().Where(ds => ds.taskId ==
int.Parse(expand[0].ToString().Split(",")[1])).FirstOrDefault();
        val.IsExpanded = false;
    }
}

List<TreeData> data = tree.ToList();
if (queryString.Keys.Contains("$select"))
{
    data = (from ord in tree
select new TreeData
```

```
{
parentID = ord.parentID
}
).ToList();
return data;
}
data = data.Where(p => p.parentID == null).ToList();
int count = data.Count;
if (queryString.Keys.Contains("$inlinecount"))
{
StringValues Skip;
StringValues Take;
StringValues loadchild;
int skip = (queryString.TryGetValue("$skip", out Skip)) ? Convert.ToInt32(Skip[0]) : 0;
int top = (queryString.TryGetValue("$top", out Take)) ? Convert.ToInt32(Take[0]) : data.Count();
var GroupData = TreeData.GetTree().ToList().GroupBy(rec => rec.parentID)
.Where(g => g.Key != null).ToDictionary(g => g.Key?.ToString(), g => g.ToList());
foreach (var Record in data.ToList())
{
if (GroupData.ContainsKey(Record.taskId.ToString()))
{
var ChildGroup = GroupData[Record.taskId.ToString()];
if (ChildGroup?.Count > 0)
AppendChildren(ChildGroup, Record, GroupData, data);
}
}
if (expand.Count > 0 && expand[0].ToString().Split(",")[0] == "CollapsingAction")
{
string IdMapping = "taskId";
List<WhereFilter> CollapseFilter = new List<WhereFilter>();
CollapseFilter.Add(new WhereFilter() { Field = IdMapping, value = expand[0].ToString().Split(",")[1],
Operator = "equal" });
var CollapsedParentRecord = operation.PerformFiltering(data, CollapseFilter, "and");
}
```

```
var index = data.Cast<object>().ToList().IndexOf(CollapsedParentRecord.Cast<object>().ToList()[0]);
skip = index;
}
else if (expand.Count > 0 && expand[0].ToString().Split(",")[0] == "ExpandingAction")
{
    string IdMapping = "taskId";
    List<WhereFilter> ExpandFilter = new List<WhereFilter>();
    ExpandFilter.Add(new WhereFilter() { Field = IdMapping, value = expand[0].ToString().Split(",")[1],
    Operator = "equal" });
    var ExpandedParentRecord = operation.PerformFiltering(data, ExpandFilter, "and");
    var index = data.Cast<object>().ToList().IndexOf(ExpandedParentRecord.Cast<object>().ToList()[0]);
    skip = index;
}
return new { result = data.Skip(skip).Take(top), count = data.Count };
}
else
{
    return TreeData.GetTree();
}
}

private void AppendChildren(List<TreeData> ChildRecords, TreeData ParentItem, Dictionary<string,
List<TreeData>> GroupData, List<TreeData> data)
{
    var queryString = Request.Query;
    string TaskId = ParentItem.taskId.ToString();
    var index = data.IndexOf(ParentItem);
    foreach (var Child in ChildRecords)
    {
        string ParentId = Child.parentID.ToString();
        if (TaskId == ParentId && (bool)ParentItem.IsExpanded)
        {
            if (data.IndexOf(Child) == -1)
            {
                ((IList)data).Insert(++index, Child);
            }
            if (GroupData.ContainsKey(Child.taskId.ToString()))
            {
                GroupData[Child.taskId.ToString()] = data;
            }
        }
    }
}
```

```
{
var DeepChildRecords = GroupData[Child.taskId.ToString()];
if (DeepChildRecords?.Count > 0)
AppendChildren(DeepChildRecords, Child, GroupData, data);
}
}
}
}

// GET: api/Orders/
[HttpGet("{id}", Name = "Get")]
public string Get(int id)
{
return "value";
}

[HttpPost]
public object Post([FromBody] TreeData[] value)
{
//handle insert action
for (var i = 0; i < value.Length; i++)
{
tree.Insert(0, value[i]);
}
return value;
}

//// PUT: api/Orders
[HttpPut]
public object Put([FromBody] TreeData[] value)
{
//handle edit action
if (value.Length == 1 && value[0].isParent == true)
{
UpdateDependentRecords(value[0]);
}
}
```

```
for (var i = 0; i < value.Length; i++) {
    var ord = value[i];
    TreeData val = tree.Where(or => or.taskId == ord.taskId).FirstOrDefault();
    val.taskId = ord.taskId;
    val.taskName = ord.taskName;
    val.endDate = ord.endDate;
    val.startDate = ord.startDate;
    val.duration = ord.duration;
    val.predecessor = ord.predecessor;
}
return value;
}

private void UpdateDependentRecords(TreeData ParentItem)
{
    var data = tree.Where(p => p.parentID == ParentItem.taskId).ToList();
    var previousData = tree.Where(p => p.taskId == ParentItem.taskId).ToList();
    var previousStartDate = previousData[0].startDate;
    var previousEndDate = previousData[0].endDate;
    double sdiff = (double)GetTimeDifference((DateTime)previousStartDate,
        (DateTime)ParentItem.startDate);
    double ediff = (double)GetTimeDifference((DateTime)previousEndDate,
        (DateTime)ParentItem.endDate);
    GetRootChildRecords(ParentItem);
    for(var i=0; i<ChildRecords.Count;i++)
    {
        ChildRecords[i].startDate = ((DateTime)ChildRecords[i].startDate).AddSeconds(sdiff);
        ChildRecords[i].endDate = ((DateTime)ChildRecords[i].endDate).AddSeconds(ediff);
    }
}

private void GetRootChildRecords(TreeData ParentItem)
{
    var currentchildRecords = tree.Where(p => p.parentID == ParentItem.taskId).ToList();
    for (var i = 0; i < currentchildRecords.Count; i++) {
        var currentRecord = currentchildRecords[i];
```

```
ChildRecords.Add(currentRecord);
if (currentRecord.isParent == true)
{
    GetRootChildRecords(currentRecord);
}
}
}

public object GetTimeDifference(DateTime sdate, DateTime edate)
{
    return new DateTime(edate.Year, edate.Month, edate.Day, edate.Hour, edate.Minute, edate.Second,
        DateTimeKind.Utc).Subtract(new DateTime(sdate.Year, sdate.Month, sdate.Day, sdate.Hour,
        sdate.Minute, sdate.Second, DateTimeKind.Utc)).TotalSeconds;
}

// DELETE: api/ApiWithActions
[HttpDelete("{id:int}")]
[Route("Orders/{id:int}")]
public object Delete(int id)
{
    //handle delete action
    tree.Remove(tree.Where(or => or.taskId == id).FirstOrDefault());
    return Json(id);
}

public class CRUDModel<T> where T : class
{
    public TreeData Value;
    public int Key { get; set; }
    public int RelationalKey { get; set; }
    public List<TreeData> added { get; set; }
    public List<TreeData> changed { get; set; }
    public List<TreeData> deleted { get; set; }
}

public class TreeData
{
    public static List<TreeData> tree = new List<TreeData>();
}
```

```
[System.ComponentModel.DataAnnotations.Key]
public int taskId { get; set; }
public string taskName { get; set; }
public DateTime startDate { get; set; }
public DateTime endDate { get; set; }
public string duration { get; set; }
public int progress { get; set; }
public int? parentId { get; set; }
public string predecessor { get; set; }
public bool? isParent { get; set; }
public bool? IsExpanded { get; set; }
public static List<TreeData> GetTree()
{
    if (tree.Count == 0)
    {
        Random rand = new Random();
        var x = 0;
        int duration = 0;
        DateTime startDate = new DateTime(2000, 1, 3, 08, 00, 00);
        for (var i = 1; i <= 50; i++)
        {
            startDate = startDate.AddDays(i == 1 ? 0 : 7);
            DateTime childStartDate = startDate;
            TreeData Parent = new TreeData()
            {
                taskId = ++x,
                taskName = "Task " + x,
                startDate = startDate,
                endDate = childStartDate.AddDays(26),
                duration = "20",
                progress = rand.Next(100),
                predecessor = null,
                isParent = true,
```



```

parentID = null,
IsExpanded = false
};
tree.Add(Parent);
for (var j = 1; j <= 4; j++)
{
    childStartDate = childStartDate.AddDays(j == 1 ? 0 : duration + 2);
    duration = 5;
    tree.Add(new TreeData()
    {
        taskId = ++x,
        taskName = "Task " + x,
        startDate = childStartDate,
        endDate = childStartDate.AddDays(5),
        duration = duration.ToString(),
        progress = rand.Next(100),
        parentID = Parent.taskId,
        predecessor = (j > 1 ? (x - 1) + "FS" : ""),
        isParent = false,
        IsExpanded = false
    });
}
}
}
return tree;
}
}
`

```

Limitations

- Filtering, sorting and searching are not supported in load on demand.
- Only Self-Referential type data is supported with remote data binding in Gantt Chart.
- Load-on-demand supports only the validated data source.

Sending additional parameters to the server

We can pass additional parameters using `addParams` method of [Query](#) class. In server side we have inherited and shown the additional parameter value in Syncfusion DataManager class itself. We pass an additional parameter in load time using `load` event. We can also pass additional parameter to the CRUD model. Please Check the below code snippet to send additional parameter to Gantt.

```
`ts
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit, Toolbar } from '@syncfusion/ej2-react-gantt';
import { DataManager, UrlAdaptor, Query } from '@syncfusion/ej2-data';
class App extends React.Component<{}, {}>{
  public taskFields: any = {
    id: 'TaskId',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    dependency: 'Predecessor',
    parentID: 'parentID',
  };
  this.editOptions = {
    allowAdding: true,
    allowEditing: true,
    allowDeleting: true
  };
  this.toolbarOptions = ['Add', 'Edit', 'Delete', 'Cancel', 'Update', 'ExpandAll', 'CollapseAll'];
  public dataSource: DataManager = new DataManager({
    url: 'http://localhost:50039/Home/UrlDatasource',
    adaptor: new UrlAdaptor,
    batchUrl: 'http://localhost:50039/Home/BatchSave',
  });
  load(args) {
    this.ganttInstance.query = new Query().addParams('ej2Gantt', "test");
  }
  render() {
```

```

return <GanttComponent dataSource={this.dataSource} taskFields={this.taskFields}
editSettings={this.editOptions} toolbar={this.toolbarOptions} load={this.load.bind(this)} height = '450px'
ref={gantt => this.ganttInstance = gantt}>
<Inject services={[Edit, Toolbar]}/>
</GanttComponent>
}
};
ReactDOM.render(<App />, document.getElementById('root'));

```

```
`ts
```

```

namespace URLAdaptor.Controllers
{
    public class HomeController : Controller
    {
        ...///
        //inherit the class to show age as property of DataManager
        public class Test : DataManagerRequest
        {
            public string ej2Gantt { get; set; }
        }
        public ActionResult UrlDatasource([FromBody]Test dm)
        {
            if (DataList == null)
            {
                ProjectData datasource = new ProjectData();
                DataList = datasource.GetUrlDataSource();
            }
            var count = DataList.Count();
            return Json(new { result = DataList, count = count }, JsonRequestBehavior.AllowGet);
        }
        ...///
        public class ICRUDModel<T> where T : class
        {
            public object key { get; set; }
        }
    }
}

```

```
public T value { get; set; }

public List<T> added { get; set; }

public List<T> changed { get; set; }

public List<T> deleted { get; set; }

public IDictionary<string, object> @params { get; set; }

}

...///

}

}

}
```

You can find the full sample from [here](#).

Handling HTTP error

During server interaction from the Gantt, some server-side exceptions may occur, and you can acquire those error messages or exception details in client-side using the [actionFailure](#) event.

The argument passed to the `actionFailure` event contains the error details returned from the server.

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { DataManager } from '@syncfusion/ej2-data';
function App() {
  const taskFields = {
    id: 'TaskId',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    dependency: 'Predecessor',
    parentID: 'parentID',
  };
  const dataSource = new DataManager({
    url: 'http://some.com/invalidUrl'
  });
  let ganttInstance;
  function actionFailure(args) {
    let span = document.createElement('span');
    ganttInstance.element.parentNode.insertBefore(span,
ganttInstance.element);
    span.style.color = '#FF0000'
    span.innerHTML = 'Server exception: 404 Not found';
  }
  return <GanttComponent dataSource={dataSource} taskFields={taskFields}
actionFailure={actionFailure} height = '450px'
  ref={gantt => ganttInstance = gantt}>
    </GanttComponent>
  </>
  ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { DataManager } from '@syncfusion/ej2-data';
function App() {
    const taskFields: any = {
        id: 'TaskId',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        dependency: 'Predecessor',
        parentID: 'parentID',
    };
    const dataSource: DataManager = new DataManager({
        url: 'http://some.com/invalidUrl'
    });
    let ganttInstance;
    function actionFailure(args) {
        let span: HTMLElement = document.createElement('span');
        ganttInstance.element.parentNode.insertBefore(span,
ganttInstance.element);
        span.style.color = '#FF0000'
        span.innerHTML = 'Server exception: 404 Not found';
    }
    return <GanttComponent dataSource={dataSource} taskFields={taskFields}
actionFailure={actionFailure} height = '450px'
    ref={gantt => ganttInstance = gantt}>
        </GanttComponent>
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
```

```

        color: #008cff;
        height: 40px;
        left: 45%;
        position: absolute;
        top: 45%;
        width: 30%;
    }
</style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Binding with Ajax

You can use Gantt [dataSource](#) property to bind the data source to Gantt from external Ajax request. In the below code we have fetched the data source from the server with the help of Ajax request and provided that to `dataSource` property by using `onSuccess` event of the Ajax.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Ajax } from '@syncfusion/ej2-base';
function App () {
    const taskFields= {
        id: 'TaskId',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        dependency: 'Predecessor',
        parentID: 'parentID',
    };
    let ganttInstance;
    function clickHandler() {
        let ajax = new
        Ajax("https://ej2services.syncfusion.com/production/web-
        services/api/GanttData", "GET");
        ganttInstance.showSpinner();
        ajax.send();
        ajax.onSuccess = function (data) {
            ganttInstance.hideSpinner();
            ganttInstance.dataSource = (JSON.parse(data)).Items;
            ganttInstance.refresh();
        };
    }
    return <div>
        <ButtonComponent onClick={clickHandler}>Bind Data</ButtonComponent>
        <GanttComponent taskFields={taskFields}
        projectStartDate='02/24/2019' projectEndDate='07/20/2019' height = '450px'
        ref={gantt => ganttInstance = gantt}>
        </GanttComponent>
    </div>

```

```

    </div>
  };
  ReactDOM.render(<App />, document.getElementById('root'));;

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Ajax } from '@syncfusion/ej2-base';
function App () {
  const taskFields: any = {
    id: 'TaskId',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    dependency: 'Predecessor',
    parentID: 'parentID',
  };
  let ganttInstance: any;
  function clickHandler() {
    let ajax = new
    Ajax("https://ej2services.syncfusion.com/production/web-
    services/api/GanttData", "GET");
    ganttInstance.showSpinner();
    ajax.send();
    ajax.onSuccess = function (data: string) {
      ganttInstance.hideSpinner();
      ganttInstance.dataSource = (JSON.parse(data)).Items;
      ganttInstance.refresh();
    };
  }
  return <div>
    <ButtonComponent onClick={clickHandler}>Bind Data</ButtonComponent>
    <GanttComponent taskFields={taskFields}
    projectStartDate='02/24/2019' projectEndDate='07/20/2019' height = '450px'
    ref={gantt => ganttInstance = gantt}>
    </GanttComponent>
  </div>
};
ReactDOM.render(<App />, document.getElementById('root'));;

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>

```

```

    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008cff;
            height: 40px;
            left: 45%;
            position: absolute;
            top: 45%;
            width: 30%;
        }
    </style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Note: If you bind the dataSource from this way, then it acts like a local dataSource. So you cannot perform any server side crud actions.

Split task

The **Split-task** feature allows you to split a task or interrupt the work during planned or unforeseen circumstances.

We can split the task either in load time or dynamically, by defining the segments either in hierarchical or self-referential way.

Hierarchical

To split a task at load time in hierarchical way, we need to define the segment details in datasource and this field should be mapped by using the [taskFields.segments](#) property.

```
`ts
```

```
[
```

```
{
```

```
TaskID: 1, TaskName: 'Identify Site location', StartDate: new Date('04/02/2019'), Duration: 4, Progress: 50,
```

```
Segments: [
```

```
{ StartDate: new Date("04/02/2019"), Duration: 2 },
```

```
{ StartDate: new Date("04/04/2019"), Duration: 2 }
```

```
]
```

```
}
```


]
,

INDEX.JSX

```
let GanttData = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 2, TaskName: 'Identify Site location', StartDate:
new Date('04/02/2019'), Duration: 4, Progress: 50,
      Segments: [
        { StartDate: new Date("04/02/2019"), Duration: 2 },
        { StartDate: new Date("04/04/2019"), Duration: 2 }
      ] },
      { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
      { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
    ]
  },
  {
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
      { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 },
      { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 }
    ]
  }
];
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
function App () {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    endDate: 'EndDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks',
    segments: 'Segments'
  };
  return <GanttComponent dataSource={GanttData} taskFields={taskFields}
height='450px'>
    </GanttComponent>;
}
```

```
};
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
let GanttData = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 2, TaskName: 'Identify Site location', StartDate:
new Date('04/02/2019'), Duration: 4, Progress: 50,
      Segments: [
        { StartDate: new Date("04/02/2019"), Duration: 2 },
        { StartDate: new Date("04/04/2019"), Duration: 2 }
      ] },
      { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
      { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
    ]
  },
  {
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
      { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 },
      { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 }
    ]
  }
];
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
function App () {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    endDate: 'EndDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks',
    segments: 'Segments'
  };
  return <GanttComponent dataSource={GanttData} taskFields={taskFields}
height='450px'>
    </GanttComponent>;
```

```
};
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>
```

Self-referential

We can also define segment details as a flat data and this collection can be mapped by using [segmentData](#) property. The segment id field of this collection is mapped by using the [taskFields.segmentId](#) property.

```
`ts
```

```
taskFields: {
  segmentId: "segmentId"
},
segmentData: [
```

```
{ segmentId: 1, StartDate: new Date("02/04/2019"), Duration: 2 },
{ segmentId: 1, StartDate: new Date("02/05/2019"), Duration: 5 },
{ segmentId: 4, StartDate: new Date("04/02/2019"), Duration: 2 },
{ segmentId: 4, StartDate: new Date("04/04/2019"), Duration: 2 }
],
`
```

INDEX.JSX

```
let GanttData = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 2, TaskName: 'Identify Site location', StartDate:
new Date('04/02/2019'), Duration: 4, Progress: 50,
      Segments: [
        { StartDate: new Date("04/02/2019"), Duration: 2 },
        { StartDate: new Date("04/04/2019"), Duration: 2 }
      ] },
      { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
      { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4 , Progress: 50 },
    ]
  },
  {
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
      { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 },
      { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 }
    ]
  }
];
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
function App() {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    endDate: 'EndDate',
    duration: 'Duration',
    progress: 'Progress',
  }
```

```

        child: 'subtasks',
        segmentId: 'segmentId'
      };
      const segmentData = [
        { segmentId: 2, StartDate: new Date("04/02/2019"), Duration: 2 },
        { segmentId: 2, StartDate: new Date("04/04/2019"), Duration: 2 },
        { segmentId: 4, StartDate: new Date("04/02/2019"), Duration: 2 },
        { segmentId: 4, StartDate: new Date("04/04/2019"), Duration: 2 }
      ];

      return (<GanttComponent dataSource={GanttData} taskFields={taskFields}
        segmentData={segmentData} height='450px'>
        </GanttComponent>)
    );
  };
  ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

let GanttData = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 2, TaskName: 'Identify Site location', StartDate:
        new Date('04/02/2019'), Duration: 4, Progress: 50,
        Segments: [
          { StartDate: new Date("04/02/2019"), Duration: 2 },
          { StartDate: new Date("04/04/2019"), Duration: 2 }
        ] },
      { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
        Date('04/02/2019'), Duration: 4, Progress: 50 },
      { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
        Date('04/02/2019'), Duration: 4, Progress: 50 },
    ]
  },
  {
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 6, TaskName: 'Develop floor plan for estimation',
        StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
      { TaskID: 7, TaskName: 'List materials', StartDate: new
        Date('04/04/2019'), Duration: 3, Progress: 50 },
      { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
        Date('04/04/2019'), Duration: 3, Progress: 50 }
    ]
  }
];
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
function App() {

```

```

const taskFields = {
  id: 'TaskID',
  name: 'TaskName',
  startDate: 'StartDate',
  endDate: 'EndDate',
  duration: 'Duration',
  progress: 'Progress',
  child: 'subtasks',
  segmentId: 'segmentId'
};
const segmentData = [
  { segmentId: 2, StartDate: new Date("04/02/2019"), Duration: 2 },
  { segmentId: 2, StartDate: new Date("04/04/2019"), Duration: 2 },
  { segmentId: 4, StartDate: new Date("04/02/2019"), Duration: 2 },
  { segmentId: 4, StartDate: new Date("04/04/2019"), Duration: 2 }
];

return (<GanttComponent dataSource={GanttData} taskFields={taskFields}
segmentData={segmentData} height='450px'>
  </GanttComponent>)
);
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>

```

```

        <div id='loader'>Loading....</div>
      </div>
</body>
</html>

```

Note: Segment id field contains id of a task which should be split at load time.

Improve performance by disabling validations

The [autoCalculateDateScheduling](#) property can help you reduce the time taken for the Gantt chart to render on the initial load. When this API is enabled, parent-child validation, data validation, and predecessor validation are restricted, allowing the Gantt chart to load more quickly. Since we are disabling the validations, data source provided to gantt should have all data such as start date, end date, duration, as proper data.

INDEX.JSX

```

let tempData = [
  {
    TaskID: 1, TaskName: 'Product concept',StartDate: new
Date('04/02/2019'), EndDate: new Date('04/21/2019'),
    parentID: 0
  },
  {
    TaskID: 2, TaskName: 'Defining the product and its usage',
StartDate: new Date('04/02/2019'),
    Duration: 3, Progress: 30, parentID: 1
  },
  {
    TaskID: 3, TaskName: 'Defining target audience', StartDate: new
Date('04/02/2019'),
    parentID: 1, Duration: 3
  },
  {
    TaskID: 4, TaskName: 'Prepare product sketch and notes', StartDate:
new Date('04/05/2019'),
    Duration: 2, parentID: 1, Progress: 30
  },
  {
    TaskID: 5, TaskName: 'Concept approval', StartDate: new
Date('04/08/2019'),
    parentID: 0, Duration: 0
  },
  {
    TaskID: 6, TaskName: 'Market research', StartDate: new
Date('04/02/2019'),
    parentID: 0, EndDate: new Date('04/21/2019')
  },
  {
    TaskID: 7, TaskName: 'Demand analysis', StartDate: new
Date('04/04/2019'),
    EndDate: new Date('04/21/2019'), parentID: 6
  },
  {
    TaskID: 8, TaskName: 'Customer strength', StartDate: new
Date('04/09/2019'),
    Duration: 4, parentID: 7, Progress: 30
  }
]

```

```

    },
    {
      TaskID: 9, TaskName: 'Market opportunity analysis', StartDate: new
Date('04/09/2019'),
      Duration: 4, parentID: 7
    },
    {
      TaskID: 10, TaskName: 'Competitor analysis', StartDate: new
Date('04/15/2019'),
      Duration: 4, parentID: 6, Progress: 30
    },
    {
      TaskID: 11, TaskName: 'Product strength analysis', StartDate: new
Date('04/15/2019'),
      Duration: 4, parentID: 6
    },
    {
      TaskID: 12, TaskName: 'Research complete', StartDate: new
Date('04/18/2019'),
      Duration: 0, parentID: 6
    },
    {
      TaskID: 13, TaskName: 'Product design and development', StartDate:
new Date('04/04/2019'),
      parentID: 0, EndDate: new Date('04/21/2019')
    },
    {
      TaskID: 14, TaskName: 'Functionality design', StartDate: new
Date('04/19/2019'),
      Duration: 3, parentID: 13, Progress: 30
    },
    {
      TaskID: 15, TaskName: 'Quality design', StartDate: new
Date('04/19/2019'),
      Duration: 3, parentID: 13
    },
    {
      TaskID: 16, TaskName: 'Define reliability', StartDate: new
Date('04/24/2019'),
      Duration: 2, Progress: 30, parentID: 13
    },
    {
      TaskID: 17, TaskName: 'Identifying raw materials', StartDate: new
Date('04/24/2019'),
      Duration: 2, parentID: 13
    },
    {
      TaskID: 18, TaskName: 'Define cost plan', StartDate: new
Date('04/04/2019'),
      parentID: 13, EndDate: new Date('04/21/2019')
    },
    {
      TaskID: 19, TaskName: 'Manufacturing cost', StartDate: new
Date('04/26/2019'),
      Duration: 2, Progress: 30, parentID: 18
    },
    {

```



```

    TaskID: 20, TaskName: 'Selling cost', StartDate: new
Date('04/26/2019'),
    Duration: 2, parentID: 18
  },
  {
    TaskID: 21, TaskName: 'Development of the final design', StartDate:
new Date('04/30/2019'),
    parentID: 13, EndDate: new Date('04/21/2019')
  },
  {
    TaskID: 22, TaskName: 'Defining dimensions and package volume',
StartDate: new Date('04/30/2019'),
    Duration: 2, parentID: 21, Progress: 30
  },
  {
    TaskID: 23, TaskName: 'Develop design to meet industry standards',
StartDate: new Date('05/02/2019'),
    Duration: 2, parentID: 21
  },
  {
    TaskID: 24, TaskName: 'Include all the details', StartDate: new
Date('05/06/2019'),
    Duration: 3, parentID: 21
  },
  {
    TaskID: 25, TaskName: 'CAD computer-aided design', StartDate: new
Date('05/09/2019'),
    Duration: 3, parentID: 13, Progress: 30
  },
  {
    TaskID: 26, TaskName: 'CAM computer-aided manufacturing', StartDate:
new Date('09/14/2019'),
    Duration: 3, parentID: 13
  },
  {
    TaskID: 27, TaskName: 'Design complete', StartDate: new
Date('05/16/2019'),
    Duration: 0, parentID: 13
  },
  {
    TaskID: 28, TaskName: 'Prototype testing', StartDate: new
Date('05/17/2019'),
    Duration: 4, Progress: 30, parentID: 0
  },
  {
    TaskID: 29, TaskName: 'Include feedback', StartDate: new
Date('05/17/2019'),
    Duration: 4, parentID: 0
  },
  {
    TaskID: 30, TaskName: 'Manufacturing', StartDate: new
Date('05/23/2019'),
    Duration: 5, Progress: 30, parentID: 0
  },
  {
    TaskID: 31, TaskName: 'Assembling materials to finsihed goods',
StartDate: new Date('05/30/2019'),

```

```

        Duration: 5, parentID: 0
    },
    {
        TaskID: 32, TaskName: 'Feedback and testing', StartDate: new
Date('04/04/2019'),
        parentID: 0, EndDate: new Date('04/21/2019'),
    },
    {
        TaskID: 33, TaskName: 'Internal testing and feedback', StartDate:
new Date('06/06/2019'),
        Duration: 3, parentID: 32, Progress: 45
    },
    {
        TaskID: 34, TaskName: 'Customer testing and feedback', StartDate:
new Date('06/11/2019'),
        Duration: 3, parentID: 32, Progress: 50
    },
    {
        TaskID: 35, TaskName: 'Final product development', StartDate: new
Date('04/04/2019'),
        parentID: 0, EndDate: new Date('04/21/2019'),
    },
    {
        TaskID: 36, TaskName: 'Important improvements', StartDate: new
Date('06/14/2019'),
        Duration: 4, Progress: 30, parentID: 35
    },
    {
        TaskID: 37, TaskName: 'Address any unforeseen issues', StartDate:
new Date('06/14/2019'),
        Duration: 4, Progress: 30, parentID: 35
    },
    {
        TaskID: 38, TaskName: 'Final product', StartDate: new
Date('04/04/2019'),
        parentID: 0, EndDate: new Date('04/21/2019'),
    },
    {
        TaskID: 39, TaskName: 'Branding product', StartDate: new
Date('06/20/2019'),
        Duration: 4, parentID: 38
    },
    {
        TaskID: 40, TaskName: 'Marketing and presales', StartDate: new
Date('06/26/2019'), Duration: 4,
        Progress: 30, parentID: 38
    }
];
let virtualData = [];
let projId = 1;
for (let i = 0; i < 50; i++) {
    let x = virtualData.length + 1;
    let parent = {};
    /* tslint:disable:no-string-literal */
    parent['TaskID'] = x;
    parent['TaskName'] = 'Project ' + (i + 1);
    virtualData.push(parent);
}

```

```

    for (let j = 0; j < tempData.length; j++) {
        let subtasks = {};
        /* tslint:disable:no-string-literal */
        subtasks['TaskID'] = tempData[j].TaskID + x;
        subtasks['TaskName'] = tempData[j].TaskName;
        subtasks['StartDate'] = tempData[j].StartDate;
        subtasks['Duration'] = tempData[j].Duration;
        subtasks['Progress'] = tempData[j].Progress;
        subtasks['parentID'] = tempData[j].parentID + x;
        virtualData.push(subtasks);
    }
}
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective, Inject, Edit,
Selection, Toolbar, VirtualScroll } from '@syncfusion/ej2-react-gantt';
function App () {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        endDate: 'EndDate',
        duration: 'Duration',
        progress: 'Progress',
        parentID: 'parentID'
    };
    const splitterSettings= {
        columnIndex: 2
    };
    const labelSettings = {
        taskLabel: 'Progress'
    };
    const editSettings = {
        allowAdding: true,
        allowEditing: true,
        allowDeleting: true,
        allowTaskbarEditing: true,
        showDeleteConfirmDialog: true
    };
    const toolbar = ['Add', 'Edit', 'Update', 'Delete', 'Cancel', 'ExpandAll',
'CollapseAll', 'Indent', 'Outdent'];
    return (
        <GanttComponent dataSource={virtualData} treeColumnIndex={1}
labelSettings={labelSettings}
            allowSelection={true} highlightWeekends={true}
enableVirtualization={true}
            taskFields={taskFields} splitterSettings={splitterSettings}
autoCalculateDateScheduling={false} toolbar={toolbar}
editSettings={editSettings} height='450px'>
            <ColumnsDirective>
                <ColumnDirective field='TaskID' />
                <ColumnDirective field='TaskName' headerText='Task
Name' />
                <ColumnDirective field='StartDate' />
                <ColumnDirective field='Duration' />
                <ColumnDirective field='Progress' />
            </ColumnsDirective>

```

```

        <Inject services={[Selection, VirtualScroll,Edit,Toolbar]} />
      </GanttComponent>
    )
  };
  ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

let tempData: any[] = [
  {
    TaskID: 1, TaskName: 'Product concept',StartDate: new
    Date('04/02/2019'), EndDate: new Date('04/21/2019'),
    parentID: 0
  },
  {
    TaskID: 2, TaskName: 'Defining the product and its usage',
    StartDate: new Date('04/02/2019'),
    Duration: 3, Progress: 30, parentID: 1
  },
  {
    TaskID: 3, TaskName: 'Defining target audience', StartDate: new
    Date('04/02/2019'),
    parentID: 1, Duration: 3
  },
  {
    TaskID: 4, TaskName: 'Prepare product sketch and notes', StartDate:
    new Date('04/05/2019'),
    Duration: 2, parentID: 1, Progress: 30
  },
  {
    TaskID: 5, TaskName: 'Concept approval', StartDate: new
    Date('04/08/2019'),
    parentID: 0, Duration: 0
  },
  {
    TaskID: 6, TaskName: 'Market research', StartDate: new
    Date('04/02/2019'),
    parentID: 0, EndDate: new Date('04/21/2019')
  },
  {
    TaskID: 7, TaskName: 'Demand analysis', StartDate: new
    Date('04/04/2019'),
    EndDate: new Date('04/21/2019'), parentID: 6
  },
  {
    TaskID: 8, TaskName: 'Customer strength', StartDate: new
    Date('04/09/2019'),
    Duration: 4, parentID: 7, Progress: 30
  },
  {
    TaskID: 9, TaskName: 'Market opportunity analysis', StartDate: new
    Date('04/09/2019'),
    Duration: 4, parentID: 7
  },
  {

```

```

    TaskID: 10, TaskName: 'Competitor analysis', StartDate: new
Date('04/15/2019'),
    Duration: 4, parentID: 6, Progress: 30
  },
  {
    TaskID: 11, TaskName: 'Product strength analysis', StartDate: new
Date('04/15/2019'),
    Duration: 4, parentID: 6
  },
  {
    TaskID: 12, TaskName: 'Research complete', StartDate: new
Date('04/18/2019'),
    Duration: 0, parentID: 6
  },
  {
    TaskID: 13, TaskName: 'Product design and development', StartDate:
new Date('04/04/2019'),
    parentID: 0, EndDate: new Date('04/21/2019')
  },
  {
    TaskID: 14, TaskName: 'Functionality design', StartDate: new
Date('04/19/2019'),
    Duration: 3, parentID: 13, Progress: 30
  },
  {
    TaskID: 15, TaskName: 'Quality design', StartDate: new
Date('04/19/2019'),
    Duration: 3, parentID: 13
  },
  {
    TaskID: 16, TaskName: 'Define reliability', StartDate: new
Date('04/24/2019'),
    Duration: 2, Progress: 30, parentID: 13
  },
  {
    TaskID: 17, TaskName: 'Identifying raw materials', StartDate: new
Date('04/24/2019'),
    Duration: 2, parentID: 13
  },
  {
    TaskID: 18, TaskName: 'Define cost plan', StartDate: new
Date('04/04/2019'),
    parentID: 13, EndDate: new Date('04/21/2019')
  },
  {
    TaskID: 19, TaskName: 'Manufacturing cost', StartDate: new
Date('04/26/2019'),
    Duration: 2, Progress: 30, parentID: 18
  },
  {
    TaskID: 20, TaskName: 'Selling cost', StartDate: new
Date('04/26/2019'),
    Duration: 2, parentID: 18
  },
  {
    TaskID: 21, TaskName: 'Development of the final design', StartDate:
new Date('04/30/2019'),

```

```

    parentID: 13, EndDate: new Date('04/21/2019')
  },
  {
    TaskID: 22, TaskName: 'Defining dimensions and package volume',
    StartDate: new Date('04/30/2019'),
    Duration: 2, parentID: 21, Progress: 30
  },
  {
    TaskID: 23, TaskName: 'Develop design to meet industry standards',
    StartDate: new Date('05/02/2019'),
    Duration: 2, parentID: 21
  },
  {
    TaskID: 24, TaskName: 'Include all the details', StartDate: new
    Date('05/06/2019'),
    Duration: 3, parentID: 21
  },
  {
    TaskID: 25, TaskName: 'CAD computer-aided design', StartDate: new
    Date('05/09/2019'),
    Duration: 3, parentID: 13, Progress: 30
  },
  {
    TaskID: 26, TaskName: 'CAM computer-aided manufacturing', StartDate:
    new Date('09/14/2019'),
    Duration: 3, parentID: 13
  },
  {
    TaskID: 27, TaskName: 'Design complete', StartDate: new
    Date('05/16/2019'),
    Duration: 0, parentID: 13
  },
  {
    TaskID: 28, TaskName: 'Prototype testing', StartDate: new
    Date('05/17/2019'),
    Duration: 4, Progress: 30, parentID: 0
  },
  {
    TaskID: 29, TaskName: 'Include feedback', StartDate: new
    Date('05/17/2019'),
    Duration: 4, parentID: 0
  },
  {
    TaskID: 30, TaskName: 'Manufacturing', StartDate: new
    Date('05/23/2019'),
    Duration: 5, Progress: 30, parentID: 0
  },
  {
    TaskID: 31, TaskName: 'Assembling materials to finsihed goods',
    StartDate: new Date('05/30/2019'),
    Duration: 5, parentID: 0
  },
  {
    TaskID: 32, TaskName: 'Feedback and testing', StartDate: new
    Date('04/04/2019'),
    parentID: 0, EndDate: new Date('04/21/2019'),
  },

```

```

    {
      TaskID: 33, TaskName: 'Internal testing and feedback', StartDate:
new Date('06/06/2019'),
      Duration: 3, parentID: 32, Progress: 45
    },
    {
      TaskID: 34, TaskName: 'Customer testing and feedback', StartDate:
new Date('06/11/2019'),
      Duration: 3, parentID: 32, Progress: 50
    },
    {
      TaskID: 35, TaskName: 'Final product development', StartDate: new
Date('04/04/2019'),
      parentID: 0, EndDate: new Date('04/21/2019'),
    },
    {
      TaskID: 36, TaskName: 'Important improvements', StartDate: new
Date('06/14/2019'),
      Duration: 4, Progress: 30, parentID: 35
    },
    {
      TaskID: 37, TaskName: 'Address any unforeseen issues', StartDate:
new Date('06/14/2019'),
      Duration: 4, Progress: 30, parentID: 35
    },
    {
      TaskID: 38, TaskName: 'Final product', StartDate: new
Date('04/04/2019'),
      parentID: 0, EndDate: new Date('04/21/2019'),
    },
    {
      TaskID: 39, TaskName: 'Branding product', StartDate: new
Date('06/20/2019'),
      Duration: 4, parentID: 38
    },
    {
      TaskID: 40, TaskName: 'Marketing and presales', StartDate: new
Date('06/26/2019'), Duration: 4,
      Progress: 30, parentID: 38
    }
  ];
let virtualData: any[] = [];
let projId: number = 1;
for (let i: number = 0; i < 50; i++) {
  let x: number = virtualData.length + 1;
  let parent: any = {};
  /* tslint:disable:no-string-literal */
  parent['TaskID'] = x;
  parent['TaskName'] = 'Project ' + (i + 1);
  virtualData.push(parent);
  for (let j: number = 0; j < tempData.length; j++) {
    let subtasks: any = {};
    /* tslint:disable:no-string-literal */
    subtasks['TaskID'] = tempData[j].TaskID + x;
    subtasks['TaskName'] = tempData[j].TaskName;
    subtasks['StartDate'] = tempData[j].StartDate;
    subtasks['Duration'] = tempData[j].Duration;
  }
}

```

```

        subtasks['Progress'] = tempData[j].Progress;
        subtasks['parentID'] = tempData[j].parentID + x;
        virtualData.push(subtasks);
    }
}
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective, Inject, Edit,
Selection, Toolbar, VirtualScroll } from '@syncfusion/ej2-react-gantt';
function App () {
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        endDate: 'EndDate',
        duration: 'Duration',
        progress: 'Progress',
        parentID: 'parentID'
    };
    const splitterSettings: any = {
        columnIndex: 2
    };
    const labelSettings: any = {
        taskLabel: 'Progress'
    };
    const editSettings: any = {
        allowAdding: true,
        allowEditing: true,
        allowDeleting: true,
        allowTaskbarEditing: true,
        showDeleteConfirmDialog: true
    };
    const toolbar: any = ['Add', 'Edit', 'Update', 'Delete', 'Cancel',
'ExpandAll', 'CollapseAll', 'Indent', 'Outdent'];
    return (
        <GanttComponent dataSource={virtualData} treeColumnIndex={1}
labelSettings={labelSettings}
            allowSelection={true} highlightWeekends={true}
enableVirtualization={true}
            taskFields={taskFields} splitterSettings={splitterSettings}
autoCalculateDateScheduling={false} toolbar={toolbar}
editSettings={editSettings} height='450px'>
            <ColumnsDirective>
                <ColumnDirective field='TaskID' />
                <ColumnDirective field='TaskName' headerText='Task
Name' />
                <ColumnDirective field='StartDate' />
                <ColumnDirective field='Duration' />
                <ColumnDirective field='Progress' />
            </ColumnsDirective>
            <Inject services={[Selection, VirtualScroll, Edit, Toolbar]} />
        </GanttComponent>
    )
};
ReactDOM.render(<App />, document.getElementById('root'));

```


INDEX.HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>
```

Limitations

Gantt has the support for both Hierarchical and Self-Referential data binding. When rendering the Gantt control with SQL database, we suggest you to use the Self-Referential data binding to maintain the parent-child relation. Because the complex json structure is very difficult to manage it in SQL tables, we need to write a complex queries and we have to write a complex algorithm to find out the proper record details while updating/deleting the inner level task in Gantt data source. We cannot implement both data binding for Gantt control and this is not a recommended way. If both child and parentID are mapped, the records will not render properly because, when task id of a record defined in the hierarchy structure is assigned to parent id of another record, in such case the records will not properly render. As the self-referential will search the record with particular id in flat data only, not in the inner level of records. If we map the parentID field, it will be prioritized and Gantt will be rendered based on the parentID values.

Columns in React Gantt component

The column displays information from a bound data source, and you can edit the values of column to update the task details through TreeGrid. The operations such as sorting, filtering, and searching can be

performed based on column definitions. To display a Gantt column, the [field](#) property should be mapped from the data source to the column.

If the column [field](#) is not specified in the data source, the column values will be empty.

The [treeColumnIndex](#) property is used to define the expander column in the Gantt component to expand and collapse the child rows.

Defining columns

Using the [columns](#) property, you can define the columns in Gantt. If the columns are not defined, then the default columns will be rendered based on the mapped data source fields in the [taskFields](#) property. Refer to the following code example for defining the columns in Gantt along with their widths.

INDEX.JSX

```
let data = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
      { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
      { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
    ]
  },
  {
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
      { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 },
      { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 }
    ]
  },
];

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective } from
'@syncfusion/ej2-react-gantt';

function App () {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
```

```

        progress: 'Progress',
        child: 'subtasks'
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
height = '450px'>
    <ColumnsDirective>
        <ColumnDirective field='TaskID' width='150'
></ColumnDirective>
        <ColumnDirective field='TaskName'
width='250'></ColumnDirective>
    </ColumnsDirective>
</GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

let data: Object[] = [
    {
        TaskID: 1,
        TaskName: 'Project Initiation',
        StartDate: new Date('04/02/2019'),
        EndDate: new Date('04/21/2019'),
        subtasks: [
            { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
            { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
            { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
        ]
    },
    {
        TaskID: 5,
        TaskName: 'Project Estimation',
        StartDate: new Date('04/02/2019'),
        EndDate: new Date('04/21/2019'),
        subtasks: [
            { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
            { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 },
            { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 }
        ]
    },
];

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective } from
'@syncfusion/ej2-react-gantt';

function App () {
    const taskFields: any = {
        id: 'TaskID',

```

```

        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };

    return <GanttComponent dataSource={data} taskFields={taskFields}
height = '450px'>
        <ColumnsDirective>
            <ColumnDirective field='TaskID' width='150'
></ColumnDirective>
            <ColumnDirective field='TaskName'
width='250'></ColumnDirective>
        </ColumnsDirective>
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008cff;
            height: 40px;
            left: 45%;
            position: absolute;
            top: 45%;
            width: 30%;
        }
    </style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Custom column header

The column header text can be defined using the [headerText](#) property, and you can customize the column headers using the [headerTemplate](#) property.

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective } from
 '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const splitterSettings = {
    columnIndex: 7
  };
  return <GanttComponent dataSource={data} taskFields={taskFields}
    splitterSettings={splitterSettings} height = '450px'>
    <ColumnsDirective>
      <ColumnDirective field='TaskName' headerText='Job Name'
headerTemplate={() => {
        return <div>
          <b className="e-header">Task Name</b></div>;
      }}></ColumnDirective>
      <ColumnDirective field='StartDate' headerTemplate={() => {
        return <div>
          <b className="e-header">Start Date</b></div>;
      }}></ColumnDirective>
      <ColumnDirective field='Duration' headerTemplate={() => {
        return <div>
          <b className="e-header">Duration</b></div>;
      }}></ColumnDirective>
      <ColumnDirective field='Progress' headerTemplate={() => {
        return <div>
          <b className="e-header">Progress</b></div>;
      }}></ColumnDirective>
    </ColumnsDirective>
  </GanttComponent>
  );
  ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
```

```

import { GanttComponent, ColumnsDirective, ColumnDirective } from
 '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App(){
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const splitterSettings: any = {
    columnIndex: 7
  };
  return <GanttComponent dataSource={data} taskFields={taskFields}
    splitterSettings={splitterSettings} height = '450px'>
    <ColumnsDirective>
      <ColumnDirective field='TaskName' headerText='Job Name'
headerTemplate={() => {
        return (<div>
          <b className='e-header'>Task Name</b></div>);
      }}></ColumnDirective>
      <ColumnDirective field='StartDate' headerTemplate={() => {
        return (<div>
          <b className='e-header'>Start Date</b></div>);
      }}></ColumnDirective>
      <ColumnDirective field='Duration' headerTemplate={() => {
        return (<div>
          <b className='e-header'>Duration</b></div>);
      }}></ColumnDirective>
      <ColumnDirective field='Progress' headerTemplate={() => {
        return (<div>
          <b className='e-header'>Progress</b></div>);
      }}></ColumnDirective>
    </ColumnsDirective>
  </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />

```

```

    <link href="https://cdn.syncfusion.com/ej2/material.css"
    rel="stylesheet" type="text/css"/>
    <link
    href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
    rel="stylesheet" />
    <script
    src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
    ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008cff;
            height: 40px;
            left: 45%;
            position: absolute;
            top: 45%;
            width: 30%;
        }
    </style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Format

To format the cell values based on a specific culture, use the [columns.format](#) property. The Gantt component uses the [Internationalization](#) library to format [number](#) and [date](#) values.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective } from
 '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App () {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const splitterSettings = {
        columnIndex : 4
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
        splitterSettings={splitterSettings} height = '450px'>
        <ColumnsDirective>
            <ColumnDirective field='TaskID' width='100'
        ></ColumnDirective>
    ></GanttComponent>

```

```

        <ColumnDirective field='TaskName' headerText='Job Name'
width='250'></ColumnDirective>
        <ColumnDirective field='StartDate'></ColumnDirective>
        <ColumnDirective field='Progress'
format='P2'></ColumnDirective>
        <ColumnDirective field='Duration'></ColumnDirective>
        <ColumnDirective field='Predecessor'></ColumnDirective>
    </ColumnsDirective>
</GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective } from
'@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App () {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const splitterSettings = {
        columnIndex : 4
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
splitterSettings={splitterSettings} height = '450px'>
        <ColumnsDirective>
            <ColumnDirective field='TaskID' width='100'
></ColumnDirective>
            <ColumnDirective field='TaskName' headerText='Job Name'
width='250'></ColumnDirective>
            <ColumnDirective field='StartDate'></ColumnDirective>
            <ColumnDirective field='Progress'
format='P2'></ColumnDirective>
            <ColumnDirective field='Duration'></ColumnDirective>
            <ColumnDirective field='Predecessor'></ColumnDirective>
        </ColumnsDirective>
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
```



```

<meta name="description" content="Essential JS 2 for React Components"
/>
<meta name="author" content="Syncfusion" />
<link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
<link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
<script src="systemjs.config.js"></script>
<style>
    #loader {
        color: #008cff;
        height: 40px;
        left: 45%;
        position: absolute;
        top: 45%;
        width: 30%;
    }
</style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

By default, the number and date values are formatted in **en-US** culture.

Number formatting

The number or integer values can be formatted using the following format strings.

Format | Description | Remarks

{ type:'date', format:'dd/MM/yyyy' } | 04/07/2019

{ type:'date', format:'dd.MM.yyyy' } | 04.07.2019

{ type:'date', skeleton:'short' } | 7/4/19

{ type:'dateTime', format:'dd/MM/yyyy hh:mm a' } | 04/07/2019 12:00 AM

{ type:'dateTime', format:'MM/dd/yyyy hh:mm:ss a' } | 07/04/2019 12:00:00 AM

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective } from
'@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App () {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',

```

```

        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const splitterSettings = {
        columnIndex: 4
    };
    const formatOption = { type: 'date', format: 'dd.MM.yyyy' };

    return <GanttComponent dataSource={data} taskFields={taskFields}
        splitterSettings={splitterSettings} height='450px'>
        <ColumnsDirective>
            <ColumnDirective field='TaskID'
width='100'></ColumnDirective>
            <ColumnDirective field='TaskName' headerText='Job Name'
width='250'></ColumnDirective>
            <ColumnDirective field='StartDate'
format={formatOption}></ColumnDirective>
            <ColumnDirective field='Duration'></ColumnDirective>
            <ColumnDirective field='Progress'></ColumnDirective>
        </ColumnsDirective>
    </GanttComponent>;
}
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective } from
'@syncfusion/ej2-react-gantt';
import { data } from './datasource';
class App extends React.Component<{}, {}>{
    public taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    public splitterSettings: any = {
        columnIndex : 4
    };
    public formatOption: Object = {type:'date', format:'dd.MM.yyyy'};
    render() {
        return <GanttComponent dataSource={data}
taskFields={this.taskFields}
        splitterSettings={this.splitterSettings} height = '450px'>
            <ColumnsDirective>
                <ColumnDirective field='TaskID' width='100'
></ColumnDirective>
                <ColumnDirective field='TaskName' headerText='Job Name'
width='250'></ColumnDirective>

```

```

        <ColumnDirective field='StartDate'
format={this.formatOption}></ColumnDirective>
        <ColumnDirective field='Duration'></ColumnDirective>
        <ColumnDirective field='Progress'></ColumnDirective>
    </ColumnsDirective>
</GanttComponent>
    }
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008cff;
            height: 40px;
            left: 45%;
            position: absolute;
            top: 45%;
            width: 30%;
        }
    </style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Change tree/expander column

The tree/expander column is a column in the Gantt component, that has icons to expand or collapse the parent records. You can define the tree column index in the Gantt component by using the [treeColumnIndex](#) property and the default value of this property is 0. The following code example shows how to use this property.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App () {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const splitterSettings = {
        position : '90%'
    };
    return <GanttComponent dataSource={data}
splitterSettings={splitterSettings} taskFields={taskFields}
treeColumnIndex={2}
        height = '450px'>
        </GanttComponent>
    };
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App () {
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const splitterSettings: any = {
        position : '90%'
    };
    return <GanttComponent dataSource={data}
splitterSettings={splitterSettings} taskFields={taskFields}
treeColumnIndex={2}
        height = '450px'>
        </GanttComponent>
    };
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>

```

```

<meta charset="utf-8" />
<meta name="viewport" content="width=device-width, initial-scale=1.0" />
<meta name="description" content="Essential JS 2 for React Components"
/>
<meta name="author" content="Syncfusion" />
<link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
<link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
<script src="systemjs.config.js"></script>
<style>
    #loader {
        color: #008cff;
        height: 40px;
        left: 45%;
        position: absolute;
        top: 45%;
        width: 30%;
    }
</style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Show or hide columns dynamically

You can show or hide gantt columns dynamically using external buttons by invoking the [showColumn](#) or [hideColumn](#) method.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { GanttComponent, Inject, ColumnsDirective, ColumnDirective } from
'@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App(){
    let ganttInstance;
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const splitterSettings = {
        columnIndex : 5
    };

```

```

};
function show() {
    /** show by HeaderText */
    ganttInstance.showColumn(['Duration']);
}
function hide(){
    /** hide by HeaderText */
    ganttInstance.hideColumn(['Duration']);
}

return (<div>
    <ButtonComponent onClick= { show }>Show</ButtonComponent>
    <ButtonComponent onClick= { hide }>Hide</ButtonComponent>
    <GanttComponent dataSource={data} taskFields={taskFields}
    splitterSettings={splitterSettings} height = '450px'
    ref={gantt => ganttInstance = gantt}>
    <ColumnsDirective>
        <ColumnDirective field='TaskID' width='100' ></ColumnDirective>
        <ColumnDirective field='TaskName' headerText='Task
Name'></ColumnDirective>
        <ColumnDirective field='StartDate'></ColumnDirective>
        <ColumnDirective field='Duration'
headerText='Duration'></ColumnDirective>
        <ColumnDirective field='Progress'></ColumnDirective>
    </ColumnsDirective>
    </GanttComponent></div>)
);
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { GanttComponent, Inject, ColumnsDirective, ColumnDirective } from
 '@syncfusion/ej2-react-gantt';
import { data } from '../datasource';
function App(){
    let ganttInstance: GanttComponent;
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const splitterSettings: any = {
        columnIndex : 5
    };
    function show() {
        /** show by HeaderText */
        ganttInstance.showColumn(['Duration']);
    }
    function hide(){
        /** hide by HeaderText */
        ganttInstance.hideColumn(['Duration']);
    }
}

```

```

    }

    return (<div>
      <ButtonComponent onClick= { show }>Show</ButtonComponent>
      <ButtonComponent onClick= { hide }>Hide</ButtonComponent>
      <GanttComponent dataSource={data} taskFields={taskFields}
        splitterSettings={splitterSettings} height = '450px'
        ref={gantt => ganttInstance = gantt}>
        <ColumnsDirective>
          <ColumnDirective field='TaskID' width='100' ></ColumnDirective>
          <ColumnDirective field='TaskName' headerText='Task
Name'></ColumnDirective>
          <ColumnDirective field='StartDate'></ColumnDirective>
          <ColumnDirective field='Duration'
headerText='Duration'></ColumnDirective>
          <ColumnDirective field='Progress'></ColumnDirective>
        </ColumnsDirective>
      </GanttComponent></div>)
  };
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>

```

```
</html>
```

Controlling Gantt column actions

You can enable or disable gantt action for a particular column by setting the [allowFiltering](#), [allowSorting](#), [allowReordering](#), and [allowEditing](#) properties.

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective, Inject, Resize,
Sort, Filter, Edit, Reorder } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const splitterSettings = {
    position : '90%'
  };
  let ganttInstance;
  const editSettings = {
    allowEditing : true
  };
  return (<div>
    <GanttComponent dataSource={data} taskFields={taskFields}
splitterSettings={splitterSettings} height='450px' allowSorting={true}
allowFiltering={true} allowReordering={true} editSettings={editSettings}
ref={gantt => ganttInstance = gantt}>
      <ColumnsDirective>
        <ColumnDirective field='TaskID' width='100' ></ColumnDirective>
        <ColumnDirective field='TaskName' headerText='Task Name'
allowSorting= {false}></ColumnDirective>
        <ColumnDirective field='StartDate' allowEditing=
{false}></ColumnDirective>
        <ColumnDirective field='Duration' allowFiltering=
{false}></ColumnDirective>
        <ColumnDirective field='Progress' allowReordering=
{false}></ColumnDirective>
      </ColumnsDirective>
      <Inject services={[Sort, Filter, Reorder, Edit]}/>
    </GanttComponent></div>
  );
  ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
```



```

import { GanttComponent, ColumnsDirective, ColumnDirective, Inject, Resize,
Sort, Filter, Edit, Reorder } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App(){
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const splitterSettings: any = {
        position : '90%'
    };
    let ganttInstance:any;
    const editSettings: any = {
        allowEditing : true
    };
    return (<div>
        <GanttComponent dataSource={data} taskFields={taskFields}
        splitterSettings={splitterSettings} height='450px' allowSorting={true}
        allowFiltering={true} allowReordering={true} editSettings={editSettings}
        ref={gantt => ganttInstance = gantt}>
            <ColumnsDirective>
                <ColumnDirective field='TaskID' width='100' ></ColumnDirective>
                <ColumnDirective field='TaskName' headerText='Task Name'
allowSorting= {false}></ColumnDirective>
                <ColumnDirective field='StartDate' allowEditing=
{false}></ColumnDirective>
                <ColumnDirective field='Duration' allowFiltering=
{false}></ColumnDirective>
                <ColumnDirective field='Progress' allowReordering=
{false}></ColumnDirective>
            </ColumnsDirective>
            <Inject services={[Sort, Filter, Reorder, Edit]}>/>
        </GanttComponent></div>)
    );
    ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />

```

```
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
<script src="systemjs.config.js"></script>
<style>
  #loader {
    color: #008cff;
    height: 40px;
    left: 45%;
    position: absolute;
    top: 45%;
    width: 30%;
  }
</style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>
```

Column type

Column type can be specified using the `columns.type` property. It specifies the type of data the column binds.

If the `format` is defined for a column, the column uses `type` to select the appropriate format option [number](#) or [date](#).

Gantt column supports the following types:

- string
- number
- boolean
- date
- datetime

If the `type` is not defined, it will be determined from the first record of the [dataSource](#).

In case if the first record of the [dataSource](#) is null/blank value for a column then it is necessary to define the `type` for that column.

Time line in React Gantt component

In the Gantt component, timeline is used to represent the project duration as individual cells with defined unit and formats.

Timeline view modes

Gantt contains the following in-built timeline view modes:

- Hour
- Day
- Week

- Month
- Year

Timescale mode in Gantt can be defined by using [timelineViewMode](#) property and also we can define timescale mode of top tier and bottom tier by using [topTier.unit](#) and [bottomTier.unit](#) properties.

Week timeline mode

In the **Week** timeline mode, the upper part of the schedule header displays the weeks, whereas the bottom half of the header displays the days. Refer to the following code example.

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App () {
    const taskFields= {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const timelineSettings = {
        timelineViewMode: 'Week'
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
        timelineSettings={timelineSettings} height = '450px'>
        </GanttComponent>
    };
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App () {
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const timelineSettings: any = {
        timelineViewMode: 'Week'
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
        timelineSettings={timelineSettings} height = '450px'>
        </GanttComponent>
    };
};
```

```
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>
```

Month timeline mode

In the **Month** timeline mode, the upper part of the schedule header displays the months, whereas the bottom header of the schedule displays its corresponding weeks. Refer to the following code example.

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
```

```

    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const timelineSettings = {
    timelineUnitSize: 80,
    timelineViewMode: 'Month'
  };
  return <GanttComponent dataSource={data} taskFields={taskFields}
    timelineSettings={timelineSettings} height = '450px'>
    </GanttComponent>
  };
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const timelineSettings: any = {
    timelineUnitSize: 80,
    timelineViewMode: 'Month'
  };
  return <GanttComponent dataSource={data} taskFields={taskFields}
    timelineSettings={timelineSettings} height = '450px'>
    </GanttComponent>
  };
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />

```

```

<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Year timeline mode

In the **Year** timeline mode, the upper schedule header displays the years whereas, the bottom header displays its corresponding months. Refer to the following code example.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const timelineSettings = {
    timelineUnitSize: 80,
    timelineViewMode: 'Year'
  };
  return <GanttComponent dataSource={data} taskFields={taskFields}
    timelineSettings={timelineSettings} height = '450px'>
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';

```

```
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App(){
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const timelineSettings: any = {
    timelineUnitSize: 80,
    timelineViewMode: 'Year'
  };
  return <GanttComponent dataSource={data} taskFields={taskFields}
    timelineSettings={timelineSettings} height = '450px'>
    </GanttComponent>
  };
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
```

```
</body>
</html>
```

Day timeline mode

In the **Day** timeline mode, the upper part of the header displays the days whereas, the bottom schedule header displays its corresponding hours. Refer to the following code example.

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const timelineSettings = {
        timelineViewMode: 'Day'
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
        timelineSettings={timelineSettings} height = '450px'>
        </GanttComponent>
    };
    ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const timelineSettings: any = {
        timelineViewMode: 'Day'
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
        timelineSettings={timelineSettings} height = '450px'>
        </GanttComponent>
    };
    ReactDOM.render(<App />, document.getElementById('root'));
```


INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Hour timeline mode

An **Hour** timeline mode tracks the tasks in minutes scale. In this mode, the upper schedule header displays hour scale and the lower schedule header displays its corresponding minutes.

INDEX.JSX

```

let data = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019 08:05:00 AM'), Duration: 10, Progress: 50 },
      { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019 08:05:00 AM'), Duration: 10, Progress: 50 },

```

```

        { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019 08:05:00 AM'), Duration: 10, Progress: 50 },
    ]
  },
  {
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/02/2019 08:15:00 AM'), Duration: 15, Progress: 50 },
      { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/02/2019 08:15:00 AM'), Duration: 15, Progress: 50 },
      { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/02/2019 08:15:00 AM'), Duration: 15, Progress: 50 }
    ]
  },
];
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
function App() {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const timelineSettings = {
    timelineViewMode: 'Hour'
  };
  return <GanttComponent dataSource={data} taskFields={taskFields}
dateFormat="M/d/yyyy hh:mm:ss tt" durationUnit="Minute"
    timelineSettings={timelineSettings} height = '450px'>
    </GanttComponent>
  ;
  ReactDOM.render(<App />, document.getElementById('root'));
}

```

INDEX.TSX

```

let data: Object[] = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019 08:05:00 AM'), Duration: 10, Progress: 50 },
      { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019 08:05:00 AM'), Duration: 10, Progress: 50 },
      { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019 08:05:00 AM'), Duration: 10, Progress: 50 },
    ]
  }
]

```

```

    ],
    {
      TaskID: 5,
      TaskName: 'Project Estimation',
      StartDate: new Date('04/02/2019'),
      EndDate: new Date('04/21/2019'),
      subtasks: [
        { TaskID: 6, TaskName: 'Develop floor plan for estimation',
          StartDate: new Date('04/02/2019 08:15:00 AM'), Duration: 15, Progress: 50 },
        { TaskID: 7, TaskName: 'List materials', StartDate: new
          Date('04/02/2019 08:15:00 AM'), Duration: 15, Progress: 50 },
        { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
          Date('04/02/2019 08:15:00 AM'), Duration: 15, Progress: 50 }
      ]
    },
  ],
};
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
function App() {
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const timelineSettings: any = {
    timelineViewMode: 'Hour'
  };
  return <GanttComponent dataSource={data} taskFields={taskFields}
    dateFormat="M/d/yyyy hh:mm:ss tt" durationUnit="Minute"
    timelineSettings={timelineSettings} height = '450px'>
    </GanttComponent>
  };
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />

```

```

<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Change timeline view mode programmatically

In the Gantt component, the timeline view mode can be modified programmatically. As described below, the Dropdown menu is also used to change the timeline view. The `DropDownlist` component can be used to create a dropdown menu. Once the dropdown menu is enabled, the [timelineViewMode](#) property from the [timelineSettings](#) can be utilized to switch the timeline view between Hour, Day, Week, Month, and Year. Refer to the following code example.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { data } from './datasource';

function App () {
  let ganttInstance;
  const taskFields= {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const modes=[
    {
      item: "Hour",
      id:"1"
    },
    {
      item: "Day",
      id:"2"
    },
  ],

```

```

    {
      item: "Week",
      id:"3"
    },
    {
      item: "Month",
      id:"4"
    },
    {
      item: "Year",
      id:"5"
    }
  ];
  const fields={text:"item", value:"id"};
  function onChange(args) {
    if(args.value==="1")
    {
      ganttInstance.timelineSettings.timelineViewMode="Hour";
    }
    else if(args.value==="2")
    {
      ganttInstance.timelineSettings.timelineViewMode="Day";
    }
    else if(args.value==="3")
    {
      ganttInstance.timelineSettings.timelineViewMode="Week";
    }
    else if(args.value==="4")
    {
      ganttInstance.timelineSettings.timelineViewMode="Month";
    }
    else if(args.value==="5")
    {
      ganttInstance.timelineSettings.timelineViewMode="Year";
    }
  }
  return (
    <div>
      <DropDownListComponent id="modes" placeholder="Select"
dataSource={modes}
        fields={fields} change={onChange} width="150px"/>

      <GanttComponent ref={gantt => ganttInstance =gantt}
        dataSource={data} taskFields={taskFields}
        height = '450px'>
        </GanttComponent>
    </div>
  );
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';

```

```
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { data } from './datasource';
function App () {
    let ganttInstance:any;
    const taskFields:any= {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const modes:any=[
        {
            item: "Hour",
            id:"1"
        },
        {
            item: "Day",
            id:"2"
        },
        {
            item: "Week",
            id:"3"
        },
        {
            item: "Month",
            id:"4"
        },
        {
            item: "Year",
            id:"5"
        }
    ];
    const fields:any={text:"item", value:"id"};
    function onChange(args:any) {
        if(args.value==="1")
        {
            ganttInstance.timelineSettings.timelineViewMode="Hour";
        }
        else if(args.value==="2")
        {
            ganttInstance.timelineSettings.timelineViewMode="Day";
        }
        else if(args.value==="3")
        {
            ganttInstance.timelineSettings.timelineViewMode="Week";
        }
        else if(args.value==="4")
        {
            ganttInstance.timelineSettings.timelineViewMode="Month";
        }
        else if(args.value==="5")
        {
            ganttInstance.timelineSettings.timelineViewMode="Year";
        }
    }
}
```

```

    return (
      <div>
        <DropDownListComponent id="modes" placeholder="Select"
dataSource={modes}
        fields={fields} change={onChange} width="150px"/>

        <GanttComponent ref={gantt => ganttInstance =gantt}
          dataSource={data} taskFields={taskFields}
          height = '450px'>
        </GanttComponent>
      </div>
    );
  };
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Week start day customization

In the Gantt component, you can customize the week start day using the [weekStartDay](#) property. By default, the [weekStartDay](#) is set to 0, which specifies the Sunday as a start day of the week. But, you can customize the week start day by using the following code example.

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const timelineSettings = {
        timelineViewMode: 'Week',
        weekStartDay: 3
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
        timelineSettings={timelineSettings} height = '450px'>
        </GanttComponent>
    };
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const timelineSettings: any = {
        timelineViewMode: 'Week',
        weekStartDay: 3
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
        timelineSettings={timelineSettings} height = '450px'>
        </GanttComponent>
    };
ReactDOM.render(<App />, document.getElementById('root'));
```


INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Customize automatic timescale update action

In the Gantt component, the schedule timeline will be automatically updated when the tasks date values are updated beyond the project start date and end date ranges. This can be enabled or disabled using the [updateTimescaleView](#) property.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit, Selection } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App(){
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',

```

```

    progress: 'Progress',
    child: 'subtasks'
  };
  const editOptions = {
    allowEditing: true,
    allowTaskbarEditing: true
  };
  const timelineSettings = {
    updateTimescaleView: false
  };
  return <GanttComponent dataSource={data} taskFields={taskFields}
    timelineSettings={timelineSettings} allowSelection={true}
    editSettings={editOptions} height = '450px'>
    <Inject services={[Edit, Selection]} />
  </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit, EditSettingsModel, Selection } from
'@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const editOptions: EditSettingsModel = {
    allowEditing: true,
    allowTaskbarEditing: true
  };
  const timelineSettings: any = {
    updateTimescaleView: false
  };
  return <GanttComponent dataSource={data} taskFields={taskFields}
    timelineSettings={timelineSettings} allowSelection={true}
    editSettings={editOptions} height = '450px'>
    <Inject services={[Edit, Selection]} />
  </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />

```

```

<meta name="viewport" content="width=device-width, initial-scale=1.0" />
<meta name="description" content="Essential JS 2 for React Components"
/>
<meta name="author" content="Syncfusion" />
<link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
<link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
<script src="systemjs.config.js"></script>
<style>
    #loader {
        color: #008cff;
        height: 40px;
        left: 45%;
        position: absolute;
        top: 45%;
        width: 30%;
    }
</style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Timeline cells tooltip

In the Gantt component, you can enable or disable the mouse hover tooltip of timeline cells using the [timelineSettings.showTooltip](#) property. The default value of this property is `true`. The following code example shows how to enable the timeline cells tooltip in Gantt.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const timelineSettings = {
        showTooltip: true
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
        timelineSettings={timelineSettings} height = '450px'>

```

```
        </GanttComponent>
    };
    ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const timelineSettings: any = {
        showTooltip: true
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
        timelineSettings={timelineSettings} height = '450px'>
        </GanttComponent>
    };
    ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008cff;
            height: 40px;
            left: 45%;
            position: absolute;
            top: 45%;
            width: 30%;
```

```
    }  
  </style>  
</head>  
<body>  
  <div id='root'>  
    <div id='loader'>Loading....</div>  
  </div>  
</body>  
</html>
```

Splitter in React Gantt component

Splitter

In the Gantt component, the Splitter separates the TreeGrid section from the Chart section. You can change the position of the Splitter when loading the Gantt component using the [splitterSettings](#) property. By splitting the TreeGrid from the chart, the width of the TreeGrid and chart sections will vary in the component. The [splitterSettings.position](#) property denotes the percentage of the TreeGrid section's width to be rendered and this property supports both pixels and percentage values. You can define the splitter position as column index value using the [splitterSettings.columnIndex](#) property. You can also define the splitter position with built-in splitter view modes by using the [splitterSettings.view](#) property. The following list is the possible values for this property:

- **Default:** Shows Grid side and Gantt side.
- **Grid:** Shows Grid side alone in Gantt.
- **Chart:** Shows chart side alone in Gantt.

INDEX.JSX

```
import * as React from 'react';  
import * as ReactDOM from 'react-dom';  
import { GanttComponent } from '@syncfusion/ej2-react-gantt';  
import { data } from './datasource';  
function App() {  
  const taskFields = {  
    id: 'TaskID',  
    name: 'TaskName',  
    startDate: 'StartDate',  
    duration: 'Duration',  
    progress: 'Progress',  
    child: 'subtasks'  
  };  
  const splitterSettings = {  
    position: "80%"  
  };  
  return <GanttComponent dataSource={data} taskFields={taskFields}  
    splitterSettings={splitterSettings} height = '450px'>  
    </GanttComponent>  
  };  
  ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
```

```
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App(){
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const splitterSettings: any = {
        position: "80%"
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
        splitterSettings={splitterSettings} height = '450px'>
        </GanttComponent>
    };
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008cff;
            height: 40px;
            left: 45%;
            position: absolute;
            top: 45%;
            width: 30%;
        }
    </style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
```

```
</body>
</html>
```

Changing splitter view

In the Gantt component, it is possible to change the view of the component to a grid view, a chart view, or both using the dropdown menu. This can be achieved by customizing the toolbar, which allows to add custom toolbar items using the `template` attribute.

Refer below link for more details.

- [To Add Custom Toolbar items](#)

To add a custom dropdown menu to the toolbar, use the `DropDownList` component which is available in `@syncfusion/ej2-react-dropdowns` library.

After enabling the dropdown menu in the toolbar, pass the data to the `dataSource` property. To modify the component's view, use the `change` property. To do this, call the `setSplitterPosition` method on the `ganttInstance` with the `value` and `type` of splitter property as an parameter, after checking with the user's choice and the given data condition is true.

The following code example shows, how to enable the dropdown menu in the Toolbar and change view of the Gantt component.

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Toolbar } from '@syncfusion/ej2-react-gantt';
import { DropDownList } from '@syncfusion/ej2-react-dropdowns';
import { data } from './datasource';
function App() {

    let ganttInstance;
    const taskFields= {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };

    function onChange(args) {
        if(args.value==="1")
        {
            ganttInstance.setSplitterPosition("100%", "position")
        }
        else if(args.value==="2")
        {
            ganttInstance.setSplitterPosition("0%", "position");
        }
        else if(args.value==="3")
```

```

    {
      ganttInstance.setSplitterPosition("50%", "position");
    }
  }

  const items = [
    {
      item: 'Grid Only',
      id:"1"
    },
    {
      item: 'Chart Only',
      id:"2"
    },
    {
      item: 'Grid and Chart',
      id:"3"
    }
  ];
  const toolbarOptions = ['ExpandAll','CollapseAll',{type: "Input",
  tooltipText:"Change View", template: new DropDownList({dataSource:items,
  placeholder:"Select", change:onChange, fields:{text:'item', value:'id'}})]

  return (<GanttComponent ref={gantt => ganttInstance =gantt}
  dataSource={data} taskFields={taskFields} toolbar={toolbarOptions}
  height='450px'>
    <Inject services={[Toolbar]}/>
    </GanttComponent>;
  )
;
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject,Toolbar } from '@syncfusion/ej2-react-gantt';
import { DropDownList } from '@syncfusion/ej2-react-dropdowns';
import { data } from './datasource';
function App() {
  let ganttInstance:any;
  const taskFields:any= {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };

  function onChange(args:any) {
    if(args.value==="1")
    {

```



```

    ganttInstance.setSplitterPosition("100%", "position")
  }
  else if (args.value === "2")
  {
    ganttInstance.setSplitterPosition("0%", "position");
  }
  else if (args.value === "3")
  {
    ganttInstance.setSplitterPosition("50%", "position");
  }
}

const items:any = [
  {
    item: 'Grid Only',
    id:"1"
  },
  {
    item: 'Chart Only',
    id:"2"
  },
  {
    item: 'Grid and Chart',
    id:"3"
  }
];
const toolbarOptions:any = ['ExpandAll', 'CollapseAll', {type: "Input",
tooltipText:"Change View", template: new DropDownList({dataSource:items,
placeholder:"Select", change:onChange, fields:{text:'item', value:'id'}})]

return (<GanttComponent ref={gantt => ganttInstance =gantt}
dataSource={data} taskFields={taskFields} toolbar={toolbarOptions}
height='450px'>
  <Inject services={[Toolbar]} />
  </GanttComponent>);
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />

```

```

<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Change splitter position dynamically

In Gantt, we can change the splitter position dynamically by using [setSplitterPosition](#) method. We can change the splitter position by passing value and type parameter to [setSplitterPosition](#) method. Type parameter will accept one of the following values 'position', 'columnIndex', 'viewType'. The following code example shows how to use this method.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
  let ganttInstance;
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  function clickHandler() {
    ganttInstance.setSplitterPosition('50%', 'position');
  }
  function changeindex() {
    ganttInstance.setSplitterPosition(0, 'columnIndex');
  }
  return (
    <div>
      <ButtonComponent onClick= {
clickHandler}>ChangeByPosition</ButtonComponent>
      <ButtonComponent onClick= {
changeindex}>ChangeByIndex</ButtonComponent>
    </div>
  );
}

```

```

    <GanttComponent dataSource={data} taskFields={taskFields}
    height = '450px' ref={gantt => ganttInstance = gantt}>
    </GanttComponent></div>
  );
  ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
  let ganttInstance: any;
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  function clickHandler() {
    ganttInstance.setSplitterPosition('50%', 'position');
  }
  function changeindex() {
    ganttInstance.setSplitterPosition(0, 'columnIndex');
  }
  return (
    <div>
      <ButtonComponent onClick= {
clickHandler}>ChangeByPosition</ButtonComponent>
      <ButtonComponent onClick= {
changeindex}>ChangeByIndex</ButtonComponent>
      <GanttComponent dataSource={data} taskFields={taskFields}
      height = '450px' ref={gantt => ganttInstance = gantt}>
      </GanttComponent></div>
    );
  ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />

```

```
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
<script src="systemjs.config.js"></script>
<style>
  #loader {
    color: #008cff;
    height: 40px;
    left: 45%;
    position: absolute;
    top: 45%;
    width: 30%;
  }
</style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>
```

Task scheduling in React Gantt component

The Gantt provides support for automatic and manual task scheduling modes. It is used to indicate whether the start date and end date of all the tasks will be automatically validated or not. [taskMode](#) is the property used to change the schedule mode of a task.

The Gantt control supports three types of mode. They are:

- **Auto**: All the tasks are automatically validate.
- **Manual**: All the tasks are manually validate by the user.
- **Custom**: Both Auto and Manual tasks are render by mapped from data source.

Note: The default value of [taskMode](#) is Auto.

Automatically scheduled Tasks

When the [taskMode](#) property is set as **Auto**, the start date and end date of all the tasks in the project will be automatically validated. That is, dates are validated based on various factors such as working time, holidays, weekends and predecessors.

In auto scheduling mode, the parent taskbar will be rendered according to the minimum start date and maximum end date of its child records, irrespective of the dates provided to it.

If a child task is updated, the parent task's start and end dates are automatically updated to reflect the changes. The parent task's progress is also updated based on the progress of its child tasks.

The rendering of the parent taskbar in auto-scheduling mode also takes into account the dependencies between tasks. If a child task is dependent on another task, the parent task's start date and end date will be adjusted accordingly to ensure that the child task is not scheduled to start before its predecessor is completed.

INDEX.JSX

```
import * as React from 'react';
```

```

import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit, Selection, Toolbar, ColumnsDirective,
ColumnDirective } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'Children',
        manual: 'isManual'
    };
    const toolbarOptions = ['Add', 'Edit', 'Delete', 'Cancel', 'Update',
'PrevTimeSpan', 'NextTimeSpan', 'ExpandAll', 'CollapseAll', 'Search'];
    const editSettings = {
        allowEditing: true,
        allowDeleting: true,
        allowTaskbarEditing: true
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
highlightWeekends={true} toolbar={toolbarOptions}
editSettings={editSettings} taskMode='Custom' height='450px'>
        <ColumnsDirective>
            <ColumnDirective field='TaskID'
visible={false}></ColumnDirective>
            <ColumnDirective field='TaskName'></ColumnDirective>
            <ColumnDirective field='isManual'></ColumnDirective>
        </ColumnsDirective>
        <Inject services={[Edit, Selection, Toolbar]}></>
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit, Selection, Toolbar, ColumnsDirective,
ColumnDirective } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'Children',
        manual: 'isManual'
    };
    const toolbarOptions = ['Add', 'Edit', 'Delete', 'Cancel', 'Update',
'PrevTimeSpan', 'NextTimeSpan', 'ExpandAll', 'CollapseAll', 'Search'];
    const editSettings = {
        allowEditing: true,

```

```

        allowDeleting: true,
        allowTaskbarEditing: true
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
highlightWeekends={true} toolbar={toolbarOptions}
editSettings={editSettings} taskMode='Custom' height='450px'>
    <ColumnsDirective>
        <ColumnDirective field='TaskID'
visible={false}></ColumnDirective>
        <ColumnDirective field='TaskName'></ColumnDirective>
        <ColumnDirective field='isManual'></ColumnDirective>
    </ColumnsDirective>
    <Inject services={[Edit, Selection, Toolbar]}>/>
</GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008cff;
            height: 40px;
            left: 45%;
            position: absolute;
            top: 45%;
            width: 30%;
        }
    </style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Manually scheduled Tasks

When the `taskMode` property is set as **Manual**, the start date and end date of all the tasks in the project will be same as given in the data source. That is, dates are not validated based on various factors such as dependencies between tasks, holidays, weekends, working time. We can restrict this mode in predecessor validation alone. That is, we can automatically validate the dates based on predecessor values by enabling the `validateManualTasksOnLinking` property.

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit, Selection, Toolbar, ColumnsDirective,
ColumnDirective } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'Children',
        manual: 'isManual'
    };
    const toolbarOptions = ['Add', 'Edit', 'Delete', 'Cancel', 'Update',
'PrevTimeSpan', 'NextTimeSpan', 'ExpandAll', 'CollapseAll', 'Search'];
    const editSettings = {
        allowEditing: true,
        allowDeleting: true,
        allowTaskbarEditing: true
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
highlightWeekends={true} toolbar={toolbarOptions}
editSettings={editSettings} taskMode='Custom' height='450px'>
        <ColumnsDirective>
            <ColumnDirective field='TaskID'
visible={false}></ColumnDirective>
            <ColumnDirective field='TaskName'></ColumnDirective>
            <ColumnDirective field='isManual'></ColumnDirective>
        </ColumnsDirective>
        <Inject services={[Edit, Selection, Toolbar]}></>
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit, Selection, Toolbar, ColumnsDirective,
ColumnDirective } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
```

```

        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'Children',
        manual: 'isManual'
    };
    const toolbarOptions = ['Add', 'Edit', 'Delete', 'Cancel', 'Update',
    'PrevTimeSpan', 'NextTimeSpan', 'ExpandAll', 'CollapseAll', 'Search'];
    const editSettings = {
        allowEditing: true,
        allowDeleting: true,
        allowTaskbarEditing: true
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
    highlightWeekends={true} toolbar={toolbarOptions}
    editSettings={editSettings} taskMode='Custom' height='450px'>
        <ColumnsDirective>
            <ColumnDirective field='TaskID'
    visible={false}></ColumnDirective>
            <ColumnDirective field='TaskName'></ColumnDirective>
            <ColumnDirective field='isManual'></ColumnDirective>
        </ColumnsDirective>
        <Inject services={[Edit, Selection, Toolbar]}></>
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
    rel="stylesheet" type="text/css"/>
    <link
    href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
    rel="stylesheet" />
    <script
    src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
    ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008cff;
            height: 40px;
            left: 45%;
            position: absolute;
            top: 45%;
            width: 30%;
        }
    </style>

```



```

    </style>
  </head>
  <body>
    <div id='root'>
      <div id='loader'>Loading....</div>
    </div>
  </body>
</html>

```

Custom

When the [taskMode](#) property is set as **Custom**, the scheduling mode for each tasks will be mapped from the data source field. The **Boolean** property [taskFields.manual](#) is used to map the manual scheduling mode field from the data source.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit, Selection, Toolbar, ColumnsDirective,
ColumnDirective } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'Children',
    manual: 'isManual'
  };
  const toolbarOptions = ['Add', 'Edit', 'Delete', 'Cancel', 'Update',
'PrevTimeSpan', 'NextTimeSpan', 'ExpandAll', 'CollapseAll', 'Search'];
  const editSettings = {
    allowEditing: true,
    allowDeleting: true,
    allowTaskbarEditing: true
  };
  return <GanttComponent dataSource={data} taskFields={taskFields}
highlightWeekends={true} toolbar={toolbarOptions}
editSettings={editSettings} taskMode='Custom' height='450px'>
    <ColumnsDirective>
      <ColumnDirective field='TaskID'
visible={false}></ColumnDirective>
      <ColumnDirective field='TaskName'></ColumnDirective>
      <ColumnDirective field='isManual'></ColumnDirective>
    </ColumnsDirective>
    <Inject services={[Edit, Selection, Toolbar]}/>
  </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';

```

```

import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit, Selection, Toolbar, ColumnsDirective,
ColumnDirective } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'Children',
        manual: 'isManual'
    };
    const toolbarOptions = ['Add', 'Edit', 'Delete', 'Cancel', 'Update',
'PrevTimeSpan', 'NextTimeSpan', 'ExpandAll', 'CollapseAll', 'Search'];
    const editSettings = {
        allowEditing: true,
        allowDeleting: true,
        allowTaskbarEditing: true
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
highlightWeekends={true} toolbar={toolbarOptions}
editSettings={editSettings} taskMode='Custom' height='450px'>
        <ColumnsDirective>
            <ColumnDirective field='TaskID'
visible={false}></ColumnDirective>
            <ColumnDirective field='TaskName'></ColumnDirective>
            <ColumnDirective field='isManual'></ColumnDirective>
        </ColumnsDirective>
        <Inject services={[Edit, Selection, Toolbar]}></>
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>

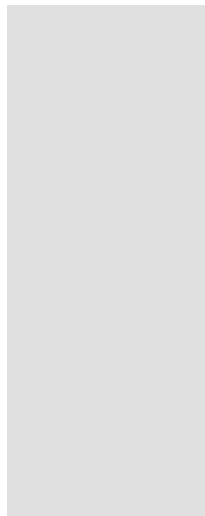
```

```
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>
```

Unscheduled Tasks

Unscheduled tasks are planned for a project without any definite schedule dates. The Gantt control supports rendering the unscheduled tasks. You can create or update the tasks with anyone of start date, end date, and duration values or none. You can enable or disable the unscheduled tasks by using the [allowUnscheduledTasks](#) property. The following images represent the various types of unscheduled tasks in Gantt.

Taskbar state | Auto | Manual

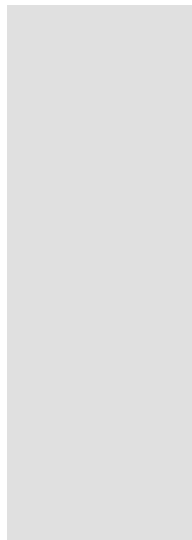


Start Date Only |



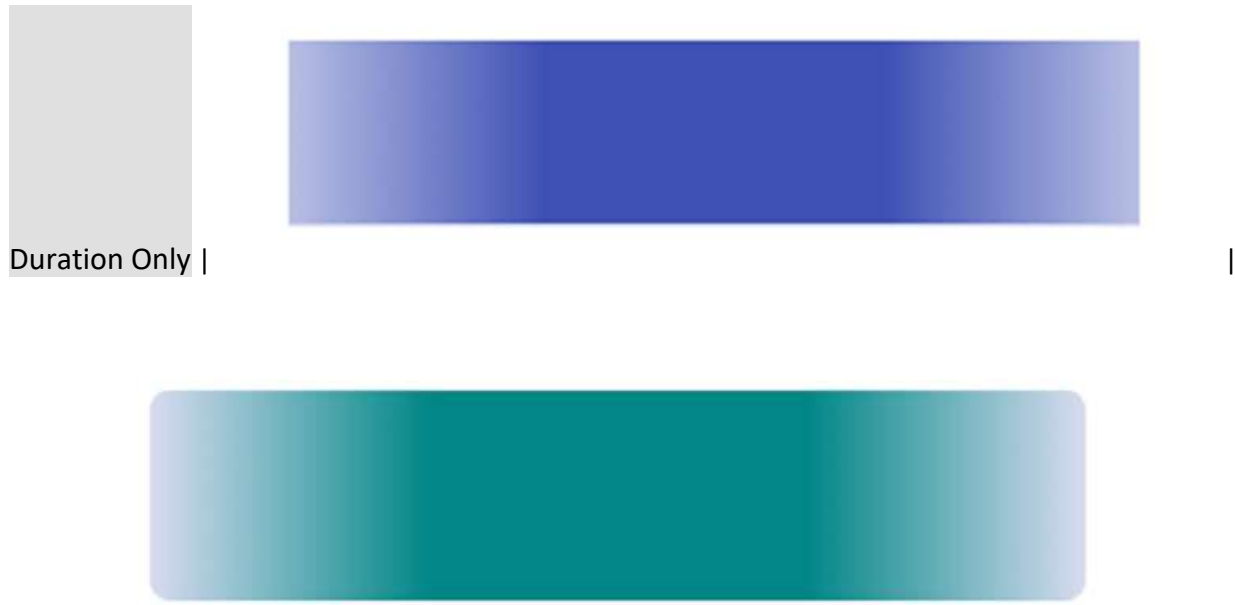
|

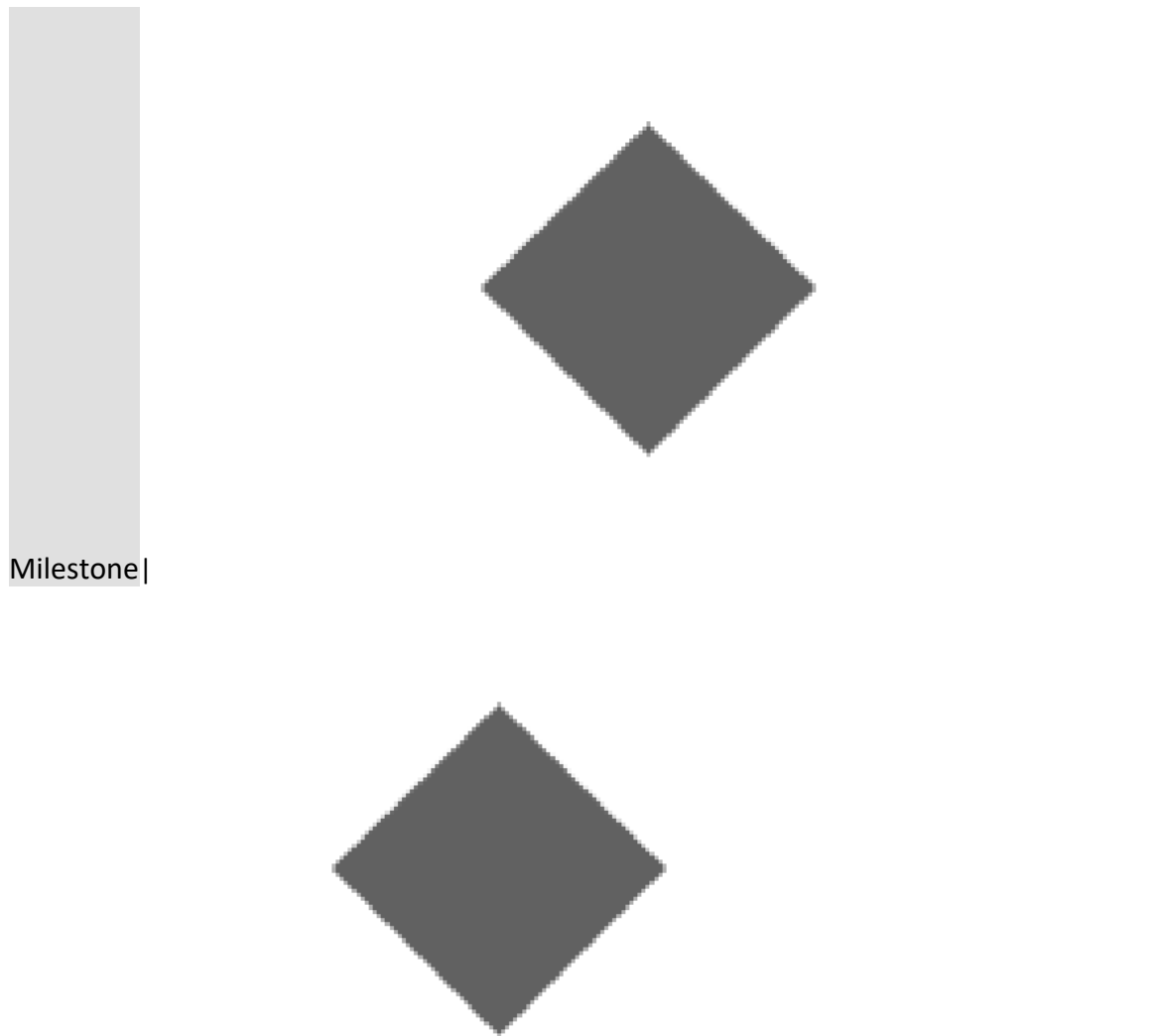




End Date Only |







Note: A milestone is a task that has no start and end dates, but it has a duration value of zero

Define unscheduled tasks in data source

You can define the various types of unscheduled tasks in the data source as follows

INDEX.JSX

```
let GanttData = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 2, TaskName: 'Identify Site location', Duration: 3,
        Progress: 50 },
      { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
        Date('04/02/2019'), Progress: 50 },
```

```

        { TaskID: 4, TaskName: 'Soil test approval', EndDate: new
Date('04/08/2019'), Progress: 50 },
    ]
  },
  {
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), EndDate: new Date('04/08/2019'),
Progress: 50 },
      { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Progress: 50 },
      { TaskID: 8, TaskName: 'Estimation approval', Duration: 0,
Progress: 50 }
    ]
  },
];
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit } from '@syncfusion/ej2-react-gantt';
function App() {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    endDate: 'EndDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const editSettings = {
    allowEditing: true,
    allowTaskbarEditing: true,
  };

  return <GanttComponent dataSource={GanttData}
taskFields={taskFields} editSettings={editSettings}
allowUnscheduledTasks={true} height='400px'>
<Inject services={[Edit]}/>
</GanttComponent>;
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

let GanttData = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [

```



```

        { TaskID: 2, TaskName: 'Identify Site location', Duration: 3,
        Progress: 50 },
        { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
        Date('04/02/2019'), Progress: 50 },
        { TaskID: 4, TaskName: 'Soil test approval', EndDate: new
        Date('04/08/2019'), Progress: 50 },
    ]
},
{
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
        { TaskID: 6, TaskName: 'Develop floor plan for estimation',
        StartDate: new Date('04/04/2019'), EndDate: new Date('04/08/2019'),
        Progress: 50 },
        { TaskID: 7, TaskName: 'List materials', StartDate: new
        Date('04/04/2019'), Progress: 50 },
        { TaskID: 8, TaskName: 'Estimation approval', Duration: 0,
        Progress: 50 }
    ]
},
];
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit } from '@syncfusion/ej2-react-gantt';
function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        endDate: 'EndDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const editSettings = {
        allowEditing: true,
        allowTaskbarEditing: true,
    };

    return <GanttComponent dataSource={GanttData}
    taskFields={taskFields} editSettings={editSettings}
    allowUnscheduledTasks={true} height='400px'>
    <Inject services={[Edit]}/>
    </GanttComponent>;
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>

```

```

<meta charset="utf-8" />
<meta name="viewport" content="width=device-width, initial-scale=1.0" />
<meta name="description" content="Essential JS 2 for React Components"
/>
<meta name="author" content="Syncfusion" />
<link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
<link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
<script src="systemjs.config.js"></script>
<style>
    #loader {
        color: #008cff;
        height: 40px;
        left: 45%;
        position: absolute;
        top: 45%;
        width: 30%;
    }
</style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

NOTE

If the [allowUnscheduledTasks](#) property is set to false, then the Gantt control automatically calculates the scheduled date values with a default value of duration 1 and the project start date is considered as the start date for the task.

Working time range

In the Gantt control, working hours in a day for a project can be defined by using the [dayWorkingTime](#) property. Based on the working hours, automatic date scheduling and duration validations for a task are performed.

The following code snippet explains how to define the working time range for the project in Gantt.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',

```

```

        duration: 'Duration',
        progress: 'Progress',
        child: 'Children'
    };
    const timelineSettings = {
        timelineViewMode: 'Day'
    };
    const dayWorkingTime = [{ from: 9, to: 18 }];

    return <GanttComponent dataSource={data} taskFields={taskFields}
    dayWorkingTime={dayWorkingTime} timelineSettings={timelineSettings}
    height='450px'>
        </GanttComponent>;
    };
    ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'Children'
    };
    const timelineSettings = {
        timelineViewMode: 'Day'
    };
    const dayWorkingTime = [{ from: 9, to: 18 }];

    return <GanttComponent dataSource={data} taskFields={taskFields}
    dayWorkingTime={dayWorkingTime} timelineSettings={timelineSettings}
    height='450px'>
        </GanttComponent>;
    };
    ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>

```

```

<link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
<script src="systemjs.config.js"></script>
<style>
    #loader {
        color: #008cff;
        height: 40px;
        left: 45%;
        position: absolute;
        top: 45%;
        width: 30%;
    }
</style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

NOTE

- * Individual tasks can lie between any time within the defined working time range of the project.
- * The [dayWorkingTime](#) property is used to define the working time for the whole project.

Weekend/non-working days

Non-working days/weekend are used to represent the non-productive days in a project. You can define the non-working days in a week using the [workWeek](#) property in Gantt.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, DayMarkers } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'Children'
    };
    const workWeek = ['Sunday', 'Monday', 'Tuesday', 'Wednesday', 'Thursday'];

    return <GanttComponent dataSource={data} taskFields={taskFields}
        highlightWeekends={true} workWeek={workWeek} height='450px'>
        <Inject services={[DayMarkers]} />
    </GanttComponent>

```

```

    </GanttComponent>
  };
  ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, DayMarkers } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'Children'
  };
  const workWeek = ['Sunday', 'Monday', 'Tuesday', 'Wednesday', 'Thursday'];

  return <GanttComponent dataSource={data} taskFields={taskFields}
    highlightWeekends={true} workWeek={workWeek} height='450px'>
    <Inject services={[DayMarkers]} />
  </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
    rel="stylesheet" type="text/css"/>
  <link
    href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
    rel="stylesheet" />
  <script
    src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></script>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;

```

```

        top: 45%;
        width: 30%;
    }
</style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

By default, Saturdays and Sundays are considered as non-working days/weekend in a project.

In the Gantt control, you can make weekend as working day by setting the [includeWeekend](#) property to true.

Duration units

In Gantt, the task's duration value can be measured by the following duration units,

- Day
- Hour
- Minute

In Gantt, we can define duration unit for whole project by using [durationUnit](#) property, when we defines the value for this property, this unit will be applied for all task which don't has duration unit value.

And each task in the project can be defined with different duration units and the duration unit of a task can be defined by the following ways,

- Using [taskFields.durationUnit](#) property, to map the duration unit data source field.
- Defining the duration unit value along with the duration field in the data source.

Mapping the duration unit field

The below code snippet explains the mapping of duration unit data source field to the Gantt component using the [taskFields.durationUnit](#) property.

INDEX.JSX

```

let data = [
    {
        TaskID: 1,
        TaskName: 'Project Initiation',
        StartDate: new Date('04/02/2019'),
        EndDate: new Date('04/21/2019'),
        subtasks: [
            { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: 2, DurationUnit:'day', Progress: 50 },
            { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 12,DurationUnit:'hour', Progress: 70 },
            { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 240,DurationUnit:'minute', Progress: 80 },
        ]
    },
],

```

```

    {
      TaskID: 5,
      TaskName: 'Project Estimation',
      StartDate: new Date('04/02/2019'),
      EndDate: new Date('04/21/2019'),
      subtasks: [
        { TaskID: 6, TaskName: 'Develop floor plan for estimation',
          StartDate: new Date('04/04/2019'), Duration: 8, DurationUnit: 'hour',
          Progress: 50 },
        { TaskID: 7, TaskName: 'List materials', StartDate: new
          Date('04/04/2019'), Duration: 3, Progress: 50, DurationUnit: 'day' },
        { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
          Date('04/04/2019'), Duration: 480, DurationUnit: 'minute', Progress: 70 }
      ]
    },
  ];
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
function App () {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    durationUnit: 'DurationUnit',
    child: 'subtasks'
  };
  const splitterSettings = {
    columnIndex: 4
  };
  return <GanttComponent dataSource={data} taskFields={taskFields}
    splitterSettings={splitterSettings} height = '450px'>
    </GanttComponent>
  };
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

let data: Object[] = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
        Date('04/02/2019'), Duration: 2, DurationUnit: 'day', Progress: 50 },
      { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
        Date('04/02/2019'), Duration: 12, DurationUnit: 'hour', Progress: 70 },
      { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
        Date('04/02/2019'), Duration: 240, DurationUnit: 'minute', Progress: 80 },
    ]
  },
  {

```

```

        TaskID: 5,
        TaskName: 'Project Estimation',
        StartDate: new Date('04/02/2019'),
        EndDate: new Date('04/21/2019'),
        subtasks: [
            { TaskID: 6, TaskName: 'Develop floor plan for estimation',
              StartDate: new Date('04/04/2019'), Duration: 8, DurationUnit: 'hour',
              Progress: 50 },
            { TaskID: 7, TaskName: 'List materials', StartDate: new
              Date('04/04/2019'), Duration: 3, Progress: 50, DurationUnit: 'day' },
            { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
              Date('04/04/2019'), Duration: 480, DurationUnit: 'minute', Progress: 70 }
        ]
    },
];
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
function App () {
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        durationUnit: 'DurationUnit',
        child: 'subtasks'
    };
    const splitterSettings: any = {
        columnIndex: 4
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
        splitterSettings={splitterSettings} height = '450px'>
        </GanttComponent>
    };
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>

```



```

<script src="systemjs.config.js"></script>
<style>
  #loader {
    color: #008cff;
    height: 40px;
    left: 45%;
    position: absolute;
    top: 45%;
    width: 30%;
  }
</style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

NOTE

The default value of the [durationUnit](#) property is `day`.

Defining duration unit along with duration field

Duration units for the tasks can also be defined along with the duration values, the below code snippet explains the duration unit for a task along with duration value,

INDEX.JSX

```

let data = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    isParent: true,
    subtasks: [
      { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: '4days', Progress: 50 },
      { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: '16hours', Progress: 70 },
      { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: '1800minutes', Progress: 80 },
    ]
  },
  {
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    isParent: true,
    subtasks: [
      { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: '16hours', Progress: 50 },
      { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: '3days', Progress: 50 },
    ]
  }
]

```

```

        { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: '480minutes', Progress: 70 }
    ]
    },
];
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective } from
'@syncfusion/ej2-react-gantt';
function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const splitterSettings = {
        columnIndex: 4
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
        splitterSettings={splitterSettings} height = '450px'>
        </GanttComponent>
    };
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

let data: Object[] = [
    {
        TaskID: 1,
        TaskName: 'Project Initiation',
        StartDate: new Date('04/02/2019'),
        EndDate: new Date('04/21/2019'),
        isParent: true,
        subtasks: [
            { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: '4days', Progress: 50 },
            { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: '16hours', Progress: 70 },
            { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: '1800minutes', Progress: 80 },
        ]
    },
    {
        TaskID: 5,
        TaskName: 'Project Estimation',
        StartDate: new Date('04/02/2019'),
        EndDate: new Date('04/21/2019'),
        isParent: true,
        subtasks: [
            { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: '16hours', Progress: 50 },
            { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: '3days', Progress: 50 },
        ]
    }
];

```

```

        { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: '480minutes', Progress: 70 }
    ]
  },
];
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective } from
'@syncfusion/ej2-react-gantt';
function App() {
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const splitterSettings: any = {
    columnIndex: 4
  };
  return <GanttComponent dataSource={data} taskFields={taskFields}
    splitterSettings={splitterSettings} height = '450px'>
    </GanttComponent>
  };
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>

```

```

    </style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

NOTE:

The edit type of the duration column in Gantt is string, to support editing the duration field along with duration units.

Taskbar in React Gantt component

Taskbar template

You can design your own taskbars to view the tasks in Gantt by using [taskbarTemplate](#) property. And it is possible to map the template script element's ID value to this property. It is also possible to customize the parent taskbars and milestones with custom templates by using [parentTaskbarTemplate](#) and [milestoneTemplate](#) properties.

INDEX.JSX

```

import * as React from "react";
import * as ReactDOM from "react-dom";
import { GanttComponent } from "@syncfusion/ej2-react-gantt";
import { data } from "../datasource";
function App() {
    const taskFields = {
        id: "TaskID",
        name: "TaskName",
        startDate: "StartDate",
        duration: "Duration",
        progress: "Progress",
        child: "subtasks"
    };
    function TaskbarTemplate(props) {
        return (
            <div
                className="e-gantt-child-taskbar-inner-div e-gantt-child-taskbar"
                style={{ height: "100%" }}
            >
                <div
                    className="e-gantt-child-progressbar-inner-div e-gantt-child-progressbar"
                    style={{
                        width: props.ganttProperties.progressWidth + "px",
                        height: "100%"
                    }}
                >
                </div>
                <span
                    className="e-task-label"
                    style={{
                        position: "absolute",

```

```

        fontSize: "12px",
        color: "white",
        top: "5px",
        left: "10px",
        fontFamily: "Segoe UI",
        cursor: "move"
    }}
    >
    {props.TaskName}
  </span>
</div>
);
}
function ParentTaskbarTemplate(props) {
  return (
    <div
      className="e-gantt-parent-taskbar-inner-div e-gantt-parent-taskbar"
      style={{ height: "100%" }}
    >
      <div
        className="e-gantt-parent-progressbar-inner-div e-row-expand e-
gantt-parent-progressbar"
        style={{ width: props.ganttProperties.progressWidth+"px", height:
"100%" }}
      >
        </div>
        <span
          className="e-task-label"
          style={{
            position: "absolute",
            fontSize: "12px",
            color: "white",
            top: "5px",
            left: "10px",
            fontFamily: "Segoe UI",
            cursor: "move"
          }}
        >
          {props.TaskName}
        </span>
      </div>
    );
  }
function MilestoneTemplate(props) {
  return (
    <div className="e-gantt-milestone" style={{ position: "absolute" }}>
      <div
        className="e-milestone-top"
        style={{
          borderRightWidth: "15px",
          borderLeftWidth: "15px",
          borderBottomWidth: "15px"
        }}
      />
      <div
        className="e-milestone-bottom"
        style={{

```

```

        top: "15px",
        borderRightWidth: "15px",
        borderLeftWidth: "15px",
        borderTopWidth: "15px"
    })
  />
</div>
);
}
return (
  <GanttComponent
    dataSource={data}
    rowHeight={60}
    taskFields={taskFields}
    taskbarTemplate={TaskbarTemplate}
    parentTaskbarTemplate={ParentTaskbarTemplate}
    milestoneTemplate={MilestoneTemplate}
    height="450px"
  />
);
}
ReactDOM.render(<App />, document.getElementById("root"));

```

INDEX.TSX

```

import * as React from "react";
import * as ReactDOM from "react-dom";
import { GanttComponent } from "@syncfusion/ej2-react-gantt";
import { data } from "../datasource";
function App() {
  const taskFields: any = {
    id: "TaskID",
    name: "TaskName",
    startDate: "StartDate",
    duration: "Duration",
    progress: "Progress",
    child: "subtasks"
  };
  function TaskbarTemplate(props: any) {
    return (
      <div
        className="e-gantt-child-taskbar-inner-div e-gantt-child-taskbar"
        style={{ height: "100%" }}
      >
        <div
          className="e-gantt-child-progressbar-inner-div e-gantt-child-progressbar"
          style={{
            width: props.ganttProperties.progressWidth + "px",
            height: "100%"
          }}
        >
        </div>
        <span
          className="e-task-label"
          style={{

```

```

        position: "absolute",
        fontSize: "12px",
        color: "white",
        top: "5px",
        left: "10px",
        fontFamily: "Segoe UI",
        cursor: "move"
    }}
    >
    {props.TaskName}
    </span>
</div>
);
}
function ParentTaskbarTemplate(props: any) {
    return (
        <div
            className="e-gantt-parent-taskbar-inner-div e-gantt-parent-taskbar"
            style={{ height: "100%" }}
        >
            <div
                className="e-gantt-parent-progressbar-inner-div e-row-expand e-
gantt-parent-progressbar"
                style={{ width: props.ganttProperties.progressWidth+"px", height:
"100%" }}
            >
                </div>
                <span
                    className="e-task-label"
                    style={{
                        position: "absolute",
                        fontSize: "12px",
                        color: "white",
                        top: "5px",
                        left: "10px",
                        fontFamily: "Segoe UI",
                        cursor: "move"
                    }}
                >
                    {props.TaskName}
                </span>
            </div>
        );
    }
}
function MilestoneTemplate(props: any) {
    return (
        <div className="e-gantt-milestone" style={{ position: "absolute" }}>
            <div
                className="e-milestone-top"
                style={{
                    borderRightWidth: "15px",
                    borderLeftWidth: "15px",
                    borderBottomWidth: "15px"
                }}
            />
            <div
                className="e-milestone-bottom"

```

```

        style={{
          top: "15px",
          borderRightWidth: "15px",
          borderLeftWidth: "15px",
          borderTopWidth: "15px"
        }}
      />
    </div>
  );
}
return (
  <GanttComponent
    dataSource={data}
    rowHeight={60}
    taskFields={taskFields}
    taskbarTemplate={TaskbarTemplate}
    parentTaskbarTemplate={ParentTaskbarTemplate}
    milestoneTemplate={MilestoneTemplate}
    height="450px"
  />
);
}
ReactDOM.render(<App />, document.getElementById("root"));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>

```



```
    <div id='root'>
      <div id='loader'>Loading....</div>
    </div>
  </body>
</html>
```

Taskbar customization

Taskbar height

Height of child taskbars and parent taskbars can be customized by using [taskbarHeight](#) property. The following code example shows how to use the property.

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  return <GanttComponent dataSource={data} taskFields={taskFields}
    rowHeight={50}
    taskbarHeight={40} height = '450px'>
    </GanttComponent>
  </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  return <GanttComponent dataSource={data} taskFields={taskFields}
    rowHeight={50}
    taskbarHeight={40} height = '450px'>
    </GanttComponent>
  </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

NOTE

The [taskbarHeight](#) value should be lower than the [rowHeight](#) property value and these properties accept only pixel values.

Conditional formatting

The default taskbar UI can be replaced with custom templates using the [queryTaskbarInfo](#) event. The following code example shows customizing the taskbar UI based on task progress values in the Gantt component.

INDEX.JSX

```

let data = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),

```

```

        subtasks: [
            { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
            { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 70 },
            { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 80 },
        ]
    },
    {
        TaskID: 5,
        TaskName: 'Project Estimation',
        StartDate: new Date('04/02/2019'),
        EndDate: new Date('04/21/2019'),
        subtasks: [
            { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
            { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 },
            { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 70 }
        ]
    },
];

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective } from
'@syncfusion/ej2-react-gantt';

function App(){
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    function queryTaskbarInfo(args) {
        if (args.data.Progress == 50) {
            args.progressBarBgColor = "red";
        } else if (args.data.Progress == 70) {
            args.progressBarBgColor = "yellow";
        } else if (args.data.Progress == 80) {
            args.progressBarBgColor = "lightgreen";
        }
    }
    return <GanttComponent dataSource={data} taskFields={taskFields}
queryTaskbarInfo={queryTaskbarInfo} height = '450px'>
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

let data: Object[] = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
      { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 70 },
      { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 80 },
    ]
  },
  {
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
      { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 },
      { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 70 }
    ]
  },
];

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective } from
'@syncfusion/ej2-react-gantt';

function App() {
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  function queryTaskbarInfo(args: any) {
    if (args.data.Progress == 50) {
      args.progressBarBgColor = "red";
    } else if (args.data.Progress == 70) {
      args.progressBarBgColor = "yellow";
    } else if (args.data.Progress == 80) {
      args.progressBarBgColor = "lightgreen";
    }
  }
  return <GanttComponent dataSource={data} taskFields={taskFields}
queryTaskbarInfo={queryTaskbarInfo} height = '450px'>
</GanttComponent>

```

```
};
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>
```

Change gripper icon in taskbar

You can change the gripper icon in the taskbar by applying styles to their respective class elements.

INDEX.JSX

```
const projectResources = [
  { resourceId: 1, resourceName: 'Project Manager' },
  { resourceId: 2, resourceName: 'Software Analyst' },
  { resourceId: 3, resourceName: 'Developer' },
  { resourceId: 4, resourceName: 'Testing Engineer' }
];
const data = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
```

```

        StartDate: new Date('04/02/2019'),
        EndDate: new Date('04/21/2019'),
        subtasks: [
            { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50, resources: [2, 3] },
            { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50, resources: [2] },
            { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Predecessor: '3FS', Progress: 50,
resources: [1] },
        ]
    },
    {
        TaskID: 5,
        TaskName: 'Project Estimation',
        StartDate: new Date('04/02/2019'),
        EndDate: new Date('04/21/2019'),
        subtasks: [
            { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
            { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50, resources: [1, 3, 5] },
            { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Predecessor: '7SS', Progress: 50 }
        ]
    },
];
import { GanttComponent, Inject, Edit, Filter, Sort } from '@syncfusion/ej2-
react-gantt';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks',
        dependency: 'Predecessor',
        resourceInfo: 'resources'
    };
    const labelSettings = {
        rightLabel: 'resources'
    };
    const editSettings = {
        allowEditing: true,
        editMode: 'Auto',
        allowTaskbarEditing: true
    };
    const resourceFields = {
        id: 'resourceId',
        name: 'resourceName',
    };
    return <GanttComponent dataSource={data} allowFiltering={true}
allowSorting={true} taskFields={taskFields} editSettings={editSettings}
labelSettings={labelSettings}

```

```

        resourceFields={resourceFields} resources={projectResources}
height='400px'>
    <Inject services={[Edit, Filter, Sort]} />
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

const projectResources: object[] = [
  { resourceId: 1, resourceName: 'Project Manager' },
  { resourceId: 2, resourceName: 'Software Analyst' },
  { resourceId: 3, resourceName: 'Developer' },
  { resourceId: 4, resourceName: 'Testing Engineer' }
];
const data: object[] = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50, resources: [2, 3] },
      { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50, resources: [2] },
      { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Predecessor: '3FS', Progress: 50,
resources: [1] },
    ]
  },
  {
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
      { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50, resources: [1, 3, 5] },
      { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Predecessor: '7SS', Progress: 50 }
    ]
  },
];
import { GanttComponent, Inject, Edit, Filter, Sort } from '@syncfusion/ej2-
react-gantt';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
function App() {
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',

```

```

        progress: 'Progress',
        child: 'subtasks',
        dependency: 'Predecessor',
        resourceInfo: 'resources'
    };
    const labelSettings: any = {
        rightLabel: 'resources'
    };
    const editSettings: any = {
        allowEditing: true,
        editMode: 'Auto',
        allowTaskbarEditing: true
    };
    const resourceFields: any = {
        id: 'resourceId',
        name: 'resourceName',
    };
    return <GanttComponent dataSource={data} allowFiltering={true}
allowSorting={true} taskFields={taskFields} editSettings={editSettings}
labelSettings={labelSettings}
        resourceFields={resourceFields} resources={projectResources}
height='400px'>
        <Inject services={[Edit, Filter, Sort]} />
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css" />
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008cff;
            height: 40px;
            left: 45%;
            position: absolute;
            top: 45%;
            width: 30%;
        }
    </style>

```



```

    /* change gripper icon */
    .e-gantt .e-left-resize-gripper::before,
    .e-gantt .e-right-resize-gripper::before {
        content: '\e934';
    }
    .e-gantt .e-left-resize-gripper,
    .e-gantt .e-right-resize-gripper {
        transform: rotate(90deg);
    }
</style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Multi Taskbar support in project view

The Gantt component, supports rendering multi-taskbars in the project view. With this feature the parent taskbar, when it is collapsed, visually summarize the progress of all its child taskbars.

This feature can be enabled by setting the [enableMultiTaskbar](#) property value to **true**.

The following code example shows how to use this property.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { projectViewMultiTaskData } from './datasource';
function App () {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        progress: 'Progress',
        duration: 'Duration',
        child: 'subtasks',
        expandState: 'isExpand'
    };

    return <GanttComponent dataSource={projectViewMultiTaskData}
        renewableMultiTaskbar={true}
        taskFields={taskFields} height = '400px'>
        </GanttComponent>
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';

```

```
import { projectViewMultiTaskData } from './datasource';
function App () {
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    progress: 'Progress',
    duration: 'Duration',
    child: 'subtasks',
    expandState: 'isExpand'
  };

  return <GanttComponent dataSource={projectViewMultiTaskData}
enableMultiTaskbar={true}
taskFields={taskFields} height = '400px'>
</GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
```

```
</html>
```

Connector lines

The width and background color of connector lines in Gantt can be customized using the [connectorLineWidth](#) and [connectorLineBackground](#) properties. The following code example shows how to use these properties.

INDEX.JSX

```
let data = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
      { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
      { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'),Predecessor:"3SS", Duration: 4, Progress: 50 },
    ]
  },
  {
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
      { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 },
      { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'),Predecessor:"7FS", Duration: 3, Progress: 50 }
    ]
  },
];

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective } from
'@syncfusion/ej2-react-gantt';

function App(){
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    dependency: 'Predecessor',
    child: 'subtasks'
  };

  return <GanttComponent dataSource={data} taskFields={taskFields}
```

```

        connectorLineWidth={2} connectorLineBackground='#0aecb8' height =
        '450px'>
        </GanttComponent>
    };
    ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

let data: Object[] = [
    {
        TaskID: 1,
        TaskName: 'Project Initiation',
        StartDate: new Date('04/02/2019'),
        EndDate: new Date('04/21/2019'),
        subtasks: [
            { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
            { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
            { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'),Predecessor:"3SS", Duration: 4, Progress: 50 },
        ]
    },
    {
        TaskID: 5,
        TaskName: 'Project Estimation',
        StartDate: new Date('04/02/2019'),
        EndDate: new Date('04/21/2019'),
        subtasks: [
            { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
            { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 },
            { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'),Predecessor:"7FS", Duration: 3, Progress: 50 }
        ]
    },
];

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective } from
'@syncfusion/ej2-react-gantt';

function App() {
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        dependency: 'Predecessor',
        child: 'subtasks'
    };

    return <GanttComponent dataSource={data} taskFields={taskFields}

```

```

        connectorLineWidth={2} connectorLineBackground='#0aecb8' height =
        '450px'>
        </GanttComponent>
    };
    ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008cff;
            height: 40px;
            left: 45%;
            position: absolute;
            top: 45%;
            width: 30%;
        }
    </style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Enable tooltip

In the Gantt component, you can enable or disable the mouse hover tooltip for the following UI elements using the [tooltipSettings.showTooltip](#) property:

- Taskbar
- Connector line
- Baseline
- Event marker

INDEX.JSX

```

export let datasource = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 2, TaskName: 'Identify Site
location', BaselineStartDate: new Date('04/02/2019'), BaselineEndDate: new
Date('04/02/2019'), StartDate: new Date('04/02/2019'), Duration: 0,
Progress: 50 },
      { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), BaselineStartDate: new
Date('04/04/2019'), BaselineEndDate: new Date('04/09/2019'), Duration: 4,
Progress: 50 },
      { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), BaselineStartDate: new
Date('04/08/2019'), BaselineEndDate: new Date('04/12/2019'), Duration:
4, Predecessor: "2FS", Progress: 50 },
    ]
  },
  {
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 6, TaskName: 'Develop floor plan for
estimation', BaselineStartDate: new Date('04/04/2019'), BaselineEndDate: new
Date('04/08/2019'), StartDate: new Date('04/04/2019'), Duration: 3,
Progress: 50 },
      { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), BaselineStartDate: new
Date('04/02/2019'), BaselineEndDate: new Date('04/04/2019'), Duration: 3,
Progress: 50 },
      { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/02/2019'), BaselineStartDate: new
Date('04/02/2019'), BaselineEndDate: new Date('04/08/2019'), Duration:
0, Predecessor: "6SS", Progress: 50 }
    ]
  },
];

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, DayMarkers, EventMarkersDirective,
EventMarkerDirective } from '@syncfusion/ej2-react-gantt';

function App () {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
  }

```

```

    dependency: 'Predecessor',
    baselineStartDate: 'BaselineStartDate',
    baselineEndDate: 'BaselineEndDate',
    child: 'subtasks'
  };
  const tooltipSettings = {
    showTooltip: true
  };
  let eventMarkerDay1= new Date('04/10/2019');
  return <GanttComponent dataSource={data} taskFields={taskFields}
    tooltipSettings={tooltipSettings} renderBaseline={true}
    baselineColor="Red" height = '450px'>
    <EventMarkersDirective>
      <EventMarkerDirective day={eventMarkerDay1} label='Project
kick-off' >
        </EventMarkerDirective>
      </EventMarkersDirective>
      <Inject services={[DayMarkers]} />
    </GanttComponent>
  };
  ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

export let data: Object[] = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 2, TaskName: 'Identify Site location',BaselineStartDate:
new Date('04/02/2019'),BaselineEndDate: new Date('04/02/2019'), StartDate:
new Date('04/02/2019'), Duration: 0, Progress: 50 },
      { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'),BaselineStartDate: new
Date('04/04/2019'),BaselineEndDate: new Date('04/09/2019'), Duration: 4,
Progress: 50 },
      { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'),BaselineStartDate: new
Date('04/08/2019'),BaselineEndDate: new Date('04/12/2019'), Duration:
4,Predecessor:"2FS", Progress: 50 },
    ]
  },
  {
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 6, TaskName: 'Develop floor plan for
estimation',BaselineStartDate: new Date('04/04/2019'),BaselineEndDate: new
Date('04/08/2019'), StartDate: new Date('04/04/2019'), Duration: 3,
Progress: 50 },
      { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'),BaselineStartDate: new

```

```

Date('04/02/2019'),BaselineEndDate: new Date('04/04/2019'), Duration: 3,
Progress: 50 },
    { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/02/2019'),BaselineStartDate: new
Date('04/02/2019'),BaselineEndDate: new Date('04/08/2019'), Duration:
0,Predecessor:"6SS", Progress: 50 }
    ]
  },
];
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, DayMarkers, EventMarkersDirective,
EventMarkerDirective } from '@syncfusion/ej2-react-gantt';
function App () {
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    dependency: 'Predecessor',
    baselineStartDate: 'BaselineStartDate',
    baselineEndDate: 'BaselineEndDate',
    child: 'subtasks'
  };
  const tooltipSettings: any = {
    showTooltip: true
  };
  let eventMarkerDay1: Date = new Date('04/10/2019');
  return <GanttComponent dataSource={data} taskFields={taskFields}
    tooltipSettings={tooltipSettings} renderBaseline={true}
baselineColor="Red" height = '450px'>
    <EventMarkersDirective>
      <EventMarkerDirective day={eventMarkerDay1} label='Project
kick-off' >
        </EventMarkerDirective>
      </EventMarkersDirective>
    <Inject services={[DayMarkers]} />
  </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>

```



```

<link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
<script src="systemjs.config.js"></script>
<style>
  #loader {
    color: #008cff;
    height: 40px;
    left: 45%;
    position: absolute;
    top: 45%;
    width: 30%;
  }
</style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

The default value of the [tooltipSettings.showTooltip](#) property is true.

Tooltip template

Taskbar tooltip

The default tooltip in the Gantt component can be customized using the [tooltipSettings.taskbar](#) property. You can map the template script element's ID value or template string directly to this property.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  function tooltipTemplate(props) {
    return (<div>TaskID : {props.TaskID}</div>)
  };
  const template = tooltipTemplate;
  const tooltipSettings = {
    taskbar:template
  };

```

```

        return <GanttComponent dataSource={data} taskFields={taskFields}
            tooltipSettings={tooltipSettings} height = '450px'>
        </GanttComponent>
    };
    ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    function tooltipTemplate(props: any) {
        return (<div>TaskID : {props.TaskID}</div>)
    };
    const template: any = tooltipTemplate;
    const tooltipSettings: any = {
        taskbar: template
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
        tooltipSettings={tooltipSettings} height = '450px'>
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components" />
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {

```

```

        color: #008cff;
        height: 40px;
        left: 45%;
        position: absolute;
        top: 45%;
        width: 30%;
    }
</style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Connector line tooltip

The default connector line tooltip in the Gantt component can be customized using the [tooltipSettings.connectorLine](#) property. You can map the value to this property as template script element ID or template string format. The following code example shows how to use the [tooltipSettings.connectorLine](#) property.

INDEX.JSX

```

let data = [
    {
        TaskID: 1,
        TaskName: 'Project Initiation',
        StartDate: new Date('04/02/2019'),
        EndDate: new Date('04/21/2019'),
        subtasks: [
            { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
            { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
            { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4,Predecessor:'3FS+2 days', Progress: 50 },
        ]
    },
    {
        TaskID: 5,
        TaskName: 'Project Estimation',
        StartDate: new Date('04/02/2019'),
        EndDate: new Date('04/21/2019'),
        subtasks: [
            { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
            { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 },
            { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'),Predecessor:'7SS+ 2 days', Duration: 3, Progress: 50 }
        ]
    },
];

import * as React from 'react';

```

```

import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective } from '@syncfusion/ej2-react-gantt';

function App() {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    dependency: 'Predecessor',
    child: 'subtasks'
  };
  function tooltipTemplate(props) {
    return (<div>Offset : {props.offsetString}</div>);
  };
  const template = tooltipTemplate;
  const tooltipSettings = {
    connectorLine: template
  };
  return <GanttComponent dataSource={data} taskFields={taskFields}
    tooltipSettings={tooltipSettings} height = '450px'>
    <ColumnsDirective>
      <ColumnDirective field='TaskID' width='100'
    </ColumnDirective>
      <ColumnDirective field='Predecessor'></ColumnDirective>
    </ColumnsDirective>
  </GanttComponent>

};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

let data: Object[] = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
      { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
      { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4,Predecessor:'3FS+2 days', Progress: 50 },
    ]
  },
  {
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [

```

```

        { TaskID: 6, TaskName: 'Develop floor plan for estimation',
        StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
        { TaskID: 7, TaskName: 'List materials', StartDate: new
        Date('04/04/2019'), Duration: 3, Progress: 50 },
        { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
        Date('04/04/2019'), Predecessor: '7SS+ 2 days', Duration: 3, Progress: 50 }
    ]
  },
];
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective } from
'@syncfusion/ej2-react-gantt';
function App(){
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    dependency: 'Predecessor',
    child: 'subtasks'
  };
  function tooltipTemplate(props:any) {
    return (<div>Offset : {props.offsetString}</div>)
  };
  const template: any = tooltipTemplate;
  const tooltipSettings: any = {
    connectorLine: template
  };
  return <GanttComponent dataSource={data} taskFields={taskFields}
    tooltipSettings={tooltipSettings} height = '450px'>
    <ColumnsDirective>
      <ColumnDirective field='TaskID' width='100'
></ColumnDirective>
      <ColumnDirective field='Predecessor'></ColumnDirective>
    </ColumnsDirective>
  </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
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  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
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/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>

```

```

<link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
<script src="systemjs.config.js"></script>
<style>
  #loader {
    color: #008c8f;
    height: 40px;
    left: 45%;
    position: absolute;
    top: 45%;
    width: 30%;
  }
</style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Baseline tooltip

A baseline tooltip can be customized using the [tooltipSettings.baseline](#) property. The following code example shows how to customize the baseline tooltip in Gantt.

INDEX.JSX

```

let data = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 2, TaskName: 'Identify Site location',
BaselineStartDate: new Date('04/02/2019'), BaselineEndDate: new
Date('04/06/2019'), StartDate: new Date('04/02/2019'), Duration: 0,
Progress: 50 },
      { TaskID: 3, TaskName: 'Perform Soil test', BaselineStartDate:
new Date('04/04/2019'), BaselineEndDate: new Date('04/09/2019'), StartDate:
new Date('04/02/2019'), Duration: 4, Progress: 50 },
      { TaskID: 4, TaskName: 'Soil test approval', BaselineStartDate:
new Date('04/08/2019'), BaselineEndDate: new Date('04/12/2019'), StartDate:
new Date('04/02/2019'), Duration: 4, Progress: 50 },
    ]
  },
  {
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [

```

```

        { TaskID: 6, TaskName: 'Develop floor plan for estimation',
        BaselineStartDate: new Date('04/04/2019'), BaselineEndDate: new
        Date('04/08/2019'), StartDate: new Date('04/04/2019'), Duration: 3,
        Progress: 50 },
        { TaskID: 7, TaskName: 'List materials', BaselineStartDate: new
        Date('04/02/2019'), BaselineEndDate: new Date('04/04/2019'), StartDate: new
        Date('04/04/2019'), Duration: 3, Progress: 50 },
        { TaskID: 8, TaskName: 'Estimation approval', BaselineStartDate:
        new Date('04/02/2019'), BaselineEndDate: new Date('04/02/2019'), StartDate:
        new Date('04/04/2019'), Duration: 0, Progress: 50 }
    ]
  },
];

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective } from
 '@syncfusion/ej2-react-gantt';

function App() {
  let ganttInstance;
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    baselineStartDate: 'BaselineStartDate',
    baselineEndDate: 'BaselineEndDate',
    child: 'subtasks'
  };
  function tooltipTemplate(props) {
    return (<div>Baseline StartDate :
    {ganttInstance.getFormattedDate(props.BaselineStartDate)}</div>)
  };
  const template = tooltipTemplate;
  const tooltipSettings = {
    baseline: template
  };
  return <GanttComponent dataSource={data} taskFields={taskFields}
    tooltipSettings={tooltipSettings} renderBaseline={true}
    baselineColor="red" height = '450px' ref={gantt => ganttInstance = gantt}>
    </GanttComponent>
  };
  ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

let data: Object[] = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [

```

```

        { TaskID: 2, TaskName: 'Identify Site location',
BaselineStartDate: new Date('04/02/2019'), BaselineEndDate: new
Date('04/06/2019'), StartDate: new Date('04/02/2019'), Duration: 0,
Progress: 50 },
        { TaskID: 3, TaskName: 'Perform Soil test', BaselineStartDate: new
Date('04/04/2019'), BaselineEndDate: new Date('04/09/2019'), StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
        { TaskID: 4, TaskName: 'Soil test approval', BaselineStartDate:
new Date('04/08/2019'), BaselineEndDate: new Date('04/12/2019'), StartDate:
new Date('04/02/2019'), Duration: 4, Progress: 50 },
    ]
},
{
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
        { TaskID: 6, TaskName: 'Develop floor plan for estimation',
BaselineStartDate: new Date('04/04/2019'), BaselineEndDate: new
Date('04/08/2019'), StartDate: new Date('04/04/2019'), Duration: 3,
Progress: 50 },
        { TaskID: 7, TaskName: 'List materials', BaselineStartDate: new
Date('04/02/2019'), BaselineEndDate: new Date('04/04/2019'), StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 },
        { TaskID: 8, TaskName: 'Estimation approval', BaselineStartDate:
new Date('04/02/2019'), BaselineEndDate: new Date('04/02/2019'), StartDate:
new Date('04/04/2019'), Duration: 0, Progress: 50 }
    ]
},
];
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective } from
'@syncfusion/ej2-react-gantt';
function App() {
    let ganttInstance: any;
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        baselineStartDate: 'BaselineStartDate',
        baselineEndDate: 'BaselineEndDate',
        child: 'subtasks'
    };
    function tooltipTemplate(props: any) {
        return (<div>Baseline StartDate :
{ganttInstance.getFormattedDate(props.BaselineStartDate)}</div>)
    };
    const template: any = tooltipTemplate;
    const tooltipSettings: any = {
        baseline: template
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}

```



```

        tooltipSettings={tooltipSettings} renderBaseline={true}
        baselineColor="red" height = '450px' ref={gantt => ganttInstance = gantt}>
        </GanttComponent>
    };
    ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008cff;
            height: 40px;
            left: 45%;
            position: absolute;
            top: 45%;
            width: 30%;
        }
    </style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Critical path in React Gantt component

The critical path in a project is indicated by a single task or a series of tasks. If a task in critical path is delayed, the entire project will be delayed. A task is considered to be critical if any delay to this task would affect the project end date.

The critical path can be enabled in Gantt by using the built-in toolbar button or [enableCriticalPath](#) property.

The following code example shows how to display the critical path taskbar in the Gantt control:

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit, Toolbar, CriticalPath } from
 '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App(){
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const editOptions = {
    allowAdding: true,
    allowEditing: true,
    allowDeleting: true,
    allowTaskbarEditing: true,
    showDeleteConfirmDialog: true
  };
  const toolbarOptions = ['CriticalPath'];
  return <GanttComponent dataSource={data} taskFields={taskFields}
enableCriticalPath={true}
editSettings={editOptions} toolbar={toolbarOptions} height =
'450px'>
    <Inject services={[Edit, CriticalPath, Toolbar]} />
  </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit, EditSettingsModel, Toolbar,
ToolbarItem, CriticalPath } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App(){
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const editOptions: EditSettingsModel = {
    allowAdding: true,
    allowEditing: true,
    allowDeleting: true,
    allowTaskbarEditing: true,
    showDeleteConfirmDialog: true
  };
  const toolbarOptions: ToolbarItem[] = ['CriticalPath'];

```

```

    return <GanttComponent dataSource={data} taskFields={taskFields}
enableCriticalPath={true}
    editSettings={editOptions} toolbar={toolbarOptions} height =
'450px'>
        <Inject services={[Edit, CriticalPath, Toolbar]} />
        </GanttComponent>
    };
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008cff;
            height: 40px;
            left: 45%;
            position: absolute;
            top: 45%;
            width: 30%;
        }
        .e-gantt .e-gantt-chart .e-custom-holiday {
            background-color:lightgreen;
        }
    </style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Customize taskbar in critical path

The taskbar in critical path can be customized by using [queryTaskbarInfo](#) event and [isCritical](#) property of row [data](#) in the event argument.

The following code example shows how to customize the critical path taskbar in the Gantt control:

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit, Toolbar, CriticalPath } from
 '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App(){
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const editOptions = {
        allowAdding: true,
        allowEditing: true,
        allowDeleting: true,
        allowTaskbarEditing: true,
        showDeleteConfirmDialog: true
    };
    function queryTaskbarInfo(args) {
        if ((args.data.isCritical || args.data.slack === '0 day') &&
!args.data.hasChildRecords) {
            args.taskbarBgColor = 'rgb(242, 210, 189)';
            args.progressBarBgColor = 'rgb(201, 169, 166)';
        }
    }
    const toolbarOptions = ['CriticalPath'];
    return <GanttComponent dataSource={data} taskFields={taskFields}
height = '450px' queryTaskbarInfo={queryTaskbarInfo}
enableCriticalPath={true}
editSettings={editOptions} toolbar={toolbarOptions}>
        <Inject services={[Edit, CriticalPath, Toolbar]} />
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit, EditSettingsModel, Toolbar,
ToolbarItem, CriticalPath } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App(){
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
};

```

```

const editOptions: EditSettingsModel = {
  allowAdding: true,
  allowEditing: true,
  allowDeleting: true,
  allowTaskbarEditing: true,
  showDeleteConfirmDialog: true
};

function queryTaskbarInfo(args: any): void {
  if ((args.data.isCritical || args.data.slack === '0 day') &&
!args.data.hasChildRecords) {
    args.taskbarBgColor = 'rgb(242, 210, 189)';
    args.progressBarBgColor = 'rgb(201, 169, 166)';
  }
}

const toolbarOptions: ToolbarItem[] = ['CriticalPath'];
return <GanttComponent dataSource={data} taskFields={taskFields}
height = '450px' queryTaskbarInfo={queryTaskbarInfo}
enableCriticalPath={true}
editSettings={editOptions} toolbar={toolbarOptions}>
  <Inject services={[Edit, CriticalPath, Toolbar]} />
</GanttComponent>
};

ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
    .e-gantt .e-gantt-chart .e-custom-holiday {
      background-color:lightgreen;
    }
  </style>

```

```

</style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Undo Redo in React Gantt component

The Undo feature enables users to revert the most recent action performed in the Gantt Chart. It helps undo changes made to tasks, dependencies, or other actions within the Gantt Chart.

The Redo feature can reapply an action that was previously undone using the Undo feature. This allows users to revert their decision to undo an action.

The undo redo feature can be enabled in Gantt by using the [enableUndoRedo](#) property.

To Undo Redo, inject the [UndoRedo](#) module into the Gantt component.

Configure the feature set for undo redo actions

By default, all the gantt features listed in the below table will be restored for undo and redo actions. However, you have the option to specify only the required actions to be restored using [undoRedoActions](#) property.

Built-in Undo Redo Items	Actions
-----	-----
Edit	Undo redo actions can be performed for edited record.
Delete	Undo redo actions can be performed for deleted record.
Add	Undo redo actions can be performed for newly added record.
ColumnReorder	Undo redo actions can be performed for reordered column.
Indent	Undo redo actions can be performed for indented record.
Outdent	Undo redo actions can be performed for outdented record.
ColumnResize	Undo redo actions can be performed for resized column.
Sorting	Undo redo actions can be performed for sorted column.
Filtering	Undo redo actions can be performed for filtered record.
Search	Undo redo actions can be performed for searched value.
ZoomIn	Undo redo actions can be performed for zoomIn action.
ZoomOut	Undo redo actions can be performed for zoomOut action.
ZoomToFit	Undo redo actions can be performed for zoomToFit action.
ColumnState	Undo redo actions can be performed for hided or shown columns.
RowDragAndDrop	Undo redo actions can be performed for row drag and drop.
TaskbarDragAndDrop	Undo redo actions can be performed for taskbar drag and drop.

| PreviousTimeSpan | Undo redo actions can be performed for previous time span action.

| NextTimeSpan | Undo redo actions can be performed for next time span action.

In the following code example, **Edit** and **Delete** actions are specified in **undoRedoActions** property.

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Toolbar, Selection, Edit,
Filter, Sort, RowDD, ColumnMenu, Reorder, Resize, UndoRedo } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const editOptions = {
    allowAdding: true,
    allowEditing: true,
    allowDeleting: true
  };
  const toolbarOptions = ['Add', 'Edit', 'Update', 'Delete', 'Search',
'ZoomIn', 'ZoomOut', 'ZoomToFit', 'Indent', 'Outdent',
'PrevTimeSpan', 'NextTimeSpan', 'Undo', 'Redo'];
  const undoRedoActions = ['Edit', 'Delete'];
  return <GanttComponent dataSource={data} taskFields={taskFields}
allowSelection={true} allowSorting={true} allowFiltering={true}
allowRowDragAndDrop={true}
editSettings={editOptions} showColumnMenu={true}
enableUndoRedo={true} allowResizing={true} allowReordering={true}
toolbar={toolbarOptions} undoRedoActions={undoRedoActions} height = '450px'>
    <Inject services={[Toolbar, Selection, Edit,
Filter, Sort, RowDD, ColumnMenu, Reorder, Resize, UndoRedo]} />
    </GanttComponent>
  </>
};
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, EditSettingsModel, GanttAction, ToolbarItem,
Toolbar, Selection, Edit,
Filter, Sort, RowDD, ColumnMenu, Reorder, Resize, UndoRedo } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
```

```

        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const editOptions: EditSettingsModel = {
        allowAdding: true,
        allowEditing: true,
        allowDeleting: true
    };
    const undoRedoActions: GanttAction[] = ['Edit', 'Delete'];
    const toolbarOptions: ToolbarItem[] = ['Add', 'Edit', 'Update', 'Delete',
    'Search', 'ZoomIn', 'ZoomOut', 'ZoomToFit', 'Indent', 'Outdent',
    'PrevTimeSpan', 'NextTimeSpan', 'Undo', 'Redo'];
    return <GanttComponent dataSource={data} taskFields={taskFields}
allowSelection={true} allowSorting={true} allowFiltering={true}
allowRowDragAndDrop={true}
        editSettings={editOptions} showColumnMenu={true}
enableUndoRedo={true} allowResizing={true} allowReordering={true}
toolbar={toolbarOptions} undoRedoActions={undoRedoActions} height = '450px'>
        <Inject services={[Toolbar, Selection, Edit,
Filter, Sort, RowDD, ColumnMenu, Reorder, Resize, UndoRedo]} />
        </GanttComponent>
    </>
    </>
    ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008cff;
            height: 40px;
            left: 45%;
            position: absolute;
            top: 45%;
            width: 30%;
        }
    </style>

```



```

</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Configuring the Storage Step Count for Undo and Redo Actions

You can specify the number of actions to be stored for undo and redo operations using the [undoRedoStepsCount](#) property.

By default, the value of `undoRedoStepsCount` is set to 10.

When the number of actions performed exceeds the `undoRedoStepsCount`, the oldest action in the undo collection is removed, and the latest action performed is added to the collection. This ensures that the number of stored actions does not exceed the specified limit, maintaining efficient memory usage.

In the following example, `undoRedoStepsCount` value is set to 5.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Toolbar, Selection, Edit,
Filter, Sort, RowDD, ColumnMenu, Reorder, Resize, UndoRedo } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const editOptions = {
    allowAdding: true,
    allowEditing: true,
    allowDeleting: true
  };
  const undoRedoStepsCount = 5;
  const toolbarOptions = ['Add', 'Edit', 'Update', 'Delete', 'Search',
'ZoomIn', 'ZoomOut', 'ZoomToFit', 'Indent', 'Outdent',
'PrevTimeSpan', 'NextTimeSpan', 'Undo', 'Redo'];
  const undoRedoActions = ['Add', 'Edit', 'Delete',
'Search', 'Sorting', 'Filtering', 'ZoomIn', 'ZoomOut',
'ZoomToFit', 'Indent', 'Outdent',
'PreviousTimeSpan', 'NextTimeSpan', 'ColumnState'];
  return <GanttComponent dataSource={data} taskFields={taskFields}
allowSelection={true} allowSorting={true} allowFiltering={true}
allowRowDragAndDrop={true} undoRedoStepsCount={undoRedoStepsCount}
editSettings={editOptions} showColumnMenu={true}
enableUndoRedo={true} allowResizing={true} allowReordering={true}
toolbar={toolbarOptions} undoRedoActions={undoRedoActions} height = '450px'>

```

```

        <Inject services={[Toolbar, Selection, Edit,
Filter,Sort,RowDD,ColumnMenu,Reorder,Resize,UndoRedo]} />
        </GanttComponent>
    };
    ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, EditSettingsModel, GanttAction, ToolbarItem,
Toolbar, Selection, Edit,
Filter,Sort,RowDD,ColumnMenu,Reorder,Resize,UndoRedo } from '@syncfusion/ej2-
react-gantt';
import { data } from './datasource';
function App(){
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const editOptions: EditSettingsModel = {
        allowAdding: true,
        allowEditing: true,
        allowDeleting: true
    };
    const undoRedoStepsCount: number = 5;
    const undoRedoActions: GanttAction[] = ['Add', 'Edit', 'Delete',
'Search','Sorting','Filtering', 'ZoomIn', 'ZoomOut',
'ZoomToFit','Indent','Outdent',
'PreviousTimeSpan', 'NextTimeSpan','ColumnState'];
    const toolbarOptions: ToolbarItem[] = ['Add', 'Edit', 'Update', 'Delete',
'Search', 'ZoomIn', 'ZoomOut', 'ZoomToFit','Indent','Outdent',
'PrevTimeSpan', 'NextTimeSpan','Undo','Redo'];
    return <GanttComponent dataSource={data} taskFields={taskFields}
allowSelection={true} allowSorting={true} allowFiltering={true}
allowRowDragAndDrop={true} undoRedoStepsCount={undoRedoStepsCount}
editSettings={editOptions} showColumnMenu={true}
enableUndoRedo={true} allowResizing={true} allowReordering={true}
toolbar={toolbarOptions} undoRedoActions={undoRedoActions} height = '450px'>
        <Inject services={[Toolbar, Selection, Edit,
Filter,Sort,RowDD,ColumnMenu,Reorder,Resize,UndoRedo]} />
        </GanttComponent>
    };
    ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />

```

```

<meta name="viewport" content="width=device-width, initial-scale=1.0" />
<meta name="description" content="Essential JS 2 for React Components"
/>
<meta name="author" content="Syncfusion" />
<link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
<link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
<script src="systemjs.config.js"></script>
<style>
    #loader {
        color: #008cff;
        height: 40px;
        left: 45%;
        position: absolute;
        top: 45%;
        width: 30%;
    }
</style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Perform undo redo actions programatically

You can perform undo and redo actions programatically using [undo](#) and [redo](#) methods.

The following code example demonstrates how to invoke the [undo](#) and [redo](#) method by clicking the external button.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Toolbar, Selection, Edit,
Filter, Sort, RowDD, ColumnMenu, Reorder, Resize, UndoRedo } from '@syncfusion/ej2-
react-gantt';
import { data } from './datasource';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
function App() {
    let gantt;
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
};

```

```

const editOptions = {
  allowAdding: true,
  allowEditing: true,
  allowDeleting: true
};
const toolbarOptions = ['Add', 'Edit', 'Update', 'Delete', 'Search',
'ZoomIn', 'ZoomOut', 'ZoomToFit', 'Indent', 'Outdent',
'PrevTimeSpan', 'NextTimeSpan', 'Undo', 'Redo'];
const undoRedoActions= ['Add', 'Edit', 'Delete',
'Search', 'Sorting', 'Filtering', 'ZoomIn', 'ZoomOut',
'ZoomToFit', 'Indent', 'Outdent',
'PreviousTimeSpan', 'NextTimeSpan', 'ColumnState'];
function undo() {
  gantt.undo();
}
function redo() {
  gantt.redo();
}

return (<div>
  <ButtonComponent onClick={undo}>Undo</ButtonComponent>
  <ButtonComponent onClick={redo}>Redo</ButtonComponent>
  <GanttComponent dataSource={data} ref={g => gantt = g}
taskFields={taskFields} allowSelection={true} allowSorting={true}
allowFiltering={true} allowRowDragAndDrop={true}
  editSettings={editOptions} showColumnMenu={true}
enableUndoRedo={true} allowResizing={true} allowReordering={true}
toolbar={toolbarOptions} undoRedoActions={undoRedoActions} height = '450px'>
  <Inject services={[Toolbar, Selection, Edit,
Filter, Sort, RowDD, ColumnMenu, Reorder, Resize, UndoRedo]} />
  </GanttComponent></div>)
);
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, EditSettingsModel, GanttAction, ToolbarItem,
Toolbar, Selection, Edit,
Filter, Sort, RowDD, ColumnMenu, Reorder, Resize, UndoRedo } from '@syncfusion/ej2-react-gantt';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { data } from './datasource';
function App() {
  let gantt: any;
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const editOptions: EditSettingsModel = {
    allowAdding: true,
    allowEditing: true,

```

```

        allowDeleting: true
    };
    const undoRedoActions: GanttAction[] = ['Add', 'Edit', 'Delete',
'Search', 'Sorting', 'Filtering', 'ZoomIn', 'ZoomOut',
'ZoomToFit', 'Indent', 'Outdent',
    'PreviousTimeSpan', 'NextTimeSpan', 'ColumnState'];
    const toolbarOptions: ToolbarItem[] = ['Add', 'Edit', 'Update', 'Delete',
'Search', 'ZoomIn', 'ZoomOut', 'ZoomToFit', 'Indent', 'Outdent',
    'PrevTimeSpan', 'NextTimeSpan', 'Undo', 'Redo'];
    function undo() {
        gantt.undo();
    }
    function redo() {
        gantt.redo();
    }
    return (<div>
        <ButtonComponent onClick={undo}>Undo</ButtonComponent>
        <ButtonComponent onClick={redo}>Redo</ButtonComponent>
        <GanttComponent dataSource={data} ref={g => gantt = g}
taskFields={taskFields} allowSelection={true} allowSorting={true}
allowFiltering={true} allowRowDragAndDrop={true}
        editSettings={editOptions} showColumnMenu={true} enableUndoRedo={true}
allowResizing={true} allowReordering={true} toolbar={toolbarOptions}
undoRedoActions={undoRedoActions} height='450px'>
        <Inject services={[Toolbar, Selection, Edit, Filter, Sort, RowDD,
ColumnMenu, Reorder, Resize, UndoRedo]} />
        </GanttComponent></div>
    );
    ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008cff;
            height: 40px;
            left: 45%;
            position: absolute;

```

```

        top: 45%;
        width: 30%;
    }
</style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Retrieve undo and redo stack collection

By default, when an undo or redo action is performed, the actions are stored in an array collection. To retrieve the undo and redo stack array collections, you can use the [getUndoActions](#) and [getRedoActions](#) methods.

The following code example demonstrates how to retrieve the undo and redo collection using method by clicking the external button.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Toolbar, Selection, Edit,
Filter, Sort, RowDD, ColumnMenu, Reorder, Resize, UndoRedo } from '@syncfusion/ej2-
react-gantt';
import { data } from './datasource';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
function App() {
    let gantt;
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const editOptions = {
        allowAdding: true,
        allowEditing: true,
        allowDeleting: true
    };
    const toolbarOptions = ['Add', 'Edit', 'Update', 'Delete', 'Search',
'ZoomIn', 'ZoomOut', 'ZoomToFit', 'Indent', 'Outdent',
'PrevTimeSpan', 'NextTimeSpan', 'Undo', 'Redo'];
    const undoRedoActions = ['Add', 'Edit', 'Delete',
'Search', 'Sorting', 'Filtering', 'ZoomIn', 'ZoomOut',
'ZoomToFit', 'Indent', 'Outdent',
'PreviousTimeSpan', 'NextTimeSpan', 'ColumnState'];
    function getundocollection() {
        console.log(gantt.getUndoActions());
    }
    function getredocollection() {
        console.log(gantt.getRedoActions());
    }
}

```

```

    }

    return (<div>
      <ButtonComponent
onClick={getundocollection}>GetUndoCollection</ButtonComponent>
      <ButtonComponent
onClick={getredocollection}>GetRedoCollection</ButtonComponent>
      <GanttComponent dataSource={data} ref={g => gantt = g}
taskFields={taskFields} allowSelection={true} allowSorting={true}
allowFiltering={true} allowRowDragAndDrop={true}
      editSettings={editOptions} showColumnMenu={true}
enableUndoRedo={true} allowResizing={true} allowReordering={true}
toolbar={toolbarOptions} undoRedoActions={undoRedoActions} height = '450px'>
      <Inject services={[Toolbar, Selection, Edit,
Filter, Sort, RowDD, ColumnMenu, Reorder, Resize, UndoRedo]} />
      </GanttComponent></div>)
  };
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, EditSettingsModel, GanttAction, ToolbarItem,
Toolbar, Selection, Edit,
Filter, Sort, RowDD, ColumnMenu, Reorder, Resize, UndoRedo } from '@syncfusion/ej2-
react-gantt';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { data } from './datasource';
function App() {
  let gantt: any;
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const editOptions: EditSettingsModel = {
    allowAdding: true,
    allowEditing: true,
    allowDeleting: true
  };
  const undoRedoActions: GanttAction[] = ['Add', 'Edit', 'Delete',
'Search', 'Sorting', 'Filtering', 'ZoomIn', 'ZoomOut',
'ZoomToFit', 'Indent', 'Outdent',
'PreviousTimeSpan', 'NextTimeSpan', 'ColumnState'];
  const toolbarOptions: ToolbarItem[] = ['Add', 'Edit', 'Update', 'Delete',
'Search', 'ZoomIn', 'ZoomOut', 'ZoomToFit', 'Indent', 'Outdent',
'PrevTimeSpan', 'NextTimeSpan', 'Undo', 'Redo'];
  function getundocollection() {
    console.log(gantt.getUndoActions());
  }
  function getredocollection() {
    console.log(gantt.getRedoActions());
  }
}

```

```

return (<div>
  <ButtonComponent
onClick={getundocollection}>GetUndoCollection</ButtonComponent>
  <ButtonComponent
onClick={getredocollection}>GetRedoCollection</ButtonComponent>
  <GanttComponent dataSource={data} ref={g => gantt = g}
taskFields={taskFields} allowSelection={true} allowSorting={true}
allowFiltering={true} allowRowDragAndDrop={true}
  editSettings={editOptions} showColumnMenu={true} enableUndoRedo={true}
allowResizing={true} allowReordering={true} toolbar={toolbarOptions}
undoRedoActions={undoRedoActions} height='450px'>
  <Inject services={[Toolbar, Selection, Edit, Filter, Sort, RowDD,
ColumnMenu, Reorder, Resize, UndoRedo]} />
  </GanttComponent></div>)
);
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```


Clear undo and redo collection

At any point, you can clear the undo and redo collections using the [clearUndoCollection](#) and [clearRedoCollection](#) methods. This allows you to reset the undo and redo stacks as needed during runtime.

The following code example demonstrates how to clear the undo and redo collection using method by clicking the external button.

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Toolbar, Selection, Edit,
Filter, Sort, RowDD, ColumnMenu, Reorder, Resize, UndoRedo } from '@syncfusion/ej2-
react-gantt';
import { data } from './datasource';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
function App() {
  let gantt;
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const editOptions = {
    allowAdding: true,
    allowEditing: true,
    allowDeleting: true
  };
  const toolbarOptions = ['Add', 'Edit', 'Update', 'Delete', 'Search',
'ZoomIn', 'ZoomOut', 'ZoomToFit', 'Indent', 'Outdent',
'PrevTimeSpan', 'NextTimeSpan', 'Undo', 'Redo'];
  const undoRedoActions= ['Add', 'Edit', 'Delete',
'Search', 'Sorting', 'Filtering', 'ZoomIn', 'ZoomOut',
'ZoomToFit', 'Indent', 'Outdent',
'PreviousTimeSpan', 'NextTimeSpan', 'ColumnState'];
  function clearundocollection() {
    gantt.clearUndoCollection();
  }
  function clearredocollection() {
    gantt.clearRedoCollection();
  }
  return (<div>
    <ButtonComponent
onClick={clearundocollection}>ClearUndoCollection</ButtonComponent>
    <ButtonComponent
onClick={clearredocollection}>ClearRedoCollection</ButtonComponent>
    <GanttComponent dataSource={data} ref={g => gantt = g}
taskFields={taskFields} allowSelection={true} allowSorting={true}
allowFiltering={true} allowRowDragAndDrop={true}
editSettings={editOptions} showColumnMenu={true}
enableUndoRedo={true} allowResizing={true} allowReordering={true}
toolbar={toolbarOptions} undoRedoActions={undoRedoActions} height = '450px'>
```

```

        <Inject services={[Toolbar, Selection, Edit,
        Filter, Sort, RowDD, ColumnMenu, Reorder, Resize, UndoRedo]} />
        </GanttComponent></div>)
    };
    ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, EditSettingsModel, GanttAction, ToolbarItem,
Toolbar, Selection, Edit,
Filter, Sort, RowDD, ColumnMenu, Reorder, Resize, UndoRedo } from '@syncfusion/ej2-
react-gantt';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { data } from './datasource';
function App() {
    let gantt: any;
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const editOptions: EditSettingsModel = {
        allowAdding: true,
        allowEditing: true,
        allowDeleting: true
    };
    const undoRedoActions: GanttAction[] = ['Add', 'Edit', 'Delete',
'Search', 'Sorting', 'Filtering', 'ZoomIn', 'ZoomOut',
'ZoomToFit', 'Indent', 'Outdent',
'PreviousTimeSpan', 'NextTimeSpan', 'ColumnState'];
    const toolbarOptions: ToolbarItem[] = ['Add', 'Edit', 'Update', 'Delete',
'Search', 'ZoomIn', 'ZoomOut', 'ZoomToFit', 'Indent', 'Outdent',
'PrevTimeSpan', 'NextTimeSpan', 'Undo', 'Redo'];
    function clearundocollection() {
        gantt.clearUndoCollection();
    }
    function clearredocollection() {
        gantt.clearRedoCollection();
    }
    return (<div>
        <ButtonComponent
        onClick={clearundocollection}>ClearUndoCollection</ButtonComponent>
        <ButtonComponent
        onClick={clearredocollection}>ClearRedoCollection</ButtonComponent>
        <GanttComponent dataSource={data} ref={g => gantt = g}
        taskFields={taskFields} allowSelection={true} allowSorting={true}
        allowFiltering={true} allowRowDragAndDrop={true}
        editSettings={editOptions} showColumnMenu={true} enableUndoRedo={true}
        allowResizing={true} allowReordering={true} toolbar={toolbarOptions}
        undoRedoActions={undoRedoActions} height='450px'>

```

```

    <Inject services={[Toolbar, Selection, Edit, Filter, Sort, RowDD,
    ColumnMenu, Reorder, Resize, UndoRedo]} />
    </GanttComponent></div>)
  };
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Tool bar in React Gantt component

The Gantt component provides the toolbar support to handle Gantt actions. The [toolbar](#) property accepts the collection of built-in toolbar items and `ItemModel` objects for custom toolbar items.

Built-in toolbar items

Built-in toolbar items execute standard actions of the Gantt component, and these items can be added to toolbar by defining the [toolbar](#) as a collection of built-in items. It renders the button with icon and text.

The following table shows built-in toolbar items and its actions.

Built-in Toolbar Items	Actions
Add	Adds a new record.
Cancel	Cancels the edit state.
CollapseAll	Collapses all the rows.
Delete	Deletes the selected record.
Edit	Edits the selected record.
Indent	Indent the selected record to one level.
Outdent	Outdent the elected record to one level.
ExpandAll	Expands all the rows.
NextTimeSpan	Navigate the Gantt timeline to next time span.
PrevTimeSpan	Navigate the Gantt timeline to previous time span.
Search	Searches the records by the given key.
Update	Updates the edited record.

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit, Filter, Selection, Toolbar } from
'@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const editOptions = {
    allowAdding: true,
    allowEditing: true,
    allowDeleting: true
  };
  const toolbarOptions =
['Add', 'Edit', 'Delete', 'Cancel', 'Update', 'PrevTimeSpan', 'NextTimeSpan', 'Expa
ndAll', 'CollapseAll', 'Search', 'Indent', 'Outdent'];
  return <GanttComponent dataSource={data} taskFields={taskFields}
allowSelection={true}
editSettings={editOptions} toolbar={toolbarOptions} height =
'450px'>
    <Inject services={[Edit, Selection, Toolbar, Filter]} />
    </GanttComponent>
  };
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit, Filter, EditSettingsModel, Selection,
Toolbar, ToolbarItem } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const editOptions: EditSettingsModel = {
        allowAdding: true,
        allowEditing: true,
        allowDeleting: true
    };
    const toolbarOptions: ToolbarItem[] =
['Add', 'Edit', 'Delete', 'Cancel', 'Update', 'PrevTimeSpan', 'NextTimeSpan', 'ExpandAll', 'CollapseAll', 'Search', 'Indent', 'Outdent'];
    return <GanttComponent dataSource={data} taskFields={taskFields}
allowSelection={true}
editSettings={editOptions} toolbar={toolbarOptions} height =
'450px'>
        <Inject services={[Edit, Selection, Toolbar, Filter]} />
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components" />
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></script>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008c8f;

```

```

        height: 40px;
        left: 45%;
        position: absolute;
        top: 45%;
        width: 30%;
    }
</style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

* The [toolbar](#) has options to define both built-in and custom toolbar items.

Custom toolbar items

Custom toolbar items can be added to the toolbar by defining the [toolbar](#) property as a collection of `ItemModels`.

Actions for this customized toolbar items are defined in the [Link to the Video](#) event.

You can check this video to learn about how to use custom toolbar in Gantt.

By default, the custom toolbar items are at left position. You can change the position by using the `align` property. In the following sample, the `Quick Filter` toolbar item is positioned at right.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Filter, Toolbar } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    let ganttInstance;
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const toolbarOptions = [{ text: 'Quick Filter', tooltipText: 'Quick Filter', id: 'toolbarfilter', align: 'Right', prefixIcon: 'e-quickfilter' }];
    function toolbarClick() {
        ganttInstance.filterByColumn('TaskName', 'startswith', 'Identify');
    };
    return <GanttComponent dataSource={data} taskFields={taskFields} allowFiltering={true} toolbar={toolbarOptions} toolbarClick={toolbarClick.bind(this)} height = '450px' ref={gantt => ganttInstance = gantt}>
        <Inject services={[Filter, Toolbar]} />

```

```

    </GanttComponent>
  };
  ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Filter, Toolbar } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
  let ganttInstance: any;
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const toolbarOptions: any[] = [{text: 'Quick Filter', tooltipText: 'Quick Filter', id: 'toolbarfilter', align: 'Right', prefixIcon: 'e-quickfilter' }];
  function toolbarClick(): void {
    ganttInstance.filterByColumn('TaskName', 'startswith', 'Identify');
  };
  return <GanttComponent dataSource={data} taskFields={taskFields} allowFiltering={true} toolbar={toolbarOptions} toolbarClick={toolbarClick.bind(this)} height = '450px' ref={gantt => ganttInstance = gantt}>
    <Inject services={[Filter, Toolbar]} />
  </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css" rel="stylesheet" type="text/css"/>
  <link href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css" rel="stylesheet" />
  <script src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></script>
  <script src="systemjs.config.js"></script>

```

```

<style>
  #loader {
    color: #008cff;
    height: 40px;
    left: 45%;
    position: absolute;
    top: 45%;
    width: 30%;
  }
.e-quickfilter::before {
  content: '\e7ee';
}
</style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

* The [toolbar](#) has options to define both built-in and custom toolbar items.

* If a toolbar item does not match the built-in items, it will be treated as a custom toolbar item.

Built-in and custom items in toolbar

The Gantt component has an option to use both built-in and custom toolbar items at the same time.

In the following example, the **ExpandAll** and **CollapseAll** are built-in toolbar items and **Test** is the custom toolbar item.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ClickEventArgs } from '@syncfusion/ej2-navigations';
import { GanttComponent, Inject, Toolbar } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App(){
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks',
    dependency: 'Predecessor',
  };
  const toolbarOptions = ['ExpandAll', 'CollapseAll', { text: 'Test',
tooltipText: 'Test',id: 'Test' }];
  function toolbarClick(args) {
    if (args.item.text === 'Test') {
      alert("Custom toolbar Click...");
    }
  };
  return <GanttComponent dataSource={data} taskFields={taskFields}

```



```

        toolbar={toolbarOptions} toolbarClick={toolbarClick} height =
'450px'>
        <Inject services={[Toolbar]} />
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ClickEventArgs } from '@syncfusion/ej2-navigations';
import { GanttComponent, Inject, Toolbar } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks',
        dependency: 'Predecessor',
    };
    const toolbarOptions: any[] = ['ExpandAll', 'CollapseAll', { text: 'Test',
tooltipText: 'Test', id: 'Test' }];
    function toolbarClick(args: ClickEventArgs): void {
        if (args.item.text === 'Test') {
            alert("Custom toolbar Click...");
        }
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
        toolbar={toolbarOptions} toolbarClick={toolbarClick} height =
'450px'>
        <Inject services={[Toolbar]} />
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />

```

```

<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Enable/disable toolbar items

You can enable or disable the toolbar items by using the `enableItems` method.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ClickEventArgs } from '@syncfusion/ej2-navigations';
import { GanttComponent, Inject, Toolbar, Filter, ColumnsDirective,
ColumnDirective } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
  let ganttInstance;
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const toolbarOptions = ['QuickFilter', 'ClearFilter'];
  function enable() {
    ganttInstance.toolbarModule.enableItems([ganttInstance.element.id +
'_QuickFilter', ganttInstance.element.id + '_ClearFilter'], true); // enable
toolbar items.
  };
  function disable() {
    ganttInstance.toolbarModule.enableItems([ganttInstance.element.id +
'_QuickFilter', ganttInstance.element.id + '_ClearFilter'], false); //
disable toolbar items.
  };
  function toolbarClick(args) {

```

```

        if (args.item.text === 'QuickFilter') {
            ganttInstance.filterByColumn('TaskName', 'startswith',
'Identify');
        }
        if (args.item.text === 'ClearFilter') {
            ganttInstance.clearFiltering();
        }
    };

    return (<div>
        <ButtonComponent onClick= {enable}>Enable</ButtonComponent>
        <ButtonComponent onClick= { disable}>Disable</ButtonComponent>
        <GanttComponent dataSource={data} taskFields={taskFields}
toolbar={toolbarOptions}
        toolbarClick={toolbarClick} allowFiltering={true} height = '450px'
        ref={gantt => ganttInstance = gantt}>
            <Inject services={[Toolbar, Filter]} />
        </GanttComponent></div>)
    );
    ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ClickEventArgs } from '@syncfusion/ej2-navigations';
import { GanttComponent, Inject, Toolbar, Filter, ColumnsDirective,
ColumnDirective } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    let ganttInstance: any;
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const toolbarOptions: any[] = ['QuickFilter', 'ClearFilter'];
    function enable() {
        ganttInstance.toolbarModule.enableItems([ganttInstance.element.id +
'_QuickFilter', ganttInstance.element.id + '_ClearFilter'], true); // enable
toolbar items.
    };
    function disable() {
        ganttInstance.toolbarModule.enableItems([ganttInstance.element.id +
'_QuickFilter', ganttInstance.element.id + '_ClearFilter'], false); //
disable toolbar items.
    };
    function toolbarClick(args: ClickEventArgs): void {
        if (args.item.text === 'QuickFilter') {
            ganttInstance.filterByColumn('TaskName', 'startswith',
'Identify');
        }
        if (args.item.text === 'ClearFilter') {

```

```

        ganttInstance.clearFiltering();
    }
};

return (<div>
    <ButtonComponent onClick= {enable}>Enable</ButtonComponent>
    <ButtonComponent onClick= { disable}>Disable</ButtonComponent>
    <GanttComponent dataSource={data} taskFields={taskFields}
    toolbar={toolbarOptions}
        toolbarClick={toolbarClick} allowFiltering={true} height = '450px'
        ref={gantt => ganttInstance = gantt}>
        <Inject services={[Toolbar, Filter]} />
    </GanttComponent></div>)
);

ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008cff;
            height: 40px;
            left: 45%;
            position: absolute;
            top: 45%;
            width: 30%;
        }
    </style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Add input elements in Toolbar

In Gantt toolbar, it is possible to add EJ2 editor elements like numeric text box, dropdown list and date picker components. The following code snippets explains how to add EJ2 editors in Gantt toolbar.

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { NumericTextBox } from '@syncfusion/ej2-inputs';
import { GanttComponent, Inject, Toolbar } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App () {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const toolbarOptions = [ { type: 'Input', template: new NumericTextBox({
format: 'c2', value: 1 }) } ];
    return <GanttComponent dataSource={data} taskFields={taskFields}
        toolbar={toolbarOptions} height = '400px'>
        <Inject services={[Toolbar]} />
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { NumericTextBox } from '@syncfusion/ej2-inputs';
import { GanttComponent, Inject, Toolbar } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App () {
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const toolbarOptions: any[] = [ { type: 'Input', template: new
NumericTextBox({ format: 'c2', value: 1 }) } ];
    return <GanttComponent dataSource={data} taskFields={taskFields}
        toolbar={toolbarOptions} height = '400px'>
        <Inject services={[Toolbar]} />
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Managing tasks in React Gantt component

The Gantt component has options to dynamically insert, delete, and update tasks in a project. The primary key column is necessary to manage the tasks and perform CRUD operations in Gantt. To define the primary key, set the [columns.isPrimaryKey](#) property to **true** in the column.

To use CRUD, inject the [Edit](#) module into the Gantt component.

Note: If the [Edit](#) module is not injected, you cannot edit the tasks through TreeGrid cells.

The following code example shows you how to enable the cell editing in Gantt component.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit, Selection } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App () {

```

```

const taskFields = {
  id: 'TaskID',
  name: 'TaskName',
  startDate: 'StartDate',
  duration: 'Duration',
  progress: 'Progress',
  child: 'subtasks'
};
const editOptions = {
  allowEditing: true,
  mode: 'Auto'
};
return <GanttComponent dataSource={data} taskFields={taskFields}
allowSelection={true}
editSettings={editOptions} height = '450px'>
  <Inject services={[Edit, Selection]} />
</GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit, EditSettingsModel, Selection } from
'@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App () {
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const editOptions: EditSettingsModel = {
    allowEditing: true,
    mode: 'Auto'
  };
  return <GanttComponent dataSource={data} taskFields={taskFields}
allowSelection={true}
editSettings={editOptions} height = '450px'>
    <Inject services={[Edit, Selection]} />
  </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />

```

```

<meta name="description" content="Essential JS 2 for React Components"
/>
<meta name="author" content="Syncfusion" />
<link href="https://cdn.syncfusion.com/ej2/23.1.44/material.css"
rel="stylesheet" type="text/css"/>
<link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
<script src="systemjs.config.js"></script>
<style>
    #loader {
        color: #008cff;
        height: 40px;
        left: 45%;
        position: absolute;
        top: 45%;
        width: 30%;
    }
</style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Cell edit type and its params

The [columns.editType](#) is used to define the edit type for any particular column.

You can set the [columns.editType](#) based on data type of the column.

- **numericedit** - [NumericTextBox](#) component for integers, double, and decimal data types.
- **defaultedit** - [TextBox](#) component for string data type.
- **dropdownedit** - [DropDownList](#) component to show all unique values related to that field.
- **booleanedit** - [CheckBox](#) component for boolean data type.
- **datepickeredit** - [DatePicker](#) component for date data type.
- **datetimepickeredit** - [DateTimePicker](#) component for date time data type.

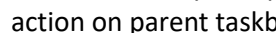
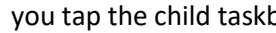
Also, you can customize the behavior of the editor component through the [columns.edit.params](#).

The following table describes cell edit type component and their corresponding edit params of the column.

Edit Type | Component | Example

[Cell editing](#) | To perform **double tap** on a specific cell, initiate the cell to be in edit state.

[Dialog editing](#) | To perform **double tap** on a specific row, initiate the edit dialog to be opened.

[Taskbar editing](#) | Taskbar editing action is initiated using the **tap** action on the taskbar.
Parent taskbar : Once you tap on the parent taskbar, it will be changed to editing state. Perform only dragging action on parent taskbar editing.

Child taskbar : Once you tap the child taskbar, it will be changed to editing state.

Dragging taskbar : To drag a taskbar to the left or right in editing state.
Resizing taskbar : To resize a taskbar, drag the left/right resize icon.
Progress resizing : To change the progress, drag the progress resize icon to the left or right direction.


[Task dependency editing](#)


You can **tap** the left/right connector point to initiate [task dependencies](#) edit mode and again tap another taskbar to establish the dependency line between two taskbars.

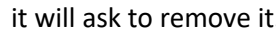
The following table explains the taskbar state in dependency edit mode.


![Taskbar states](images/taskbar-states.PNG)

Taskbar state | Description

Parent taskbar | You cannot create dependency relationship to parent tasks.


Taskbar without dependency | If you tap a valid child taskbar, it will create **FS** type dependency line between tasks, otherwise exits from task dependency edit mode.


Taskbar with dependency | If you tap the second taskbar, which has already been directly connected, it will ask to remove it.


Removing dependency | Once you tap the taskbar with direct dependency, then confirmation dialog will be shown for removing dependency.


INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit, Selection } from '@syncfusion/ej2-react-gantt';
const data = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 2, TaskName: 'Identify Site location',
        StartDate: new Date('04/02/2019'), Duration: 3, Progress: 50 },
      { TaskID: 3, TaskName: 'Perform Soil test', StartDate:
        new Date('04/02/2019'), Duration: 4, Progress: 50 },
      { TaskID: 4, TaskName: 'Soil test approval', StartDate:
        new Date('04/02/2019'), Duration: 4, Predecessor: "2FS", Progress: 50 },
    ]
  },
  {
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
```

```

        EndDate: new Date('04/21/2019'),
        subtasks: [
            { TaskID: 6, TaskName: 'Develop floor plan for
estimation', StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
            { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 },
            { TaskID: 8, TaskName: 'Estimation approval', StartDate:
new Date('04/04/2019'), Duration: 4, Predecessor: "6SS", Progress: 50 }
        ]
    },
];
function App(){
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        dependency: 'Predecessor',
        child: 'subtasks'
    };
    const editSettings = {
        allowTaskbarEditing: true
    };
    let ganttInstance;
    function load() {
        this.isAdaptive = true; // Forcing desktop layout to change as
mobile layout
    }
    return <GanttComponent dataSource={data} ref={gantt => ganttInstance
= gantt} taskFields={taskFields}
    editSettings={editSettings} height = '400px' load={load}>
        <Inject services={[Edit, Selection]} />
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit, Selection } from '@syncfusion/ej2-
react-gantt';
const data: object[] = [
    {
        TaskID: 1,
        TaskName: 'Project Initiation',
        StartDate: new Date('04/02/2019'),
        EndDate: new Date('04/21/2019'),
        subtasks: [
            { TaskID: 2, TaskName: 'Identify Site location',
StartDate: new Date('04/02/2019'), Duration: 3, Progress: 50 },
            { TaskID: 3, TaskName: 'Perform Soil test', StartDate:
new Date('04/02/2019'), Duration: 4, Progress: 50 },
            { TaskID: 4, TaskName: 'Soil test approval', StartDate:
new Date('04/02/2019'), Duration: 4, Predecessor: "2FS", Progress: 50 },

```

```

    ],
    {
      TaskID: 5,
      TaskName: 'Project Estimation',
      StartDate: new Date('04/02/2019'),
      EndDate: new Date('04/21/2019'),
      subtasks: [
        { TaskID: 6, TaskName: 'Develop floor plan for estimation', StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
        { TaskID: 7, TaskName: 'List materials', StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
        { TaskID: 8, TaskName: 'Estimation approval', StartDate: new Date('04/04/2019'), Duration: 4, Predecessor: "6SS", Progress: 50 }
      ]
    },
  ];
function App(){
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    dependency: 'Predecessor',
    child: 'subtasks'
  };
  const editSettings: any = {
    allowTaskbarEditing: true
  };
  let ganttInstance: any;
  function load() {
    this.isAdaptive = true; // Forcing desktop layout to change as mobile layout
  }
  return <GanttComponent dataSource={data} ref={gantt => ganttInstance = gantt} taskFields={taskFields}
    editSettings={editSettings} height = '400px' load={load}>
    <Inject services={[Edit, Selection]} />
    </GanttComponent>
  };
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
    rel="stylesheet" type="text/css"/>

```

```

    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008cff;
            height: 40px;
            left: 45%;
            position: absolute;
            top: 45%;
            width: 30%;
        }
    </style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Note: In mobile device, you cannot create dependency other than FS by taskbar editing. By using cell/dialog editing, you can add all type of dependencies.

Taskbar editing tooltip

The taskbar editing tooltip can be customized using the [tooltipSettings.editing](#) property. The following code example shows how to customize the taskbar editing tooltip in Gantt.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const editOptions = {
        allowTaskbarEditing: true
    };
    function tooltipTemplate(props) {
        return (<div>Duration : {props.duration}</div>)
    };
    const template = tooltipTemplate;
    const tooltipSettings = {
        editing: template
    };

```

```

    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
      tooltipSettings={tooltipSettings} editSettings={editOptions}
height = '450px'>
      <Inject services={[Edit]} />
    </GanttComponent>
  );
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit, EditSettingsModel } from
 '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const editOptions: EditSettingsModel = {
    allowTaskbarEditing: true
  };
  function tooltipTemplate(props: any) {
    return (<div>Duration : {props.duration}</div>)
  };
  const template: any = tooltipTemplate;
  const tooltipSettings: any = {
    editing: template
  };
  return <GanttComponent dataSource={data} taskFields={taskFields}
    tooltipSettings={tooltipSettings} editSettings={editOptions}
height = '450px'>
    <Inject services={[Edit]} />
  </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>

```

```

<link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
<script src="systemjs.config.js"></script>
<style>
  #loader {
    color: #008cff;
    height: 40px;
    left: 45%;
    position: absolute;
    top: 45%;
    width: 30%;
  }
</style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Scrolling in React Gantt component

The scrollbar will be displayed in the gantt when content exceeds the element **width** or **height**. The vertical and horizontal scrollbars will be displayed based on the following criteria:

- The vertical scrollbar appears when the total height of rows present in the gantt exceeds its element height.
- The horizontal scrollbar appears when the sum of columns width exceeds the grid pane size.
- The [height](#) and [width](#) are used to set the gantt height and width, respectively.

The default value for **height** and **width** is **auto**.

Set width and height

We can even set pixel values to width and height of gantt container using [width](#) and [height](#) properties.

APP.JSX

APP.TSX

Responsive with the parent container

Specify the [width](#) and [height](#) as **100%** to make the gantt element fill its parent container.

Setting the `height` to `100%` requires the gantt parent element to have explicit height. Also, the component will be responsive when the parent container is resized.

APP.JSX

APP.TSX

Scroll To Date method

In the Gantt control, When We use the [scrollToDate](#) method, it will scroll the timeline horizontally to the date that we specified in the method's argument.

The following code examples show how the scroll To Date method works in Gantt:

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    let ganttInstance;
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        dependency: 'Predecessor',
        child: 'subtasks'
    };
    function clickHandler() {
        ganttInstance.scrollToDate('05/10/2019');
    };
    return (
        <div>
            <ButtonComponent onClick=
            {clickHandler}>ScrollToDate</ButtonComponent>
            <GanttComponent dataSource={data} taskFields={taskFields}
            height = '450px' ref={gantt => ganttInstance = gantt}>
            </GanttComponent></div>
        );
};
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
```

```
function App() {
  let ganttInstance: any;
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    dependency: 'Predecessor',
    child: 'subtasks'
  };
  function clickHandler() {
    ganttInstance.scrollToDate('05/10/2019');
  };
  return (
    <div>
      <ButtonComponent onClick=
{clickHandler}>ScrollToDate</ButtonComponent>
      <GanttComponent dataSource={data} taskFields={taskFields}
        height = '450px' ref={gantt => ganttInstance = gantt}>
      </GanttComponent></div>
    );
};
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
```



```

        <div id='loader'>Loading....</div>
      </div>
</body>
</html>

```

Set the vertical scroll position

In the Gantt component, you can set the vertical scroller position dynamically by clicking the custom button using the [setScrollTop](#) method.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
  let ganttInstance;
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    dependency: 'Predecessor',
    child: 'subtasks'
  };
  function clickHandler() {
    ganttInstance.ganttChartModule.scrollObject.setScrollTop(300);
  };
  return (
    <div>
      <ButtonComponent onClick=
{clickHandler}>SetScrollTop</ButtonComponent>
      <GanttComponent dataSource={data} taskFields={taskFields}
        height = '450px' ref={gantt => ganttInstance = gantt}>
      </GanttComponent></div>
    );
}
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
  let ganttInstance: any;
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    dependency: 'Predecessor',

```

```

    child: 'subtasks'
  };
  function clickHandler() {
    ganttInstance.ganttChartModule.scrollObject.setScrollTop(300);
  };
  return (<div>
    <ButtonComponent onClick=
{clickHandler}>SetScrollTop</ButtonComponent>
    <GanttComponent dataSource={data} taskFields={taskFields}
    height = '450px' ref={gantt => ganttInstance = gantt}>
    </GanttComponent></div>)
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008c00;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Virtual scroll in React Gantt component

Virtual Scroll support in Gantt allows you to load large amount of data without performance degradation. To enable Virtual Scrolling, you need to inject `VirtualScroll` module in Gantt.

Row virtualization

Row virtualization allows you to load and render a large number of tasks in Gantt with effective performance. In this mode, all tasks are fetched initially from the datasource and rendered in the DOM within a compact viewport area.

The number of records displayed in the Gantt is determined by the height.

This mode can be enable by setting the `enableVirtualization` property to `true`.

INDEX.JSX

```
let tempData = [
  {
    TaskID: 1, TaskName: 'Product concept',StartDate: new
Date('04/02/2019'), EndDate: new Date('04/21/2019'),
    parentID: 0
  },
  {
    TaskID: 2, TaskName: 'Defining the product and its usage',
StartDate: new Date('04/02/2019'),
    Duration: 3, Progress: 30, parentID: 1
  },
  {
    TaskID: 3, TaskName: 'Defining target audience', StartDate: new
Date('04/02/2019'),
    parentID: 1, Duration: 3
  },
  {
    TaskID: 4, TaskName: 'Prepare product sketch and notes', StartDate:
new Date('04/05/2019'),
    Duration: 2, parentID: 1, Progress: 30
  },
  {
    TaskID: 5, TaskName: 'Concept approval', StartDate: new
Date('04/08/2019'),
    parentID: 0, Duration: 0
  },
  {
    TaskID: 6, TaskName: 'Market research', StartDate: new
Date('04/02/2019'),
    parentID: 0, EndDate: new Date('04/21/2019')
  },
  {
    TaskID: 7, TaskName: 'Demand analysis', StartDate: new
Date('04/04/2019'),
    EndDate: new Date('04/21/2019'), parentID: 6
  },
  {
    TaskID: 8, TaskName: 'Customer strength', StartDate: new
Date('04/09/2019'),
    Duration: 4, parentID: 7, Progress: 30
  },
  {
    TaskID: 9, TaskName: 'Market opportunity analysis', StartDate: new
Date('04/09/2019'),
    Duration: 4, parentID: 7
  },
]
```

```

    {
      TaskID: 10, TaskName: 'Competitor analysis', StartDate: new
Date('04/15/2019'),
      Duration: 4, parentID: 6, Progress: 30
    },
    {
      TaskID: 11, TaskName: 'Product strength analysis', StartDate: new
Date('04/15/2019'),
      Duration: 4, parentID: 6
    },
    {
      TaskID: 12, TaskName: 'Research complete', StartDate: new
Date('04/18/2019'),
      Duration: 0, parentID: 6
    },
    {
      TaskID: 13, TaskName: 'Product design and development', StartDate:
new Date('04/04/2019'),
      parentID: 0, EndDate: new Date('04/21/2019')
    },
    {
      TaskID: 14, TaskName: 'Functionality design', StartDate: new
Date('04/19/2019'),
      Duration: 3, parentID: 13, Progress: 30
    },
    {
      TaskID: 15, TaskName: 'Quality design', StartDate: new
Date('04/19/2019'),
      Duration: 3, parentID: 13
    },
    {
      TaskID: 16, TaskName: 'Define reliability', StartDate: new
Date('04/24/2019'),
      Duration: 2, Progress: 30, parentID: 13
    },
    {
      TaskID: 17, TaskName: 'Identifying raw materials', StartDate: new
Date('04/24/2019'),
      Duration: 2, parentID: 13
    },
    {
      TaskID: 18, TaskName: 'Define cost plan', StartDate: new
Date('04/04/2019'),
      parentID: 13, EndDate: new Date('04/21/2019')
    },
    {
      TaskID: 19, TaskName: 'Manufacturing cost', StartDate: new
Date('04/26/2019'),
      Duration: 2, Progress: 30, parentID: 18
    },
    {
      TaskID: 20, TaskName: 'Selling cost', StartDate: new
Date('04/26/2019'),
      Duration: 2, parentID: 18
    },
  ],
  {

```

```

    TaskID: 21, TaskName: 'Development of the final design', StartDate:
new Date('04/30/2019'),
    parentID: 13, EndDate: new Date('04/21/2019')
  },
  {
    TaskID: 22, TaskName: 'Defining dimensions and package volume',
StartDate: new Date('04/30/2019'),
    Duration: 2, parentID: 21, Progress: 30
  },
  {
    TaskID: 23, TaskName: 'Develop design to meet industry standards',
StartDate: new Date('05/02/2019'),
    Duration: 2, parentID: 21
  },
  {
    TaskID: 24, TaskName: 'Include all the details', StartDate: new
Date('05/06/2019'),
    Duration: 3, parentID: 21
  },
  {
    TaskID: 25, TaskName: 'CAD computer-aided design', StartDate: new
Date('05/09/2019'),
    Duration: 3, parentID: 13, Progress: 30
  },
  {
    TaskID: 26, TaskName: 'CAM computer-aided manufacturing', StartDate:
new Date('09/14/2019'),
    Duration: 3, parentID: 13
  },
  {
    TaskID: 27, TaskName: 'Design complete', StartDate: new
Date('05/16/2019'),
    Duration: 0, parentID: 13
  },
  {
    TaskID: 28, TaskName: 'Prototype testing', StartDate: new
Date('05/17/2019'),
    Duration: 4, Progress: 30, parentID: 0
  },
  {
    TaskID: 29, TaskName: 'Include feedback', StartDate: new
Date('05/17/2019'),
    Duration: 4, parentID: 0
  },
  {
    TaskID: 30, TaskName: 'Manufacturing', StartDate: new
Date('05/23/2019'),
    Duration: 5, Progress: 30, parentID: 0
  },
  {
    TaskID: 31, TaskName: 'Assembling materials to finsihed goods',
StartDate: new Date('05/30/2019'),
    Duration: 5, parentID: 0
  },
  {
    TaskID: 32, TaskName: 'Feedback and testing', StartDate: new
Date('04/04/2019'),

```

```

        parentID: 0, EndDate: new Date('04/21/2019'),
      },
      {
        TaskID: 33, TaskName: 'Internal testing and feedback', StartDate:
new Date('06/06/2019'),
        Duration: 3, parentID: 32, Progress: 45
      },
      {
        TaskID: 34, TaskName: 'Customer testing and feedback', StartDate:
new Date('06/11/2019'),
        Duration: 3, parentID: 32, Progress: 50
      },
      {
        TaskID: 35, TaskName: 'Final product development', StartDate: new
Date('04/04/2019'),
        parentID: 0, EndDate: new Date('04/21/2019'),
      },
      {
        TaskID: 36, TaskName: 'Important improvements', StartDate: new
Date('06/14/2019'),
        Duration: 4, Progress: 30, parentID: 35
      },
      {
        TaskID: 37, TaskName: 'Address any unforeseen issues', StartDate:
new Date('06/14/2019'),
        Duration: 4, Progress: 30, parentID: 35
      },
      {
        TaskID: 38, TaskName: 'Final product', StartDate: new
Date('04/04/2019'),
        parentID: 0, EndDate: new Date('04/21/2019'),
      },
      {
        TaskID: 39, TaskName: 'Branding product', StartDate: new
Date('06/20/2019'),
        Duration: 4, parentID: 38
      },
      {
        TaskID: 40, TaskName: 'Marketing and presales', StartDate: new
Date('06/26/2019'), Duration: 4,
        Progress: 30, parentID: 38
      }
    ]
  };
  let virtualData = [];
  let projId = 1;
  for (let i = 0; i < 50; i++) {
    let x = virtualData.length + 1;
    let parent = {};
    /* tslint:disable:no-string-literal */
    parent['TaskID'] = x;
    parent['TaskName'] = 'Project ' + (i + 1);
    virtualData.push(parent);
    for (let j = 0; j < tempData.length; j++) {
      let subtasks = {};
      /* tslint:disable:no-string-literal */
      subtasks['TaskID'] = tempData[j].TaskID + x;
      subtasks['TaskName'] = tempData[j].TaskName;
    }
  }

```

```

subtasks['StartDate'] = tempData[j].StartDate;
subtasks['Duration'] = tempData[j].Duration;
subtasks['Progress'] = tempData[j].Progress;
subtasks['parentID'] = tempData[j].parentID + x;
virtualData.push(subtasks);
}
}
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective, Inject, Selection,
VirtualScroll } from '@syncfusion/ej2-react-gantt';
function App () {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        endDate: 'EndDate',
        duration: 'Duration',
        progress: 'Progress',
        parentID: 'parentID'
    };
    const splitterSettings = {
        columnIndex: 2
    };
    const labelSettings = {
        taskLabel: 'Progress'
    };
    return (
        <GanttComponent dataSource={virtualData} treeColumnIndex={1}
labelSettings={labelSettings}
allowSelection={true} highlightWeekends={true}
enableVirtualization={true}
taskFields={taskFields} splitterSettings={splitterSettings}
height='450px'>
            <ColumnsDirective>
                <ColumnDirective field='TaskID' />
                <ColumnDirective field='TaskName' headerText='Task
Name' />
                <ColumnDirective field='StartDate' />
                <ColumnDirective field='Duration' />
                <ColumnDirective field='Progress' />
            </ColumnsDirective>
            <Inject services={[Selection, VirtualScroll]} />
        </GanttComponent>
    )
};
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
let tempData: any[] = [
    {
        TaskID: 1, TaskName: 'Product concept', StartDate: new
Date('04/02/2019'), EndDate: new Date('04/21/2019'),
        parentID: 0
    },

```

```
{
  TaskID: 2, TaskName: 'Defining the product and its usage',
  StartDate: new Date('04/02/2019'),
  Duration: 3, Progress: 30, parentID: 1
},
{
  TaskID: 3, TaskName: 'Defining target audience', StartDate: new
  Date('04/02/2019'),
  parentID: 1, Duration: 3
},
{
  TaskID: 4, TaskName: 'Prepare product sketch and notes', StartDate:
  new Date('04/05/2019'),
  Duration: 2, parentID: 1, Progress: 30
},
{
  TaskID: 5, TaskName: 'Concept approval', StartDate: new
  Date('04/08/2019'),
  parentID: 0, Duration: 0
},
{
  TaskID: 6, TaskName: 'Market research', StartDate: new
  Date('04/02/2019'),
  parentID: 0, EndDate: new Date('04/21/2019')
},
{
  TaskID: 7, TaskName: 'Demand analysis', StartDate: new
  Date('04/04/2019'),
  EndDate: new Date('04/21/2019'), parentID: 6
},
{
  TaskID: 8, TaskName: 'Customer strength', StartDate: new
  Date('04/09/2019'),
  Duration: 4, parentID: 7, Progress: 30
},
{
  TaskID: 9, TaskName: 'Market opportunity analysis', StartDate: new
  Date('04/09/2019'),
  Duration: 4, parentID: 7
},
{
  TaskID: 10, TaskName: 'Competitor analysis', StartDate: new
  Date('04/15/2019'),
  Duration: 4, parentID: 6, Progress: 30
},
{
  TaskID: 11, TaskName: 'Product strength analysis', StartDate: new
  Date('04/15/2019'),
  Duration: 4, parentID: 6
},
{
  TaskID: 12, TaskName: 'Research complete', StartDate: new
  Date('04/18/2019'),
  Duration: 0, parentID: 6
},
}
```



```

    TaskID: 13, TaskName: 'Product design and development', StartDate:
new Date('04/04/2019'),
    parentID: 0, EndDate: new Date('04/21/2019')
  },
  {
    TaskID: 14, TaskName: 'Functionality design', StartDate: new
Date('04/19/2019'),
    Duration: 3, parentID: 13, Progress: 30
  },
  {
    TaskID: 15, TaskName: 'Quality design', StartDate: new
Date('04/19/2019'),
    Duration: 3, parentID: 13
  },
  {
    TaskID: 16, TaskName: 'Define reliability', StartDate: new
Date('04/24/2019'),
    Duration: 2, Progress: 30, parentID: 13
  },
  {
    TaskID: 17, TaskName: 'Identifying raw materials', StartDate: new
Date('04/24/2019'),
    Duration: 2, parentID: 13
  },
  {
    TaskID: 18, TaskName: 'Define cost plan', StartDate: new
Date('04/04/2019'),
    parentID: 13, EndDate: new Date('04/21/2019')
  },
  {
    TaskID: 19, TaskName: 'Manufacturing cost', StartDate: new
Date('04/26/2019'),
    Duration: 2, Progress: 30, parentID: 18
  },
  {
    TaskID: 20, TaskName: 'Selling cost', StartDate: new
Date('04/26/2019'),
    Duration: 2, parentID: 18
  },
  {
    TaskID: 21, TaskName: 'Development of the final design', StartDate:
new Date('04/30/2019'),
    parentID: 13, EndDate: new Date('04/21/2019')
  },
  {
    TaskID: 22, TaskName: 'Defining dimensions and package volume',
StartDate: new Date('04/30/2019'),
    Duration: 2, parentID: 21, Progress: 30
  },
  {
    TaskID: 23, TaskName: 'Develop design to meet industry standards',
StartDate: new Date('05/02/2019'),
    Duration: 2, parentID: 21
  },
  {
    TaskID: 24, TaskName: 'Include all the details', StartDate: new
Date('05/06/2019'),

```

```

        Duration: 3, parentID: 21
      },
      {
        TaskID: 25, TaskName: 'CAD computer-aided design', StartDate: new
Date('05/09/2019'),
        Duration: 3, parentID: 13, Progress: 30
      },
      {
        TaskID: 26, TaskName: 'CAM computer-aided manufacturing', StartDate:
new Date('09/14/2019'),
        Duration: 3, parentID: 13
      },
      {
        TaskID: 27, TaskName: 'Design complete', StartDate: new
Date('05/16/2019'),
        Duration: 0, parentID: 13
      },
      {
        TaskID: 28, TaskName: 'Prototype testing', StartDate: new
Date('05/17/2019'),
        Duration: 4, Progress: 30, parentID: 0
      },
      {
        TaskID: 29, TaskName: 'Include feedback', StartDate: new
Date('05/17/2019'),
        Duration: 4, parentID: 0
      },
      {
        TaskID: 30, TaskName: 'Manufacturing', StartDate: new
Date('05/23/2019'),
        Duration: 5, Progress: 30, parentID: 0
      },
      {
        TaskID: 31, TaskName: 'Assembling materials to finsihed goods',
StartDate: new Date('05/30/2019'),
        Duration: 5, parentID: 0
      },
      {
        TaskID: 32, TaskName: 'Feedback and testing', StartDate: new
Date('04/04/2019'),
        parentID: 0, EndDate: new Date('04/21/2019'),
      },
      {
        TaskID: 33, TaskName: 'Internal testing and feedback', StartDate:
new Date('06/06/2019'),
        Duration: 3, parentID: 32, Progress: 45
      },
      {
        TaskID: 34, TaskName: 'Customer testing and feedback', StartDate:
new Date('06/11/2019'),
        Duration: 3, parentID: 32, Progress: 50
      },
      {
        TaskID: 35, TaskName: 'Final product development', StartDate: new
Date('04/04/2019'),
        parentID: 0, EndDate: new Date('04/21/2019'),
      },
    ],
  },

```

```

    {
      TaskID: 36, TaskName: 'Important improvements', StartDate: new
Date('06/14/2019'),
      Duration: 4, Progress: 30, parentID: 35
    },
    {
      TaskID: 37, TaskName: 'Address any unforeseen issues', StartDate:
new Date('06/14/2019'),
      Duration: 4, Progress: 30, parentID: 35
    },
    {
      TaskID: 38, TaskName: 'Final product', StartDate: new
Date('04/04/2019'),
      parentID: 0, EndDate: new Date('04/21/2019'),
    },
    {
      TaskID: 39, TaskName: 'Branding product', StartDate: new
Date('06/20/2019'),
      Duration: 4, parentID: 38
    },
    {
      TaskID: 40, TaskName: 'Marketing and presales', StartDate: new
Date('06/26/2019'), Duration: 4,
      Progress: 30, parentID: 38
    }
  ];
let virtualData: any[] = [];
let projId: number = 1;
for (let i: number = 0; i < 50; i++) {
  let x: number = virtualData.length + 1;
  let parent: any = {};
  /* tslint:disable:no-string-literal */
  parent['TaskID'] = x;
  parent['TaskName'] = 'Project ' + (i + 1);
  virtualData.push(parent);
  for (let j: number = 0; j < tempData.length; j++) {
    let subtasks: any = {};
    /* tslint:disable:no-string-literal */
    subtasks['TaskID'] = tempData[j].TaskID + x;
    subtasks['TaskName'] = tempData[j].TaskName;
    subtasks['StartDate'] = tempData[j].StartDate;
    subtasks['Duration'] = tempData[j].Duration;
    subtasks['Progress'] = tempData[j].Progress;
    subtasks['parentID'] = tempData[j].parentID + x;
    virtualData.push(subtasks);
  }
}
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective, Inject, Selection,
VirtualScroll } from '@syncfusion/ej2-react-gantt';
function App () {
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    endDate: 'EndDate',

```

```

    duration: 'Duration',
    progress: 'Progress',
    parentID: 'parentID'
  };
  const splitterSettings: any = {
    columnIndex: 2
  };
  const labelSettings: any = {
    taskLabel: 'Progress'
  };
  return (
    <GanttComponent dataSource={virtualData} treeColumnIndex={1}
    labelSettings={labelSettings}
      allowSelection={true} highlightWeekends={true}
    enableVirtualization={true}
      taskFields={taskFields} splitterSettings={splitterSettings}
    height='450px'>
      <ColumnsDirective>
        <ColumnDirective field='TaskID' />
        <ColumnDirective field='TaskName' headerText='Task
Name' />
        <ColumnDirective field='StartDate' />
        <ColumnDirective field='Duration' />
        <ColumnDirective field='Progress' />
      </ColumnsDirective>
      <Inject services={[Selection, VirtualScroll]} />
    </GanttComponent>
  )
};
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
```

```

        position: absolute;
        top: 45%;
        width: 30%;
    }
</style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Timeline virtualization

Timeline virtualization allows you to load a data source having large timespan with high performance. Initially, it renders the timeline with thrice the width of the gantt element, while other timeline cells render on-demand during horizontal scrolling.

This mode can be enable by setting the [enableTimelineVirtualization](#) property to `true`.

INDEX.JSX

```

let tempData = [
    {
        TaskID: 1, TaskName: 'Product concept',StartDate: new
Date('04/02/2019'), EndDate: new Date('04/21/2019'),
        parentID: 0
    },
    {
        TaskID: 2, TaskName: 'Defining the product and its usage',
StartDate: new Date('04/02/2019'),
        Duration: 3, Progress: 30, parentID: 1
    },
    {
        TaskID: 3, TaskName: 'Defining target audience', StartDate: new
Date('04/02/2019'),
        parentID: 1, Duration: 3
    },
    {
        TaskID: 4, TaskName: 'Prepare product sketch and notes', StartDate:
new Date('04/05/2019'),
        Duration: 2, parentID: 1, Progress: 30
    },
    {
        TaskID: 5, TaskName: 'Concept approval', StartDate: new
Date('04/08/2019'),
        parentID: 0, Duration: 0
    },
    {
        TaskID: 6, TaskName: 'Market research', StartDate: new
Date('04/02/2019'),
        parentID: 0, EndDate: new Date('04/21/2019')
    },
    {
        TaskID: 7, TaskName: 'Demand analysis', StartDate: new
Date('04/04/2019'),

```

```

        EndDate: new Date('04/21/2019'), parentID: 6
      },
      {
        TaskID: 8, TaskName: 'Customer strength', StartDate: new
Date('04/09/2019'),
        Duration: 4, parentID: 7, Progress: 30
      },
      {
        TaskID: 9, TaskName: 'Market opportunity analysis', StartDate: new
Date('04/09/2019'),
        Duration: 4, parentID: 7
      },
      {
        TaskID: 10, TaskName: 'Competitor analysis', StartDate: new
Date('04/15/2019'),
        Duration: 4, parentID: 6, Progress: 30
      },
      {
        TaskID: 11, TaskName: 'Product strength analysis', StartDate: new
Date('04/15/2019'),
        Duration: 4, parentID: 6
      },
      {
        TaskID: 12, TaskName: 'Research complete', StartDate: new
Date('04/18/2019'),
        Duration: 0, parentID: 6
      },
      {
        TaskID: 13, TaskName: 'Product design and development', StartDate:
new Date('04/04/2019'),
        parentID: 0, EndDate: new Date('04/21/2019')
      },
      {
        TaskID: 14, TaskName: 'Functionality design', StartDate: new
Date('04/19/2019'),
        Duration: 3, parentID: 13, Progress: 30
      },
      {
        TaskID: 15, TaskName: 'Quality design', StartDate: new
Date('04/19/2019'),
        Duration: 3, parentID: 13
      },
      {
        TaskID: 16, TaskName: 'Define reliability', StartDate: new
Date('04/24/2019'),
        Duration: 2, Progress: 30, parentID: 13
      },
      {
        TaskID: 17, TaskName: 'Identifying raw materials', StartDate: new
Date('04/24/2019'),
        Duration: 2, parentID: 13
      },
      {
        TaskID: 18, TaskName: 'Define cost plan', StartDate: new
Date('04/04/2019'),
        parentID: 13, EndDate: new Date('04/21/2019')
      },
    ],
  },

```

```

    {
      TaskID: 19, TaskName: 'Manufacturing cost', StartDate: new
Date('04/26/2019'),
      Duration: 2, Progress: 30, parentID: 18
    },
    {
      TaskID: 20, TaskName: 'Selling cost', StartDate: new
Date('04/26/2019'),
      Duration: 2, parentID: 18
    },
    {
      TaskID: 21, TaskName: 'Development of the final design', StartDate:
new Date('04/30/2019'),
      parentID: 13, EndDate: new Date('04/21/2019')
    },
    {
      TaskID: 22, TaskName: 'Defining dimensions and package volume',
StartDate: new Date('04/30/2019'),
      Duration: 2, parentID: 21, Progress: 30
    },
    {
      TaskID: 23, TaskName: 'Develop design to meet industry standards',
StartDate: new Date('05/02/2019'),
      Duration: 2, parentID: 21
    },
    {
      TaskID: 24, TaskName: 'Include all the details', StartDate: new
Date('05/06/2019'),
      Duration: 3, parentID: 21
    },
    {
      TaskID: 25, TaskName: 'CAD computer-aided design', StartDate: new
Date('05/09/2019'),
      Duration: 3, parentID: 13, Progress: 30
    },
    {
      TaskID: 26, TaskName: 'CAM computer-aided manufacturing', StartDate:
new Date('09/14/2019'),
      Duration: 3, parentID: 13
    },
    {
      TaskID: 27, TaskName: 'Design complete', StartDate: new
Date('05/16/2019'),
      Duration: 0, parentID: 13
    },
    {
      TaskID: 28, TaskName: 'Prototype testing', StartDate: new
Date('05/17/2019'),
      Duration: 4, Progress: 30, parentID: 0
    },
    {
      TaskID: 29, TaskName: 'Include feedback', StartDate: new
Date('05/17/2019'),
      Duration: 4, parentID: 0
    },
  ],
  {

```

```

    TaskID: 30, TaskName: 'Manufacturing', StartDate: new
Date('05/23/2019'),
    Duration: 5, Progress: 30, parentID: 0
  },
  {
    TaskID: 31, TaskName: 'Assembling materials to finsihed goods',
StartDate: new Date('05/30/2019'),
    Duration: 5, parentID: 0
  },
  {
    TaskID: 32, TaskName: 'Feedback and testing', StartDate: new
Date('04/04/2019'),
    parentID: 0, EndDate: new Date('04/21/2019'),
  },
  {
    TaskID: 33, TaskName: 'Internal testing and feedback', StartDate:
new Date('06/06/2019'),
    Duration: 3, parentID: 32, Progress: 45
  },
  {
    TaskID: 34, TaskName: 'Customer testing and feedback', StartDate:
new Date('06/11/2019'),
    Duration: 3, parentID: 32, Progress: 50
  },
  {
    TaskID: 35, TaskName: 'Final product development', StartDate: new
Date('04/04/2019'),
    parentID: 0, EndDate: new Date('04/21/2019'),
  },
  {
    TaskID: 36, TaskName: 'Important improvements', StartDate: new
Date('06/14/2019'),
    Duration: 4, Progress: 30, parentID: 35
  },
  {
    TaskID: 37, TaskName: 'Address any unforeseen issues', StartDate:
new Date('06/14/2019'),
    Duration: 4, Progress: 30, parentID: 35
  },
  {
    TaskID: 38, TaskName: 'Final product', StartDate: new
Date('04/04/2019'),
    parentID: 0, EndDate: new Date('04/21/2019'),
  },
  {
    TaskID: 39, TaskName: 'Branding product', StartDate: new
Date('06/20/2019'),
    Duration: 4, parentID: 38
  },
  {
    TaskID: 40, TaskName: 'Marketing and presales', StartDate: new
Date('06/26/2019'), Duration: 4,
    Progress: 30, parentID: 38
  }
];
let virtualData = [];
let projId = 1;

```



```

for (let i = 0; i < 50; i++) {
    let x = virtualData.length + 1;
    let parent = {};
    /* tslint:disable:no-string-literal */
    parent['TaskID'] = x;
    parent['TaskName'] = 'Project ' + (i + 1);
    virtualData.push(parent);
    for (let j = 0; j < tempData.length; j++) {
        let subtasks = {};
        /* tslint:disable:no-string-literal */
        subtasks['TaskID'] = tempData[j].TaskID + x;
        subtasks['TaskName'] = tempData[j].TaskName;
        subtasks['StartDate'] = tempData[j].StartDate;
        subtasks['Duration'] = tempData[j].Duration;
        subtasks['Progress'] = tempData[j].Progress;
        subtasks['parentID'] = tempData[j].parentID + x;
        virtualData.push(subtasks);
    }
}
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective, Inject, Edit,
Selection, Toolbar, VirtualScroll } from '@syncfusion/ej2-react-gantt';
function App () {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        endDate: 'EndDate',
        duration: 'Duration',
        progress: 'Progress',
        parentID: 'parentID'
    };
    const splitterSettings= {
        columnIndex: 2
    };
    const labelSettings = {
        taskLabel: 'Progress'
    };
    const editSettings = {
        allowAdding: true,
        allowEditing: true,
        allowDeleting: true,
        allowTaskbarEditing: true,
        showDeleteConfirmDialog: true
    };
    const projectStartDate = new Date('04/01/2019');
    const projectEndDate = new Date('12/31/2025');
    const toolbar = ['Add', 'Edit', 'Update', 'Delete', 'Cancel', 'ExpandAll',
'CollapseAll', 'Indent', 'Outdent'];
    return (
        <GanttComponent dataSource={virtualData} treeColumnIndex={1}
labelSettings={labelSettings} projectEndDate={projectEndDate}
            allowSelection={true} highlightWeekends={true}
enableVirtualization={true} enableTimelineVirtualization={true}
projectStartDate={projectStartDate}

```

```

        taskFields={taskFields} splitterSettings={splitterSettings}
        autoCalculateDateScheduling={false} toolbar={toolbar}
        editSettings={editSettings} height='450px'>
        <ColumnsDirective>
            <ColumnDirective field='TaskID' />
            <ColumnDirective field='TaskName' headerText='Task
Name' />
            <ColumnDirective field='StartDate' />
            <ColumnDirective field='Duration' />
            <ColumnDirective field='Progress' />
        </ColumnsDirective>
        <Inject services={[Selection, VirtualScroll, Edit, Toolbar]} />
        </GanttComponent>
    )
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

let tempData: any[] = [
    {
        TaskID: 1, TaskName: 'Product concept', StartDate: new
Date('04/02/2019'), EndDate: new Date('04/21/2019'),
        parentID: 0
    },
    {
        TaskID: 2, TaskName: 'Defining the product and its usage',
StartDate: new Date('04/02/2019'),
        Duration: 3, Progress: 30, parentID: 1
    },
    {
        TaskID: 3, TaskName: 'Defining target audience', StartDate: new
Date('04/02/2019'),
        parentID: 1, Duration: 3
    },
    {
        TaskID: 4, TaskName: 'Prepare product sketch and notes', StartDate:
new Date('04/05/2019'),
        Duration: 2, parentID: 1, Progress: 30
    },
    {
        TaskID: 5, TaskName: 'Concept approval', StartDate: new
Date('04/08/2019'),
        parentID: 0, Duration: 0
    },
    {
        TaskID: 6, TaskName: 'Market research', StartDate: new
Date('04/02/2019'),
        parentID: 0, EndDate: new Date('04/21/2019')
    },
    {
        TaskID: 7, TaskName: 'Demand analysis', StartDate: new
Date('04/04/2019'),
        EndDate: new Date('04/21/2019'), parentID: 6
    },
    {

```

```

    TaskID: 8, TaskName: 'Customer strength', StartDate: new
Date('04/09/2019'),
    Duration: 4, parentID: 7, Progress: 30
  },
  {
    TaskID: 9, TaskName: 'Market opportunity analysis', StartDate: new
Date('04/09/2019'),
    Duration: 4, parentID: 7
  },
  {
    TaskID: 10, TaskName: 'Competitor analysis', StartDate: new
Date('04/15/2019'),
    Duration: 4, parentID: 6, Progress: 30
  },
  {
    TaskID: 11, TaskName: 'Product strength analysis', StartDate: new
Date('04/15/2019'),
    Duration: 4, parentID: 6
  },
  {
    TaskID: 12, TaskName: 'Research complete', StartDate: new
Date('04/18/2019'),
    Duration: 0, parentID: 6
  },
  {
    TaskID: 13, TaskName: 'Product design and development', StartDate:
new Date('04/04/2019'),
    parentID: 0, EndDate: new Date('04/21/2019')
  },
  {
    TaskID: 14, TaskName: 'Functionality design', StartDate: new
Date('04/19/2019'),
    Duration: 3, parentID: 13, Progress: 30
  },
  {
    TaskID: 15, TaskName: 'Quality design', StartDate: new
Date('04/19/2019'),
    Duration: 3, parentID: 13
  },
  {
    TaskID: 16, TaskName: 'Define reliability', StartDate: new
Date('04/24/2019'),
    Duration: 2, Progress: 30, parentID: 13
  },
  {
    TaskID: 17, TaskName: 'Identifying raw materials', StartDate: new
Date('04/24/2019'),
    Duration: 2, parentID: 13
  },
  {
    TaskID: 18, TaskName: 'Define cost plan', StartDate: new
Date('04/04/2019'),
    parentID: 13, EndDate: new Date('04/21/2019')
  },
  {
    TaskID: 19, TaskName: 'Manufacturing cost', StartDate: new
Date('04/26/2019'),

```

```

        Duration: 2, Progress: 30, parentID: 18
      },
      {
        TaskID: 20, TaskName: 'Selling cost', StartDate: new
Date('04/26/2019'),
        Duration: 2, parentID: 18
      },
      {
        TaskID: 21, TaskName: 'Development of the final design', StartDate:
new Date('04/30/2019'),
        parentID: 13, EndDate: new Date('04/21/2019')
      },
      {
        TaskID: 22, TaskName: 'Defining dimensions and package volume',
StartDate: new Date('04/30/2019'),
        Duration: 2, parentID: 21, Progress: 30
      },
      {
        TaskID: 23, TaskName: 'Develop design to meet industry standards',
StartDate: new Date('05/02/2019'),
        Duration: 2, parentID: 21
      },
      {
        TaskID: 24, TaskName: 'Include all the details', StartDate: new
Date('05/06/2019'),
        Duration: 3, parentID: 21
      },
      {
        TaskID: 25, TaskName: 'CAD computer-aided design', StartDate: new
Date('05/09/2019'),
        Duration: 3, parentID: 13, Progress: 30
      },
      {
        TaskID: 26, TaskName: 'CAM computer-aided manufacturing', StartDate:
new Date('09/14/2019'),
        Duration: 3, parentID: 13
      },
      {
        TaskID: 27, TaskName: 'Design complete', StartDate: new
Date('05/16/2019'),
        Duration: 0, parentID: 13
      },
      {
        TaskID: 28, TaskName: 'Prototype testing', StartDate: new
Date('05/17/2019'),
        Duration: 4, Progress: 30, parentID: 0
      },
      {
        TaskID: 29, TaskName: 'Include feedback', StartDate: new
Date('05/17/2019'),
        Duration: 4, parentID: 0
      },
      {
        TaskID: 30, TaskName: 'Manufacturing', StartDate: new
Date('05/23/2019'),
        Duration: 5, Progress: 30, parentID: 0
      },
    ],
  },

```

```

    {
      TaskID: 31, TaskName: 'Assembling materials to finsihed goods',
      StartDate: new Date('05/30/2019'),
      Duration: 5, parentID: 0
    },
    {
      TaskID: 32, TaskName: 'Feedback and testing', StartDate: new
      Date('04/04/2019'),
      parentID: 0, EndDate: new Date('04/21/2019'),
    },
    {
      TaskID: 33, TaskName: 'Internal testing and feedback', StartDate:
      new Date('06/06/2019'),
      Duration: 3, parentID: 32, Progress: 45
    },
    {
      TaskID: 34, TaskName: 'Customer testing and feedback', StartDate:
      new Date('06/11/2019'),
      Duration: 3, parentID: 32, Progress: 50
    },
    {
      TaskID: 35, TaskName: 'Final product development', StartDate: new
      Date('04/04/2019'),
      parentID: 0, EndDate: new Date('04/21/2019'),
    },
    {
      TaskID: 36, TaskName: 'Important improvements', StartDate: new
      Date('06/14/2019'),
      Duration: 4, Progress: 30, parentID: 35
    },
    {
      TaskID: 37, TaskName: 'Address any unforeseen issues', StartDate:
      new Date('06/14/2019'),
      Duration: 4, Progress: 30, parentID: 35
    },
    {
      TaskID: 38, TaskName: 'Final product', StartDate: new
      Date('04/04/2019'),
      parentID: 0, EndDate: new Date('04/21/2019'),
    },
    {
      TaskID: 39, TaskName: 'Branding product', StartDate: new
      Date('06/20/2019'),
      Duration: 4, parentID: 38
    },
    {
      TaskID: 40, TaskName: 'Marketing and presales', StartDate: new
      Date('06/26/2019'), Duration: 4,
      Progress: 30, parentID: 38
    }
  ];
  let virtualData: any[] = [];
  let projId: number = 1;
  for (let i: number = 0; i < 50; i++) {
    let x: number = virtualData.length + 1;
    let parent: any = {};
    /* tslint:disable:no-string-literal */

```

```

    parent['TaskID'] = x;
    parent['TaskName'] = 'Project ' + (i + 1);
    virtualData.push(parent);
    for (let j: number = 0; j < tempData.length; j++) {
        let subtasks: any = {};
        /* tslint:disable:no-string-literal */
        subtasks['TaskID'] = tempData[j].TaskID + x;
        subtasks['TaskName'] = tempData[j].TaskName;
        subtasks['StartDate'] = tempData[j].StartDate;
        subtasks['Duration'] = tempData[j].Duration;
        subtasks['Progress'] = tempData[j].Progress;
        subtasks['parentID'] = tempData[j].parentID + x;
        virtualData.push(subtasks);
    }
}
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective, Inject, Edit,
Selection, Toolbar, VirtualScroll } from '@syncfusion/ej2-react-gantt';
function App () {
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        endDate: 'EndDate',
        duration: 'Duration',
        progress: 'Progress',
        parentID: 'parentID'
    };
    const splitterSettings: any = {
        columnIndex: 2
    };
    const labelSettings: any = {
        taskLabel: 'Progress'
    };
    const editSettings: any = {
        allowAdding: true,
        allowEditing: true,
        allowDeleting: true,
        allowTaskbarEditing: true,
        showDeleteConfirmDialog: true
    };
    const toolbar: any = ['Add', 'Edit', 'Update', 'Delete', 'Cancel',
'ExpandAll', 'CollapseAll', 'Indent', 'Outdent'];
    const projectStartDate: Date = new Date('04/01/2019');
    const projectEndDate: Date = new Date('12/31/2025');
    return (
        <GanttComponent dataSource={virtualData} treeColumnIndex={1}
labelSettings={labelSettings} projectEndDate={projectEndDate}
            allowSelection={true} highlightWeekends={true}
enableVirtualization={true} enableTimelineVirtualization={true}
projectStartDate={projectStartDate}
            taskFields={taskFields} splitterSettings={splitterSettings}
autoCalculateDateScheduling={false} toolbar={toolbar}
editSettings={editSettings} height='450px'>
            <ColumnsDirective>
                <ColumnDirective field='TaskID' />

```

```

        <ColumnDirective field='TaskName' headerText='Task
Name' />
        <ColumnDirective field='StartDate' />
        <ColumnDirective field='Duration' />
        <ColumnDirective field='Progress' />
    </ColumnsDirective>
    <Inject services={[Selection, VirtualScroll, Edit, Toolbar]} />
</GanttComponent>
)
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008c00;
            height: 40px;
            left: 45%;
            position: absolute;
            top: 45%;
            width: 30%;
        }
    </style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Get filtered data when virtual scrolling is enabled

While enabling virtual scroll you can get the filtered or sorted record count using `filteredResult` from the `filterModule` of the `treegrid` inside the `actionComplete` event.

The following code example shows how to get filtered data count in the gantt control.

INDEX.JSX

```

import * as React from 'react';
import { useState } from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Filter, Sort, VirtualScroll, Selection,
ColumnDirective, ColumnsDirective } from '@syncfusion/ej2-react-gantt';
import { virtualData } from './datasource';
function App() {
  const [filteredCount, setFilteredCount] = useState(0);
  const [datasetCount, setdatasetCount] = useState(0);
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    endDate: 'EndDate',
    duration: 'Duration',
    progress: 'Progress',
    parentID: 'parentID'
  };
  const splitterSettings= {
    columnIndex: 2
  };
  let ganttInstance;
  function actionComplete(args) {
    if (args.requestType === 'filtering') {
      if (args.rows !== null) {
setFilteredCount(ganttInstance.treeGrid.filterModule.filteredResult.length);
      }
    }
  };
  function created() {
    setdatasetCount(ganttInstance.flatData.length);
  }
  return (
    <div>
      <GanttComponent dataSource={virtualData} taskFields={taskFields}
splitterSettings={splitterSettings} enableVirtualization={true}
allowSorting={true} allowFiltering={true} height='450px' ref={gantt =>
ganttInstance = gantt} created={created} actionComplete={actionComplete}>
        <ColumnsDirective>
          <ColumnDirective field='TaskID' width= '120'></ColumnDirective>
          <ColumnDirective field='TaskName'></ColumnDirective>
          <ColumnDirective field='StartDate'></ColumnDirective>
          <ColumnDirective field='Duration'></ColumnDirective>
          <ColumnDirective field='Progress'></ColumnDirective>
        </ColumnsDirective>
        <Inject services={[Filter, Selection, Sort, VirtualScroll]}/>
      </GanttComponent>
    </div>
    <div>
      <p>
        <b>Dataset Count:</b> {datasetCount}
      </p>
      <p>
        <b>Filtered Count:</b> {filteredCount}
      </p>
    </div>
  )
}

```



```

    </div>
  </div>);
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import { useState } from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Filter, Sort, VirtualScroll, Selection,
ColumnDirective, ColumnsDirective } from '@syncfusion/ej2-react-gantt';
import { virtualData } from './datasource';
function App() {
  const [filteredCount, setFilteredCount] = useState(0);
  const [datasetCount, setdatasetCount] = useState(0);
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    endDate: 'EndDate',
    duration: 'Duration',
    progress: 'Progress',
    parentID: 'parentID'
  };
  const splitterSettings= {
    columnIndex: 2
  };
  let ganttInstance: any;
  function actionComplete(args: any) {
    if (args.requestType === 'filtering') {
      if (args.rows !== null) {
setFilteredCount(ganttInstance.treeGrid.filterModule.filteredResult.length);
      }
    }
  };
  function created() {
    setdatasetCount(ganttInstance.flatData.length);
  }
  return (
    <div>
      <GanttComponent dataSource={virtualData} taskFields={taskFields}
splitterSettings={splitterSettings} enableVirtualization={true}
allowSorting={true} allowFiltering={true} height='450px' ref={gantt =>
ganttInstance = gantt} created={created} actionComplete={actionComplete}>
        <ColumnsDirective>
          <ColumnDirective field='TaskID' width= '120'></ColumnDirective>
          <ColumnDirective field='TaskName'></ColumnDirective>
          <ColumnDirective field='StartDate'></ColumnDirective>
          <ColumnDirective field='Duration'></ColumnDirective>
          <ColumnDirective field='Progress'></ColumnDirective>
        </ColumnsDirective>
        <Inject services={[Filter, Selection, Sort, VirtualScroll]}/>
      </GanttComponent>
    </div>

```

```

        <p>
          <b>Dataset Count:</b> {datasetCount}
        </p>
        <p>
          <b>Filtered Count:</b> {filteredCount}
        </p>
      </div>
    </div>);
  };
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Limitations for virtual scroll

- Due to the element height limitation in browsers, the maximum number of records loaded is limited by the browser capacity.
- Cell selection will not be persisted.

- The number of records rendered will be determined by the [Link to the Video](#) property.
- It is necessary to mention the height of the Gantt in pixels when enabling Virtual Scrolling.

Resources in React Gantt component

In Gantt, the resources are represented by staff, equipment and materials etc. In Gantt component you can show or allocate the resources (human resources) for each task.

To get start quickly with Resource Allocation for each task and to know about Resource view Gantt, you can check on this video

Resource collection

The resource collection contains details about resources that are used in the project. Resources are JSON object that contains id, name, unit and group of the resources and this collection is mapped to the Gantt control using the [resources](#) property. These resource fields are mapped to the Gantt control using the [resourceFields](#) property.

Resource fields | Description

[id](#) | This field is used to assign resources to the tasks.

[name](#) | This field is used to map the resource names. These names are displayed as one of Gantt columns and also can display as labels using the [labelSettings](#) property.

[unit](#) | It indicates the amount of work that can be done by a resource for the task in a day.

[group](#) | This field is used to group the resources and the tasks assigned to that particular resource into category.

The following code snippets shows resource collection and how it assigned to Gantt control.

```
`ts
let projectResources: object[] = resources: [
{ resourceId: 1, resourceName: 'Martin Tamer', resourceGroup: 'Planning Team', resourceUnit: 50},
{ resourceId: 2, resourceName: 'Rose Fuller', resourceGroup: 'Testing Team', resourceUnit: 70 },
{ resourceId: 3, resourceName: 'Margaret Buchanan', resourceGroup: 'Approval Team' },
{ resourceId: 4, resourceName: 'Fuller King', resourceGroup: 'Development Team' },
{ resourceId: 5, resourceName: 'Davolio Fuller', resourceGroup: 'Approval Team' },
{ resourceId: 6, resourceName: 'Van Jack', resourceGroup: 'Development Team', resourceUnit: 40 },
];
class App extends React.Component<{}, {}>{
render() {
return <GanttComponent dataSource={data}
resourceFields: {
id: 'resourceId', //resource Id Mapping
name: 'resourceName', //resource Name mapping
unit: 'resourceUnit', //resource Unit mapping
```

```

group: 'resourceGroup' //resource Group mapping
},
resources: projectResources //resource collection dataSource
</GanttComponent>
}
};
ReactDOM.render(<App />, document.getElementById('root'));
`

```

Assign resource

We can assign resources for a task at initial load, using the resource id value of the resources as a collection. This collection is mapped from the dataSource to the Gantt control using the [resourceInfo](#) property.

Resources are assigned to tasks in following ways.

Assign resource alone

If the unit is not specified for specific resource, the amount of work done will be consider as 100% by default. In such cases, the resource unit will not be displayed in Gantt UI.

```

`ts
{ TaskID: 2, TaskName: 'Identify Site location', StartDate: new Date('04/02/2019'), Duration: 4, Progress:
50,resources: [2, 3] }
`

```

Assign resources with unit

We can assign the quantity of work done by the resources for the specific task as like below code snippet.

```

`ts
{ TaskID: 3, TaskName: 'Perform soil test', StartDate: new Date('03/29/2019'), Duration: 4,
resources: [{resourceId: 2, resourceUnit: 70}, {resourceId: 1, resourceUnit: 70}] },
`

```

When resource unit is defined in resource collection, the amount of work done by that particular resource will be same for all the tasks.

The following code snippet shows how to assign the resource for each task and map to Gantt control.

INDEX.JSX

```

export let ProjectResources = [
  { resourceId: 1, resourceName: 'Martin Tamer' },
  { resourceId: 2, resourceName: 'Rose Fuller' },
  { resourceId: 3, resourceName: 'Margaret Buchanan' },
  { resourceId: 4, resourceName: 'Fuller King' },
  { resourceId: 5, resourceName: 'Davolio Fuller' },
  { resourceId: 6, resourceName: 'Van Jack' },
  { resourceId: 7, resourceName: 'Fuller Buchanan' },

```

```

    { resourceId: 8, resourceName: 'Jack Davolio' },
    { resourceId: 9, resourceName: 'Tamer Vinet' },
    { resourceId: 10, resourceName: 'Vinet Fuller' },
    { resourceId: 11, resourceName: 'Bergs Anton' },
    { resourceId: 12, resourceName: 'Construction Supervisor' }
  ];
  let data = [
    {
      TaskID: 1,
      TaskName: 'Project initiation',
      StartDate: new Date('03/29/2019'),
      EndDate: new Date('04/21/2019'),
      subtasks: [
        {
          TaskID: 2, TaskName: 'Identify site location', StartDate:
new Date('03/29/2019'), Duration: 2,
          Progress: 30, resources: [{ resourceId: 1, Unit: 70 }, 6]
        },
        {
          TaskID: 3, TaskName: 'Perform soil test', StartDate: new
Date('03/29/2019'), Duration: 4,
          resources: [2, 3, 5]
        },
        {
          TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('03/29/2019'), Duration: 1,
          resources: [8, { resourceId: 9, Unit: 50 }], Progress: 30
        },
      ]
    },
    {
      TaskID: 5,
      TaskName: 'Project estimation', StartDate: new Date('03/29/2019'),
      EndDate: new Date('04/21/2019'),
      subtasks: [
        {
          TaskID: 6, TaskName: 'Develop floor plan for estimation',
          StartDate: new Date('03/29/2019'),
          Duration: 3, Progress: 30, resources: [{ resourceId: 4,
Unit: 50 }]
        },
        {
          TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/01/2019'), Duration: 3,
          resources: [4, 8]
        },
        {
          TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/01/2019'),
          Duration: 2, resources: [12, { resourceId: 5, Unit: 70 }]
        },
      ]
    },
    {
      TaskID: 9, TaskName: 'Sign contract', StartDate: new
Date('04/01/2019'), Duration: 1,
      Progress: 30, resources: [12]
    }
  ]
}

```

```

    }
  ];
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective } from
 '@syncfusion/ej2-react-gantt';
function App() {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    resourceInfo: 'resources',
    child: 'subtasks'
  };
  const resourceFields = {
    id: 'resourceId',
    name: 'resourceName',
    unit: 'Unit'
  };
  const labelSettings = {
    rightLabel: 'resources'
  };
  return <GanttComponent id='root' dataSource={ data } taskFields = {
taskFields } resourceFields={resourceFields} labelSettings = {labelSettings
} resources = { ProjectResources } height = '450px' >
    <ColumnsDirective>
      <ColumnDirective field= 'TaskID' visible= 'false' >
</ColumnDirective>
      < ColumnDirective field= 'TaskName' headerText= 'Task Name'
width= '180' > </ColumnDirective>
      < ColumnDirective field= 'resources' headerText= 'Resources'
width= '160' > </ColumnDirective>
      < ColumnDirective field= 'Duration' width= '100' >
</ColumnDirective>
    </ColumnsDirective>
  </GanttComponent>;
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

export let ProjectResources = [
  { resourceId: 1, resourceName: 'Martin Tamer' },
  { resourceId: 2, resourceName: 'Rose Fuller' },
  { resourceId: 3, resourceName: 'Margaret Buchanan' },
  { resourceId: 4, resourceName: 'Fuller King' },
  { resourceId: 5, resourceName: 'Davolio Fuller' },
  { resourceId: 6, resourceName: 'Van Jack' },
  { resourceId: 7, resourceName: 'Fuller Buchanan' },
  { resourceId: 8, resourceName: 'Jack Davolio' },
  { resourceId: 9, resourceName: 'Tamer Vinet' },
  { resourceId: 10, resourceName: 'Vinet Fuller' },
  { resourceId: 11, resourceName: 'Bergs Anton' },
  { resourceId: 12, resourceName: 'Construction Supervisor' }
]

```

```

];
let data = [
  {
    TaskID: 1,
    TaskName: 'Project initiation',
    StartDate: new Date('03/29/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      {
        TaskID: 2, TaskName: 'Identify site location', StartDate:
new Date('03/29/2019'), Duration: 2,
        Progress: 30, resources: [{ resourceId: 1, Unit: 70 }, 6]
      },
      {
        TaskID: 3, TaskName: 'Perform soil test', StartDate: new
Date('03/29/2019'), Duration: 4,
        resources: [2, 3, 5]
      },
      {
        TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('03/29/2019'), Duration: 1,
        resources: [8, { resourceId: 9, Unit: 50 }], Progress: 30
      },
    ]
  },
  {
    TaskID: 5,
    TaskName: 'Project estimation', StartDate: new Date('03/29/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      {
        TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('03/29/2019'),
        Duration: 3, Progress: 30, resources: [{ resourceId: 4,
Unit: 50 }]
      },
      {
        TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/01/2019'), Duration: 3,
        resources: [4, 8]
      },
      {
        TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/01/2019'),
        Duration: 2, resources: [12, { resourceId: 5, Unit: 70 }]
      },
    ]
  },
  {
    TaskID: 9, TaskName: 'Sign contract', StartDate: new
Date('04/01/2019'), Duration: 1,
    Progress: 30, resources: [12]
  }
];
import * as React from 'react';
import * as ReactDOM from 'react-dom';

```

```

import { GanttComponent, ColumnsDirective, ColumnDirective } from
 '@syncfusion/ej2-react-gantt';
function App() {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    resourceInfo: 'resources',
    child: 'subtasks'
  };
  const resourceFields = {
    id: 'resourceId',
    name: 'resourceName',
    unit: 'Unit'
  };
  const labelSettings = {
    rightLabel: 'resources'
  };
  return <GanttComponent id='root' dataSource={ data } taskFields = {
taskFields } resourceFields={resourceFields} labelSettings = {labelSettings
} resources = { ProjectResources } height = '450px' >
    <ColumnsDirective>
      <ColumnDirective field= 'TaskID' visible= 'false' >
</ColumnDirective>
      < ColumnDirective field= 'TaskName'   headerText= 'Task Name'
width= '180' > </ColumnDirective>
      < ColumnDirective field= 'resources'   headerText= 'Resources'
width= '160' > </ColumnDirective>
      < ColumnDirective field= 'Duration'   width= '100' >
</ColumnDirective>
    </ColumnsDirective>
  </GanttComponent>;
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>

```



```

<script src="systemjs.config.js"></script>
<style>
  #loader {
    color: #008cff;
    height: 40px;
    left: 45%;
    position: absolute;
    top: 45%;
    width: 30%;
  }
</style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

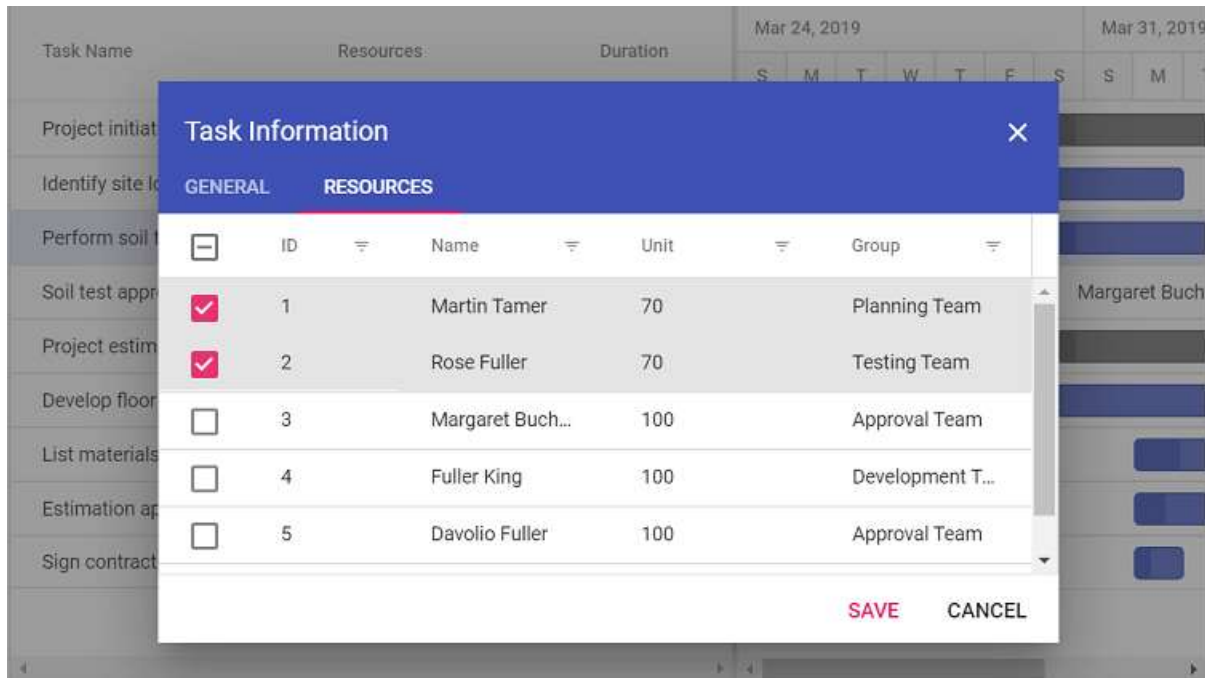
Add/Edit resource collection

By using cell/ dialog edit option, we can add/remove the multiple resources for a particular task.

Resource Unit can be change for a each task on resource tab in edit dialog by double click on the unit cell.

The screenshot displays a Gantt chart interface with a task list on the left and a timeline on the right. The timeline spans from March 24, 2019, to March 31, 2019, with days of the week (S, M, T, W, T, F, S) indicated. Tasks are represented by horizontal bars, some of which are color-coded (blue for active, grey for completed). A dropdown menu is open for the 'Identify site location' task, showing a list of resources with checkboxes. The resources listed are Martin Ta..., Rose Fuller, Margaret..., Fuller King, Davolio Fu..., and Van Jack. The 'Identify site location' task is currently assigned to 2 resources, as indicated by the '2 selected' text and the 'x' icon.

Task Name	Resources	Mar 24, 2019							Mar 31, 2019						
		S	M	T	W	T	F	S	S	M	T	W			
Project initiation															
Identify site locat...	2 selected x											M			
Perform soil test												Rose F			
Soil test approval	<input checked="" type="checkbox"/> Martin Ta...											Margare			
Project estimation	<input checked="" type="checkbox"/> Rose Fuller														
Develop floor pla...	<input type="checkbox"/> Margaret ...														
List materials	<input type="checkbox"/> Fuller King														
Estimation appro...	<input type="checkbox"/> Davolio Fu...														
Sign contract	<input type="checkbox"/> Van Jack														



Resource view in React Gantt component

The resource breakdown view is used to visualize the tasks assigned to each resource in hierarchy manner. Resources are displayed as parents and all the tasks assigned to each resource are displayed as its child records. It can be initialized by setting the [viewType](#) property to `ResourceView`.

Resource task

A task assigned to one or more resources are termed as resource task and it is added as child task to the respective resource. Already assigned task can also be shared or moved with other resources by adding a resource name to the task or removing resource name from the task by cell or dialog editing.

Note: Currently there is no support for unscheduled task in Resource view Gantt.

INDEX.JSX

```
let resourceCollection = [
  { resourceId: 1, resourceName: 'Martin Tamer', resourceGroup: 'Planning Team' },
  { resourceId: 2, resourceName: 'Rose Fuller', resourceGroup: 'Testing Team' },
  { resourceId: 3, resourceName: 'Margaret Buchanan', resourceGroup: 'Approval Team' },
  { resourceId: 4, resourceName: 'Fuller King', resourceGroup: 'Development Team' },
  { resourceId: 5, resourceName: 'Davolio Fuller', resourceGroup: 'Approval Team' },
  { resourceId: 6, resourceName: 'Van Jack', resourceGroup: 'Development Team' },
];
let data = [
  {
    TaskID: 1,
    TaskName: 'Project initiation',
    StartDate: new Date('03/29/2019'),
```

```

        EndDate: new Date('04/21/2019'),
        subtasks: [
            {
                TaskID: 2, TaskName: 'Identify site location', StartDate:
new Date('03/29/2019'), Duration: 2,
                Progress: 30, work: 10, resources: [{ resourceId: 1,
resourceUnit: 50 }]
            },
            {
                TaskID: 3, TaskName: 'Perform soil test', StartDate: new
Date('03/29/2019'), Duration: 4,
                resources: [{resourceId: 2, resourceUnit: 70}], Progress:
30, work: 20
            },
            {
                TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('03/29/2019'), Duration: 1,
                resources: [{resourceId: 3, resourceUnit: 25}, { resourceId:
1, resourceUnit: 75 }], Progress: 30, work: 10,
            },
        ]
    },
    {
        TaskID: 5,
        TaskName: 'Project estimation', StartDate: new Date('03/29/2019'),
        EndDate: new Date('04/21/2019'),
        subtasks: [
            {
                TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('03/29/2019'),
                Duration: 3, Progress: 30, resources: [{ resourceId: 4,
resourceUnit: 50 }, {resourceId: 2, resourceUnit: 70}], work: 30
            },
            {
                TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/01/2019'), Duration: 3,
                resources: [{resourceId: 6, resourceUnit: 40}], Progress:
30, work: 40
            },
            {
                TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/01/2019'),
                Duration: 2, resources: [{ resourceId: 5, resourceUnit: 75
}], Progress: 30, work: 60,
            }
        ]
    },
    {
        TaskID: 9, TaskName: 'Sign contract', StartDate: new
Date('04/01/2019'), Duration: 1,
        Progress: 30,
    }
];
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective, Inject, Edit,
Selection, Toolbar } from '@syncfusion/ej2-react-gantt';

```

```

function App () {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    endDate: 'EndDate',
    duration: 'Duration',
    progress: 'Progress',
    resourceInfo: 'resources',
    child: 'subtasks'
  };
  const resourceFields = {
    id: 'resourceId',
    name: 'resourceName',
    unit: 'Unit',
    group: 'resourceGroup'
  };
  const editSettings = {
    allowAdding: true,
    allowEditing: true,
    allowDeleting: true,
    allowTaskbarEditing: true,
    showDeleteConfirmDialog: true
  };
  const toolbar = ['Add', 'Edit', 'Delete', 'Cancel', 'Update',
'PrevTimeSpan', 'NextTimeSpan', 'ExpandAll', 'CollapseAll', 'Search'];
  const labelSettings = {
    rightLabel: 'resources'
  };
  const splitterSettings = {
    columnIndex: 3
  };
  const projectStartDate = new Date('03/28/2019');
  const projectEndDate = new Date('05/18/2019');
  return <GanttComponent id='root' dataSource = { data }
treeColumnIndex = { 1 } viewType = 'ResourceView' allowSelection = { true }
allowResizing = { true } highlightWeekends = { true } toolbar = { toolbar }
editSettings = { editSettings } projectStartDate = { projectStartDate }
projectEndDate = { projectEndDate } resourceFields = {resourceFields }
taskFields = { taskFields } labelSettings = { labelSettings }
splitterSettings = { splitterSettings } height = '410px' resources = {
resourceCollection } >
    <ColumnsDirective>
      <ColumnDirective field= 'TaskID' visible= {false} >
    </ColumnDirective>
      <ColumnDirective field= 'TaskName' headerText= 'Task Name'
width= '180' > </ColumnDirective>
      <ColumnDirective field= 'work' headerText= 'Work' >
    </ColumnDirective>
      <ColumnDirective field= 'Progress' > </ColumnDirective>
      <ColumnDirective field= 'resourceGroup' headerText= 'Group' >
    </ColumnDirective>
      <ColumnDirective field= 'StartDate' > </ColumnDirective>
      <ColumnDirective field= 'Duration' > </ColumnDirective>
    </ColumnsDirective>
    <Inject services=[ Toolbar, Edit, Selection ]/>
  </GanttComponent>;

```

```
};
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
let resourceCollection: object[] = [
  { resourceId: 1, resourceName: 'Martin Tamer', resourceGroup: 'Planning Team' },
  { resourceId: 2, resourceName: 'Rose Fuller', resourceGroup: 'Testing Team' },
  { resourceId: 3, resourceName: 'Margaret Buchanan', resourceGroup: 'Approval Team' },
  { resourceId: 4, resourceName: 'Fuller King', resourceGroup: 'Development Team' },
  { resourceId: 5, resourceName: 'Davolio Fuller', resourceGroup: 'Approval Team' },
  { resourceId: 6, resourceName: 'Van Jack', resourceGroup: 'Development Team' },
];
let data = [
  {
    TaskID: 1,
    TaskName: 'Project initiation',
    StartDate: new Date('03/29/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      {
        TaskID: 2, TaskName: 'Identify site location', StartDate: new Date('03/29/2019'), Duration: 2,
        Progress: 30, work: 10, resources: [{ resourceId: 1, resourceUnit: 50 }]
      },
      {
        TaskID: 3, TaskName: 'Perform soil test', StartDate: new Date('03/29/2019'), Duration: 4,
        resources: [{ resourceId: 2, resourceUnit: 70 }], Progress: 30, work: 20
      },
      {
        TaskID: 4, TaskName: 'Soil test approval', StartDate: new Date('03/29/2019'), Duration: 1,
        resources: [{ resourceId: 3, resourceUnit: 25 }, { resourceId: 1, resourceUnit: 75 }], Progress: 30, work: 10,
      },
    ]
  },
  {
    TaskID: 5,
    TaskName: 'Project estimation', StartDate: new Date('03/29/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      {
        TaskID: 6, TaskName: 'Develop floor plan for estimation',
        StartDate: new Date('03/29/2019'),
        Duration: 3, Progress: 30, resources: [{ resourceId: 4, resourceUnit: 50 }, { resourceId: 2, resourceUnit: 70 }], work: 30
      }
    ]
  }
];
```

```

        },
        {
            TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/01/2019'), Duration: 3,
            resources: [{resourceId: 6, resourceUnit: 40}], Progress:
30, work: 40
        },
        {
            TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/01/2019'),
            Duration: 2, resources: [{ resourceId: 5, resourceUnit: 75
}], Progress: 30, work: 60,
        }
    ]
},
{
    TaskID: 9, TaskName: 'Sign contract', StartDate: new
Date('04/01/2019'), Duration: 1,
    Progress: 30,
}
];
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective, Inject, Edit,
Selection, Toolbar } from '@syncfusion/ej2-react-gantt';
function App () {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        endDate: 'EndDate',
        duration: 'Duration',
        progress: 'Progress',
        resourceInfo: 'resources',
        child: 'subtasks'
    };
    const resourceFields = {
        id: 'resourceId',
        name: 'resourceName',
        unit: 'Unit',
        group: 'resourceGroup'
    };
    const editSettings = {
        allowAdding: true,
        allowEditing: true,
        allowDeleting: true,
        allowTaskbarEditing: true,
        showDeleteConfirmDialog: true
    };
    const toolbar = ['Add', 'Edit', 'Delete', 'Cancel', 'Update',
'PrevTimeSpan', 'NextTimeSpan', 'ExpandAll', 'CollapseAll', 'Search'];
    const labelSettings = {
        rightLabel: 'resources'
    };
    const splitterSettings = {
        columnIndex: 3
    };
}

```

```

    const projectStartDate = new Date('03/28/2019');
    const projectEndDate = new Date('05/18/2019');
    return <GanttComponent id='root' dataSource = { data }
    treeColumnIndex = { 1 } viewType = 'ResourceView' allowSelection = { true }
    allowResizing = { true } highlightWeekends = { true } toolbar = { toolbar }
    editSettings = { editSettings } projectStartDate = { projectStartDate }
    projectEndDate = { projectEndDate } resourceFields = { resourceFields }
    taskFields = { taskFields } labelSettings = { labelSettings }
    splitterSettings = { splitterSettings } height = '410px' resources = {
    resourceCollection } >
        <ColumnsDirective>
            <ColumnDirective field= 'TaskID' visible= { false } >
        </ColumnDirective>
            <ColumnDirective field= 'TaskName' headerText= 'Task Name'
width= '180' > </ColumnDirective>
            <ColumnDirective field= 'work' headerText= 'Work' >
        </ColumnDirective>
            <ColumnDirective field= 'Progress' > </ColumnDirective>
            <ColumnDirective field= 'resourceGroup' headerText= 'Group' >
        </ColumnDirective>
            <ColumnDirective field= 'StartDate' > </ColumnDirective>
            <ColumnDirective field= 'Duration' > </ColumnDirective>
        </ColumnsDirective>
        <Inject services=[ Toolbar, Edit, Selection ]/>
    </GanttComponent>;
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008cff;
            height: 40px;
            left: 45%;
            position: absolute;
            top: 45%;
            width: 30%;

```

```

    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Resource overallocation

When a resource is assigned too much of work to complete within a day of resource's available time then it is called as overallocation.

The available working time of resources for completing the task in a day will be calculated based on the `dayWorkingTime` property and `resource unit`.

The range of overallocation dates can be highlighted by a square bracket. It can be enabled by setting the `showOverallocation` property as `true`. The following code example demonstrates how to hide or show the over allocation by clicking the custom button.

Note: By default, the `showOverAllocation` property value is `false`.

INDEX.JSX

```

let resourceCollection = [
  { resourceId: 1, resourceName: 'Martin Tamer', resourceGroup: 'Planning Team' },
  { resourceId: 2, resourceName: 'Rose Fuller', resourceGroup: 'Testing Team' },
  { resourceId: 3, resourceName: 'Margaret Buchanan', resourceGroup: 'Approval Team' }
];
let data = [
  {
    TaskID: 1,
    TaskName: 'Project initiation',
    StartDate: new Date('03/29/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      {
        TaskID: 2, TaskName: 'Identify site location', StartDate: new Date('03/29/2019'), Duration: 3,
        Progress: 30, work: 10, resources: [{ resourceId: 1, resourceUnit: 50 }]
      },
      {
        TaskID: 3, TaskName: 'Perform soil test', StartDate: new Date('04/03/2019'), Duration: 4,
        resources: [{ resourceId: 1, resourceUnit: 70 }],
        Predecessor: 2, Progress: 30, work: 20
      },
      {
        TaskID: 4, TaskName: 'Soil test approval', StartDate: new Date('04/09/2019'), Duration: 4,

```



```

        resources: [{ resourceId: 1, resourceUnit: 25 }],
Predecessor: 3, Progress: 30, work: 10,
    },
    ],
    },
    {
        TaskID: 5,
        TaskName: 'Project estimation', StartDate: new Date('03/29/2019'),
        EndDate: new Date('04/21/2019'),
        subtasks: [
            {
                TaskID: 6, TaskName: 'Develop floor plan for estimation',
                StartDate: new Date('04/01/2019'),
                Duration: 5, Progress: 30, resources: [{ resourceId: 2,
                resourceUnit: 50 }], work: 30
            },
            {
                TaskID: 7, TaskName: 'List materials', StartDate: new
                Date('04/04/2019'), Duration: 4,
                resources: [{ resourceId: 2, resourceUnit: 40 }],
                Predecessor: '6FS-2', Progress: 30, work: 40
            },
            {
                TaskID: 8, TaskName: 'Estimation approval', StartDate: new
                Date('04/09/2019'),
                Duration: 4, resources: [{ resourceId: 2, resourceUnit: 75
                }], Predecessor: '7FS-1', Progress: 30, work: 60,
            }
        ]
    },
    },
    {
        TaskID: 9,
        TaskName: 'Site work',
        StartDate: new Date('04/04/2019'),
        EndDate: new Date('04/21/2019'),
        subtasks: [
            {
                TaskID: 10, TaskName: 'Install temporary power service',
                StartDate: new Date('04/01/2019'), Duration: 14,
                Progress: 30, resources: [{ resourceId: 3, resourceUnit: 75
                }],
            },
            {
                TaskID: 11, TaskName: 'Clear the building site', StartDate:
                new Date('04/08/2019'),
                Duration: 9, Progress: 30, Predecessor: '10FS-9', resources:
                [3]
            },
            {
                TaskID: 12, TaskName: 'Sign contract', StartDate: new
                Date('04/12/2019'),
                Duration: 5, resources: [3], Predecessor: '11FS-5'
            },
        ]
    }
];
import * as React from 'react';

```

```

import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective, Inject, Edit,
Selection, Toolbar } from '@syncfusion/ej2-react-gantt';
function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        endDate: 'EndDate',
        duration: 'Duration',
        progress: 'Progress',
        resourceInfo: 'resources',
        child: 'subtasks'
    };
    const resourceFields = {
        id: 'resourceId',
        name: 'resourceName',
        unit: 'Unit',
        group: 'resourceGroup'
    };
    const editSettings = {
        allowAdding: true,
        allowEditing: true,
        allowDeleting: true,
        allowTaskbarEditing: true,
        showDeleteConfirmDialog: true
    };
    const toolbarOptions = ['Add', 'Edit', 'Update', 'Delete',
'Cancel', 'ExpandAll', 'CollapseAll',
    { text: 'Show/Hide Overallocation', tooltipText: 'Show/Hide
Overallocation', id: 'showhidebar' }];
    const labelSettings = {
        rightLabel: 'resources',
        taskLabel: 'Progress'
    };
    const projectStartDate = new Date('03/28/2019');
    const projectEndDate = new Date('05/18/2019');
    let ganttInstance;
    function toolbarClick(args) {
        if (args.item.id === 'showhidebar') {
            ganttInstance.showOverAllocation =
ganttInstance.showOverAllocation ? false : true;
        }
        return <GanttComponent id='root' dataSource = { data }
treeColumnIndex = { 1 } viewType = 'ResourceView' allowSelection = { true }
allowResizing = { true } highlightWeekends = { true } toolbar =
{toolbarOptions } toolbarClick={toolbarClick}
editSettings = {editSettings} projectStartDate = { projectStartDate
} projectEndDate = { projectEndDate }
resourceFields = { resourceFields } taskFields = {taskFields }
labelSettings = {labelSettings }
resources = { resourceCollection } showOverAllocation = {true}
ref={gantt => ganttInstance = gantt} >
        <ColumnsDirective>
            <ColumnDirective field= 'TaskID' visible= {false} >
</ColumnDirective>

```

```

        <ColumnDirective field= 'TaskName' headerText= 'Task Name'
width= '180' > </ColumnDirective>
        <ColumnDirective field= 'work' headerText= 'Work' >
</ColumnDirective>
        <ColumnDirective field= 'Progress' > </ColumnDirective>
        <ColumnDirective field= 'resourceGroup' headerText= 'Group' >
</ColumnDirective>
        <ColumnDirective field= 'StartDate' > </ColumnDirective>
        <ColumnDirective field= 'Duration' > </ColumnDirective>
        </ColumnsDirective>
        <Inject services=[{ Toolbar, Edit, Selection }]/>
        </GanttComponent>
    };
    ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

let resourceCollection: object[] = [
    { resourceId: 1, resourceName: 'Martin Tamer', resourceGroup: 'Planning
Team' },
    { resourceId: 2, resourceName: 'Rose Fuller', resourceGroup: 'Testing
Team' },
    { resourceId: 3, resourceName: 'Margaret Buchanan', resourceGroup:
'Approval Team' }
];
let data = [
    {
        TaskID: 1,
        TaskName: 'Project initiation',
        StartDate: new Date('03/29/2019'),
        EndDate: new Date('04/21/2019'),
        subtasks: [
            {
                TaskID: 2, TaskName: 'Identify site location', StartDate:
new Date('03/29/2019'), Duration: 3,
                Progress: 30, work: 10, resources: [{ resourceId: 1,
resourceUnit: 50 }]
            },
            {
                TaskID: 3, TaskName: 'Perform soil test', StartDate: new
Date('04/03/2019'), Duration: 4,
                resources: [{ resourceId: 1, resourceUnit: 70 }],
                Predecessor: 2, Progress: 30, work: 20
            },
            {
                TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/09/2019'), Duration: 4,
                resources: [{ resourceId: 1, resourceUnit: 25 }],
                Predecessor: 3, Progress: 30, work: 10,
            },
        ]
    },
    {
        TaskID: 5,
        TaskName: 'Project estimation', StartDate: new Date('03/29/2019'),
        EndDate: new Date('04/21/2019'),
    }
]

```

```

        subtasks: [
            {
                TaskID: 6, TaskName: 'Develop floor plan for estimation',
                StartDate: new Date('04/01/2019'),
                Duration: 5, Progress: 30, resources: [{ resourceId: 2,
                resourceUnit: 50 }], work: 30
            },
            {
                TaskID: 7, TaskName: 'List materials', StartDate: new
                Date('04/04/2019'), Duration: 4,
                resources: [{ resourceId: 2, resourceUnit: 40 }],
                Predecessor: '6FS-2', Progress: 30, work: 40
            },
            {
                TaskID: 8, TaskName: 'Estimation approval', StartDate: new
                Date('04/09/2019'),
                Duration: 4, resources: [{ resourceId: 2, resourceUnit: 75
                }], Predecessor: '7FS-1', Progress: 30, work: 60,
            }
        ]
    },
    {
        TaskID: 9,
        TaskName: 'Site work',
        StartDate: new Date('04/04/2019'),
        EndDate: new Date('04/21/2019'),
        subtasks: [
            {
                TaskID: 10, TaskName: 'Install temporary power service',
                StartDate: new Date('04/01/2019'), Duration: 14,
                Progress: 30, resources: [{ resourceId: 3, resourceUnit: 75
                }]
            },
            {
                TaskID: 11, TaskName: 'Clear the building site', StartDate:
                new Date('04/08/2019'),
                Duration: 9, Progress: 30, Predecessor: '10FS-9', resources:
                [3]
            },
            {
                TaskID: 12, TaskName: 'Sign contract', StartDate: new
                Date('04/12/2019'),
                Duration: 5, resources: [3], Predecessor: '11FS-5'
            }
        ]
    }
];
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective, Inject, Edit,
Selection, Toolbar } from '@syncfusion/ej2-react-gantt';
function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        endDate: 'EndDate',

```

```

        duration: 'Duration',
        progress: 'Progress',
        resourceInfo: 'resources',
        child: 'subtasks'
    };
    const resourceFields = {
        id: 'resourceId',
        name: 'resourceName',
        unit: 'Unit',
        group: 'resourceGroup'
    };
    const editSettings = {
        allowAdding: true,
        allowEditing: true,
        allowDeleting: true,
        allowTaskbarEditing: true,
        showDeleteConfirmDialog: true
    };
    const toolbarOptions = ['Add', 'Edit', 'Update', 'Delete',
'Cancel', 'ExpandAll', 'CollapseAll',
    { text: 'Show/Hide Overallocation', tooltipText: 'Show/Hide
Overallocation', id: 'showhidebar' }];
    const labelSettings = {
        rightLabel: 'resources',
        taskLabel: 'Progress'
    };
    const projectStartDate = new Date('03/28/2019');
    const projectEndDate = new Date('05/18/2019');
    let ganttInstance:any;
    function toolbarClick(args) {
        if (args.item.id === 'showhidebar') {
            ganttInstance.showOverAllocation =
ganttInstance.showOverAllocation ? false : true;
        }
        return <GanttComponent id='root' dataSource = { data }
treeColumnIndex = { 1} viewType = 'ResourceView' allowSelection = { true}
        allowResizing = { true} highlightWeekends = { true} toolbar =
{toolbarOptions } toolbarClick={toolbarClick}
        editSettings = {editSettings } projectStartDate = { projectStartDate
} projectEndDate = { projectEndDate }
        resourceFields = { resourceFields } taskFields = {taskFields }
labelSettings = {labelSettings }
        resources = { resourceCollection } showOverAllocation = {true}
ref={gantt => ganttInstance = gantt} >
        <ColumnsDirective>
            <ColumnDirective field= 'TaskID' visible= {false} >
</ColumnDirective>
            <ColumnDirective field= 'TaskName' headerText= 'Task Name'
width= '180' > </ColumnDirective>
            <ColumnDirective field= 'work' headerText= 'Work' >
</ColumnDirective>
            <ColumnDirective field= 'Progress' > </ColumnDirective>
            <ColumnDirective field= 'resourceGroup' headerText= 'Group' >
</ColumnDirective>
            <ColumnDirective field= 'StartDate' > </ColumnDirective>
            <ColumnDirective field= 'Duration' > </ColumnDirective>
        </ColumnsDirective>

```

```

        <Inject services={[ Toolbar, Edit, Selection ]}/>
        </GanttComponent>
    };
    ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008cff;
            height: 40px;
            left: 45%;
            position: absolute;
            top: 45%;
            width: 30%;
        }
    </style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Unassigned task

A task not assigned to any one of the resource are termed as unassigned tasks. The unassigned tasks are grouped with a name as **Unassigned Task** and displayed at the bottom of Gantt data collection . It is validated at load time during Gantt record creation by default based on a task **resourceInfo** mapping property in the Gantt chart data source. If the resource is assigned to the unassigned grouped tasks, the task will be moved as child to the respective resource.

Enable taskbar drag and drop

In Gantt, you can enable taskbar drag and drop between resources by using the [allowTaskbarDragAndDrop](#) property. This allows you to move a taskbar from one resource to another vertically, making it easier to schedule tasks and manage resources.

INDEX.JSX

```

let resourceCollection = [
  { resourceId: 1, resourceName: 'Martin Tamer', resourceGroup: 'Planning Team', isExpand: false },
  { resourceId: 2, resourceName: 'Rose Fuller', resourceGroup: 'Testing Team', isExpand: true },
  { resourceId: 3, resourceName: 'Margaret Buchanan', resourceGroup: 'Approval Team', isExpand: false }
];
let data = [
  {
    TaskID: 1,
    TaskName: 'Project initiation',
    StartDate: new Date('03/29/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      {
        TaskID: 2, TaskName: 'Identify site location', StartDate: new Date('03/29/2019'), Duration: 3,
        Progress: 30, work: 10, resources: [{ resourceId: 1, resourceUnit: 50 }]
      },
      {
        TaskID: 3, TaskName: 'Perform soil test', StartDate: new Date('04/03/2019'), Duration: 4,
        resources: [{ resourceId: 1, resourceUnit: 70 }],
        Predecessor: 2, Progress: 30, work: 20
      },
      {
        TaskID: 4, TaskName: 'Soil test approval', StartDate: new Date('04/09/2019'), Duration: 4,
        resources: [{ resourceId: 1, resourceUnit: 25 }],
        Predecessor: 3, Progress: 30, work: 10,
      },
    ]
  },
  {
    TaskID: 5,
    TaskName: 'Project estimation', StartDate: new Date('03/29/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      {
        TaskID: 6, TaskName: 'Develop floor plan for estimation',
        StartDate: new Date('04/01/2019'),
        Duration: 5, Progress: 30, resources: [{ resourceId: 2, resourceUnit: 50 }], work: 30
      },
      {
        TaskID: 7, TaskName: 'List materials', StartDate: new Date('04/04/2019'), Duration: 4,
        resources: [{ resourceId: 2, resourceUnit: 40 }],
        Predecessor: '6FS-2', Progress: 30, work: 40
      },
      {
        TaskID: 8, TaskName: 'Estimation approval', StartDate: new Date('04/09/2019'),

```

```

        Duration: 4, resources: [{ resourceId: 2, resourceUnit: 75
    }], Predecessor: '7FS-1', Progress: 30, work: 60,
    }
  ],
},
{
  TaskID: 9,
  TaskName: 'Site work',
  StartDate: new Date('04/04/2019'),
  EndDate: new Date('04/21/2019'),
  subtasks: [
    {
      TaskID: 10, TaskName: 'Install temporary power service',
      StartDate: new Date('04/01/2019'), Duration: 14,
      Progress: 30, resources: [{ resourceId: 3, resourceUnit: 75
    }]]
    },
    {
      TaskID: 11, TaskName: 'Clear the building site', StartDate:
      new Date('04/08/2019'),
      Duration: 9, Progress: 30, Predecessor: '10FS-9', resources:
      [3]
    },
    {
      TaskID: 12, TaskName: 'Sign contract', StartDate: new
      Date('04/12/2019'),
      Duration: 5, resources: [3], Predecessor: '11FS-5'
    },
  ],
}
];
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective, Inject, Edit,
Selection, Toolbar } from '@syncfusion/ej2-react-gantt';
function App () {

  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    endDate: 'EndDate',
    duration: 'Duration',
    progress: 'Progress',
    resourceInfo: 'resources',
    expandState: 'isExpand',
    child: 'subtasks'
  };

  const resourceFields = {
    id: 'resourceId',
    name: 'resourceName',
    unit: 'Unit',
    group: 'resourceGroup'
  };

  const editSettings = {
    allowAdding: true,
    allowEditing: true,

```



```

        allowDeleting: true,
        allowTaskbarEditing: true,
        showDeleteConfirmDialog: true
    };
    const toolbarOptions = ['Add', 'Edit', 'Update', 'Delete', 'Cancel',
'ExpandAll', 'CollapseAll'];
    const labelSettings = {
        rightLabel: 'resources',
        taskLabel: 'TaskName'
    };
    const projectStartDate = new Date('03/28/2019');
    const projectEndDate = new Date('05/18/2019');
    return <GanttComponent id='root' dataSource = { data }
treeColumnIndex = {1} viewType = 'ResourceView' allowSelection = { true}
allowResizing = { true} highlightWeekends = { true} toolbar = {
toolbarOptions } allowTaskbarDragAndDrop = {true}
editSettings = { editSettings } projectStartDate = {
projectStartDate } projectEndDate = { projectEndDate }
resourceFields = { resourceFields } taskFields = {taskFields }
labelSettings = { labelSettings }
resources = { resourceCollection } showOverAllocation = {true}
enableMultiTaskbar = {true}>
    <ColumnsDirective>
        <ColumnDirective field= 'TaskID' > </ColumnDirective>
        <ColumnDirective field= 'TaskName' headerText= 'Task Name'
width= '180' > </ColumnDirective>
        <ColumnDirective field= 'work' headerText= 'Work' >
</ColumnDirective>
        <ColumnDirective field= 'Progress' > </ColumnDirective>
        <ColumnDirective field= 'resourceGroup' headerText= 'Group' >
</ColumnDirective>
        <ColumnDirective field= 'StartDate' > </ColumnDirective>
        <ColumnDirective field= 'Duration' > </ColumnDirective>
    </ColumnsDirective>
    <Inject services=[ Toolbar, Edit, Selection ]/>
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

let resourceCollection: object[] = [
    { resourceId: 1, resourceName: 'Martin Tamer', resourceGroup: 'Planning
Team', isExpand: false},
    { resourceId: 2, resourceName: 'Rose Fuller', resourceGroup: 'Testing
Team', isExpand: true},
    { resourceId: 3, resourceName: 'Margaret Buchanan', resourceGroup:
'Approval Team', isExpand: false }
];
let data = [
    {
        TaskID: 1,
        TaskName: 'Project initiation',
        StartDate: new Date('03/29/2019'),
        EndDate: new Date('04/21/2019'),
        subtasks: [

```

```

    {
      TaskID: 2, TaskName: 'Identify site location', StartDate:
new Date('03/29/2019'), Duration: 3,
      Progress: 30, work: 10, resources: [{ resourceId: 1,
resourceUnit: 50 }]
    },
    {
      TaskID: 3, TaskName: 'Perform soil test', StartDate: new
Date('04/03/2019'), Duration: 4,
      resources: [{ resourceId: 1, resourceUnit: 70 }],
      Predecessor: 2, Progress: 30, work: 20
    },
    {
      TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/09/2019'), Duration: 4,
      resources: [{ resourceId: 1, resourceUnit: 25 }],
      Predecessor: 3, Progress: 30, work: 10,
    },
  ]
},
{
  TaskID: 5,
  TaskName: 'Project estimation', StartDate: new Date('03/29/2019'),
  EndDate: new Date('04/21/2019'),
  subtasks: [
    {
      TaskID: 6, TaskName: 'Develop floor plan for estimation',
      StartDate: new Date('04/01/2019'),
      Duration: 5, Progress: 30, resources: [{ resourceId: 2,
resourceUnit: 50 }], work: 30
    },
    {
      TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 4,
      resources: [{ resourceId: 2, resourceUnit: 40 }],
      Predecessor: '6FS-2', Progress: 30, work: 40
    },
    {
      TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/09/2019'),
      Duration: 4, resources: [{ resourceId: 2, resourceUnit: 75
}], Predecessor: '7FS-1', Progress: 30, work: 60,
    }
  ]
},
{
  TaskID: 9,
  TaskName: 'Site work',
  StartDate: new Date('04/04/2019'),
  EndDate: new Date('04/21/2019'),
  subtasks: [
    {
      TaskID: 10, TaskName: 'Install temporary power service',
      StartDate: new Date('04/01/2019'), Duration: 14,
      Progress: 30, resources: [{ resourceId: 3, resourceUnit: 75
}]
    }
  ]
},

```

```

        {
            TaskID: 11, TaskName: 'Clear the building site', StartDate:
new Date('04/08/2019'),
            Duration: 9, Progress: 30, Predecessor: '10FS-9', resources:
[3]
        },
        {
            TaskID: 12, TaskName: 'Sign contract', StartDate: new
Date('04/12/2019'),
            Duration: 5, resources: [3], Predecessor: '11FS-5'
        },
    ]
}
];
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective, Inject, Edit,
Selection, Toolbar } from '@syncfusion/ej2-react-gantt';
function App () {

    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        endDate: 'EndDate',
        duration: 'Duration',
        progress: 'Progress',
        resourceInfo: 'resources',
        expandState: 'isExpand',
        child: 'subtasks'
    };
    const resourceFields = {
        id: 'resourceId',
        name: 'resourceName',
        unit: 'Unit',
        group: 'resourceGroup'
    };
    const editSettings = {
        allowAdding: true,
        allowEditing: true,
        allowDeleting: true,
        allowTaskbarEditing: true,
        showDeleteConfirmDialog: true
    };
    const toolbarOptions = ['Add', 'Edit', 'Update', 'Delete', 'Cancel',
'ExpandAll', 'CollapseAll'];
    const labelSettings = {
        rightLabel: 'resources',
        taskLabel: 'TaskName'
    };
    const projectStartDate = new Date('03/28/2019');
    const projectEndDate = new Date('05/18/2019');
    return <GanttComponent id='root' dataSource = { data }
treeColumnIndex = {1} viewType = 'ResourceView' allowSelection = { true}
allowResizing = { true} highlightWeekends = { true} toolbar = {
toolbarOptions } allowTaskbarDragAndDrop = {true}

```

```

        editSettings = { editSettings } projectStartDate = {
projectStartDate } projectEndDate = { projectEndDate }
        resourceFields = { resourceFields } taskFields = {taskFields }
labelSettings = { labelSettings }
        resources = { resourceCollection } showOverAllocation = {true}
enableMultiTaskbar = {true}>
        <ColumnsDirective>
        <ColumnDirective field= 'TaskID' > </ColumnDirective>
        <ColumnDirective field= 'TaskName' headerText= 'Task Name'
width= '180' > </ColumnDirective>
        <ColumnDirective field= 'work' headerText= 'Work' >
</ColumnDirective>
        <ColumnDirective field= 'Progress' > </ColumnDirective>
        <ColumnDirective field= 'resourceGroup' headerText= 'Group' >
</ColumnDirective>
        <ColumnDirective field= 'StartDate' > </ColumnDirective>
        <ColumnDirective field= 'Duration' > </ColumnDirective>
        </ColumnsDirective>
        <Inject services=[{ Toolbar, Edit, Selection }]/>
        </GanttComponent>
    };
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008cff;
            height: 40px;
            left: 45%;
            position: absolute;
            top: 45%;
            width: 30%;
        }
    </style>
</head>
<body>
    <div id='root'>

```

```

        <div id='loader'>Loading....</div>
      </div>
    </body>
  </html>

```

Filtering in React Gantt component

Filtering allows you to view specific or related records based on filter criteria. This can be done in the Gantt component by using the filter menu and toolbar search. To enable filtering in the Gantt component, set the [allowFiltering](#) to `true`. Menu -filtering support can be configured using the [filterSettings](#) property and toolbar searching can be configured using the [searchSettings](#) property.

To use filter, inject the [Filter](#) module into the Gantt component.

Filter hierarchy modes

The Gantt component supports a set of filtering modes with the [filterSettings.hierarchyMode](#) property. The following are the types of filter hierarchy modes available in the Gantt component:

- **Parent**: This is the default filter hierarchy mode in Gantt. The filtered records are displayed with their parent records. If the filtered records do not have any parent record, then only the filtered records will be displayed.
- **Child**: Displays the filtered records with their child record. If the filtered records do not have any child record, then only the filtered records will be displayed.
- **Both**: Displays the filtered records with their both parent and child records. If the filtered records do not have any parent or child records, then only the filtered records will be displayed.
- **None**: Displays only the filtered records.

INDEX.JSX

```

let DropData = [
  { text: 'Parent', value: 'Parent' },
  { text: 'Child', value: 'Child' },
  { text: 'Both', value: 'Both' },
  { text: 'None', value: 'None' },
];
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { GanttComponent, Inject, Filter } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
  let ganttInstance;
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  function onChange(sel) {
    let mode= sel.value.toString();
    ganttInstance.filterSettings.hierarchyMode = mode;
  }

```

```

        ganttInstance.clearFiltering();
    }
    return(<div>
        <DropDownListComponent dataSource={DropData}
            change={onChange} width= {150}
value="Parent"></DropDownListComponent>
        <GanttComponent dataSource={data} taskFields={taskFields}
            allowFiltering={true} height = '450px' ref={gantt =>
ganttInstance = gantt}>
            <Inject services={[Filter]} />
        </GanttComponent></div>)
    };
    ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

let DropData: any[] = [
    { text: 'Parent', value: 'Parent' },
    { text: 'Child', value: 'Child' },
    { text: 'Both', value: 'Both' },
    { text: 'None', value: 'None' },
];
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { DropDownListComponent, ChangeEventArgs } from "@syncfusion/ej2-react-dropdowns";
import { GanttComponent, Inject, Filter } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App(){
    let ganttInstance: any;
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    function onChange(sel: ChangeEventArgs): void {
        let mode:any = sel.value.toString();
        ganttInstance.filterSettings.hierarchyMode = mode;
        ganttInstance.clearFiltering();
    }
    return(<div>
        <DropDownListComponent dataSource={DropData}
            change={onChange} width= {150}
value="Parent"></DropDownListComponent>
        <GanttComponent dataSource={data} taskFields={taskFields}
            allowFiltering={true} height = '450px' ref={gantt => ganttInstance
= gantt}>
            <Inject services={[Filter]} />
        </GanttComponent></div>)
    };
    ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>
```

Initial filter

To apply the filter at initial rendering, set the filter to `predicate` object in the [filterSettings.columns](#) property.

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Filter } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App(){
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  }
```

```

    };
    const FilterOptions = {
      columns: [
        { field: 'TaskName', matchCase: false, operator: 'startswith',
predicate: 'and', value: 'Identify' },
        { field: 'TaskID', matchCase: false, operator: 'equal', predicate:
'and', value: 2 }]
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
      allowFiltering={true} filterSettings={FilterOptions} height =
'450px'>
      <Inject services={[Filter]} />
    </GanttComponent>
  );
  ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Filter, FilterSettingsModel } from
'@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App(){
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const FilterOptions: FilterSettingsModel = {
    columns: [
      { field: 'TaskName', matchCase: false, operator: 'startswith',
predicate: 'and', value: 'Identify' },
      { field: 'TaskID', matchCase: false, operator: 'equal', predicate:
'and', value: 2 }]
    };
  return <GanttComponent dataSource={data} taskFields={taskFields}
    allowFiltering={true} filterSettings={FilterOptions} height =
'450px'>
    <Inject services={[Filter]} />
  </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />

```



```

<meta name="description" content="Essential JS 2 for React Components"
/>
<meta name="author" content="Syncfusion" />
<link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
<link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
<script src="systemjs.config.js"></script>
<style>
    #loader {
        color: #008cff;
        height: 40px;
        left: 45%;
        position: absolute;
        top: 45%;
        width: 30%;
    }
</style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Filter operators

The filter operator for a column can be defined in the `filterSettings.columns.operator` property.

The available operators and their supported data types are:

Operator | Description | Supported Types

startswith | Checks whether the value begins with the specified value. | String

endswith | Checks whether the value ends with the specified value. | String

contains | Checks whether the value contains the specified value. | String

equal | Checks whether the value is equal to the specified value. | String | Number | Boolean | Date

notequal | Checks for the values that are not equal to the specified value. | String | Number | Boolean | Date

greaterthan | Checks whether the value is greater than the specified value. | Number | Date

greaterthanorequal | Checks whether the value is greater than or equal to the specified value. | Number | Date

lessthan | Checks whether the value is less than the specified value. | Number | Date

lessthanorequal | Checks whether the value is less than or equal to the specified value. | Number | Date

By default, the `filterSettings.columns.operator` value is `equal`

Diacritics

By default, the Gantt component ignores the diacritic characters while filtering. To include diacritic characters, set the `filterSettings.ignoreAccent` to `true`.

In the following sample, type **Perform** in the `TaskName` column to filter diacritic characters.

INDEX.JSX

```
let data = [
  {
    TaskID: 1,
    TaskName: 'Project initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      {TaskID: 2, TaskName: 'Identify site location', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
      {TaskID: 3, TaskName: 'Perform soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
      {TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
    ]
  },
  {
    TaskID: 5,
    TaskName: 'Project estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      {TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50, resources:
[4]},
      {TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50},
      {TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 }
    ]
  }
];

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Filter } from '@syncfusion/ej2-react-
gantt';

function App(){
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const FilterOptions = {
```

```

        ignoreAccent: true
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
        allowFiltering={true} filterSettings={FilterOptions} height =
'450px'>
        <Inject services={[Filter]} />
    </GanttComponent>
    };
    ReactDOM.render(<App />, document.getElementById('root'));
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Filter } from '@syncfusion/ej2-react-gantt';
class App extends React.Component {
    taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    FilterOptions = {
        ignoreAccent: true
    };
    render() {
        return <GanttComponent dataSource={data}
taskFields={this.taskFields} allowFiltering={true}
filterSettings={this.FilterOptions} height='450px'>
            <Inject services={[Filter]} />
        </GanttComponent>;
    }
}
;
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

let data: Object[] = [
    {
        TaskID: 1,
        TaskName: 'Project initiation',
        StartDate: new Date('04/02/2019'),
        EndDate: new Date('04/21/2019'),
        subtasks: [
            {TaskID: 2, TaskName: 'Identify site location', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
            {TaskID: 3, TaskName: 'Perform soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
            {TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
        ]
    },
    {
        TaskID: 5,
        TaskName: 'Project estimation',
    }
]

```

```

        StartDate: new Date('04/02/2019'),
        EndDate: new Date('04/21/2019'),
        subtasks: [
            {TaskID: 6, TaskName: 'Develöp floor plan for estimation',
StartDate: new Date('04/04/2019'),Duration: 3, Progress: 50, resources:
[4]},
            {TaskID: 7, TaskName: 'List matèrials', StartDate: new
Date('04/04/2019'),Duration: 3, Progress: 50},
            {TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'),Duration: 3, Progress: 50 }
        ]
    }
    ]];

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Filter, FilterSettingsModel } from
'@syncfusion/ej2-react-gantt';

function App(){
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const FilterOptions: FilterSettingsModel = {
        ignoreAccent:true
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
        allowFiltering={true} filterSettings={FilterOptions} height =
'450px'>
        <Inject services={[Filter]} />
        </GanttComponent>
    };
    ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />

```

```

<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
<script src="systemjs.config.js"></script>
<style>
  #loader {
    color: #008cff;
    height: 40px;
    left: 45%;
    position: absolute;
    top: 45%;
    width: 30%;
  }
</style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Filtering a specific column by method

You can filter the columns dynamically by using the [filterByColumn](#) method.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { GanttComponent, Inject, Filter } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  let ganttInstance;
  function clickHandler() {
    ganttInstance.filterByColumn('TaskName', 'startswith', 'Perf');
  }
  return (
    <div>
      <ButtonComponent onClick={clickHandler}>Filter Column</ButtonComponent>
      <GanttComponent dataSource={data} taskFields={taskFields}
        allowFiltering={true} height='450px' ref={gantt => ganttInstance = gantt}>
        <Inject services={[Filter]} />
      </GanttComponent></div>
    );
}
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { GanttComponent, Inject, Filter } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    let ganttInstance;
    function clickHandler() {
        ganttInstance.filterByColumn('TaskName', 'startswith', 'Perf');
    }
    return (
        <div>
            <ButtonComponent onClick={clickHandler}>Filter Column</ButtonComponent>
            <GanttComponent dataSource={data} taskFields={taskFields}
            allowFiltering={true} height='450px' ref={gantt => ganttInstance = gantt}>
                <Inject services={[Filter]} />
            </GanttComponent></div>
        );
    };
    ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components" />
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
    rel="stylesheet" type="text/css"/>
    <link
    href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
    rel="stylesheet" />
    <script
    src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
    ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008cff;
            height: 40px;
            left: 45%;
            position: absolute;

```

```

        top: 45%;
        width: 30%;
    }
</style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Clear filtered columns

You can clear all the filtering conditions done in the Gantt component by using the [clearFiltering](#) method. The following code snippet explains the above behavior.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { GanttComponent, Inject, Filter } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    let ganttInstance;
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const FilterOptions = {
        columns: [
            { field: 'TaskName', matchCase: false, operator: 'startswith', predicate: 'and', value: 'perfor' },
            { field: 'TaskID', matchCase: false, operator: 'equal', predicate: 'and', value: 3 }
        ]
    };
    function clickHandler() {
        ganttInstance.clearFiltering();
    }
    return (<div>
        <ButtonComponent onClick={clickHandler}>Clear Filter</ButtonComponent>
        <GanttComponent dataSource={data} taskFields={taskFields} filterSettings={FilterOptions}
            allowFiltering={true} height = '450px' ref={gantt => ganttInstance = gantt}>
            <Inject services={[Filter]} />
        </GanttComponent></div>)
    );
    ReactDOM.render(<App />, document.getElementById('root'));
}

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { GanttComponent, Inject, Filter, FilterSettingsModel } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App(){
    let ganttInstance : any;
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const FilterOptions: FilterSettingsModel = {
        columns: [
            { field: 'TaskName', matchCase: false, operator: 'startswith', predicate: 'and', value: 'perfor' },
            { field: 'TaskID', matchCase: false, operator: 'equal', predicate: 'and', value: 3 } ]
    };
    function clickHandler(){
        ganttInstance .clearFiltering();
    }
    return(<div>
        <ButtonComponent onClick= {clickHandler}>Clear
    Filter</ButtonComponent>
        <GanttComponent dataSource={data} taskFields={taskFields}
    filterSettings={FilterOptions}
        allowFiltering={true} height = '450px' ref={gantt => ganttInstance
    = gantt}>
            <Inject services={[Filter]} />
        </GanttComponent></div>)
    };
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components" />
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
    rel="stylesheet" type="text/css"/>
    <link
    href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
    rel="stylesheet" />

```



```

<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Custom component in filter menu

The [column.filter.ui](#) is used to add custom filter components to a particular column.

To implement a custom filter UI, define the following functions:

- **create**: Creates custom component.
- **write**: Wire events for custom component.
- **read**: Read the filter value from custom component.

In the following sample, the dropdown is used as a custom component in the TaskName column.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Filter } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
import { ColumnsDirective, ColumnDirective } from '@syncfusion/ej2-react-gantt';
import { createElement } from '@syncfusion/ej2-base';
import { DataManager } from '@syncfusion/ej2-data';
import { DropDownList } from '@syncfusion/ej2-dropdowns';
function App () {

  taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks',
    parentID: 'ParentId'
  }

```

```

    };
    Filter = {
      ui: {
        create: (args) => {
          const flValInput = createElement('input', { className:
'flm-input' });
          args.target.appendChild(flValInput);
          dropInstance = new DropDownList({
            dataSource: new DataManager(data),
            fields: { text: 'TaskName', value: 'TaskName' },
            placeholder: 'Select a value',
            popupHeight: '200px'
          });
          dropInstance.appendTo(flValInput);
        },
        read: (args) => {
          args.fltrObj.filterByColumn(args.column.field,
args.operator, dropInstance.value);
        },
        write: (args) => {
          dropInstance.value = args.filteredValue;
        }
      }
    };

    return <GanttComponent dataSource={data} taskFields={taskFields}
allowFiltering={true} height='450px'>
<ColumnsDirective>
  <ColumnDirective field="TaskID"></ColumnDirective>
  <ColumnDirective field="TaskName" headerText="Job Name"
filter={Filter}></ColumnDirective>
  <ColumnDirective field="StartDate"></ColumnDirective>
  <ColumnDirective field="Duration"></ColumnDirective>
  <ColumnDirective field="Progress"></ColumnDirective>
  <ColumnDirective field="Predecessor"></ColumnDirective>
</ColumnsDirective>
<Inject services={[Filter]}/>
  </GanttComponent>;
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Filter, IFilter } from '@syncfusion/ej2-
react-gantt';
import { data } from './datasource';
import { ColumnsDirective, ColumnDirective } from '@syncfusion/ej2-react-
gantt';
import { createElement } from '@syncfusion/ej2-base';
import { DataManager } from '@syncfusion/ej2-data';
import { DropDownList } from '@syncfusion/ej2-dropdowns';
function App () {

```

```

    const taskFields: any = {
      id: 'TaskID',
      name: 'TaskName',
      startDate: 'StartDate',
      duration: 'Duration',
      progress: 'Progress',
      child: 'subtasks',
      parentID: 'ParentId'
    };
    let dropInstance:any;
    const Filters : IFilter = {
      ui: {
        create: (args: { target: Element, column: object }) => {
          const flValInput: HTMLElement = createElement('input', { className:
'flm-input' });
          args.target.appendChild(flValInput);
          dropInstance = new DropDownList({
            dataSource: new DataManager(data),
            fields: { text: 'TaskName', value: 'TaskName' },
            placeholder: 'Select a value',
            popupHeight: '200px'
          });
          dropInstance.appendTo(flValInput);
        },
        read: (args: { target: Element, column: any, operator: string, fltrObj:
Filter }) => {
          args.fltrObj.filterByColumn(args.column.field, args.operator,
dropInstance.value);
        },
        write: (args: {
          column: object, target: Element, parent: any,
          filteredValue: number | string }) => {
          dropInstance.value = args.filteredValue;
        }
      }
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
      allowFiltering={true} height = '450px'>
      <ColumnsDirective>
        <ColumnDirective field="TaskID" ></ColumnDirective>
        <ColumnDirective
          field="TaskName"
          headerText="Job Name"
          filter={Filters}
        ></ColumnDirective>
        <ColumnDirective field="StartDate"></ColumnDirective>
        <ColumnDirective field="Duration"></ColumnDirective>
        <ColumnDirective field="Progress"></ColumnDirective>
        <ColumnDirective field="Predecessor"></ColumnDirective>
      </ColumnsDirective>
      <Inject services={[Filter]} />
    </GanttComponent>
  );
  ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Sorting in React Gantt component

Sorting enables you to sort data in the ascending or descending order. To sort a column, click the column header.

To sort multiple columns, press and hold the CTRL key and click the column header. You can clear sorting of any one of the multi-sorted columns by pressing and holding the SHIFT key and clicking the specific column header.

To enable sorting in the Gantt component, set the [allowSorting](#) property to `true`. Sorting options can be configured through the [sortSettings](#) property.

To sort, inject the [Sort](#) module into the Gantt component.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Sort } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {

```

```

const taskFields = {
  id: 'TaskID',
  name: 'TaskName',
  startDate: 'StartDate',
  duration: 'Duration',
  progress: 'Progress',
  child: 'subtasks'
};
return <GanttComponent dataSource={data} taskFields={taskFields}
  allowSorting={true} height='450px'>
  <Inject services={[Sort]} />
</GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Sort } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  return <GanttComponent dataSource={data} taskFields={taskFields}
    allowSorting={true} height='450px'>
    <Inject services={[Sort]} />
  </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>

```

```

<script src="systemjs.config.js"></script>
<style>
  #loader {
    color: #008cff;
    height: 40px;
    left: 45%;
    position: absolute;
    top: 45%;
    width: 30%;
  }
</style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

* Gantt columns are sorted in the ascending order. If you click the already sorted column, the sort direction toggles.

* To disable sorting for a particular column, set the [columns.allowSorting](#) property to `false`.

Sorting column on Gantt initialization

The Gantt component can be rendered with sorted columns initially, and this can be achieved by using the [sortSettings](#) property. You can add columns that are sorted initially in the [sortSettings.columns](#) collection defined with [field](#) and [direction](#) properties. The following code example shows how to add the sorted column to Gantt initialization.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Sort } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const sortingOptions = { columns: [{ field: 'TaskID', direction: 'Descending' }] };
  return <GanttComponent dataSource={data} taskFields={taskFields}
    sortSettings={sortingOptions} allowSorting={true} height='450px'>
    <Inject services={[Sort]} />
  </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Sort, SortSettingsModel } from
 '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const sortingOptions: SortSettingsModel = { columns: [{ field: 'TaskID',
direction: 'Descending' }] };
    return <GanttComponent dataSource={data} taskFields={taskFields}
sortSettings={sortingOptions} allowSorting={true} height='450px'>
        <Inject services={[Sort]} />
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008cff;
            height: 40px;
            left: 45%;
            position: absolute;
            top: 45%;
            width: 30%;
        }
    </style>
</head>
<body>
    <div id='root'>
```

```

        <div id='loader'>Loading....</div>
      </div>
</body>
</html>

```

Sorting column dynamically

Columns in the Gantt component can be sorted dynamically using the [sortColumn](#) method. The following code example demonstrates how to invoke the [sortColumn](#) method by clicking the custom button.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { GanttComponent, Inject, Sort } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App () {
  let gantt;
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  function clickHandler() {
    gantt.sortModule.sortColumn('TaskID', "Descending", false);
  }
  return (
    <div>
      <ButtonComponent onClick={clickHandler}>Sort
      Column</ButtonComponent>
      <GanttComponent dataSource={data} ref={g => gantt = g}
      taskFields={taskFields}
      allowSorting={true} height='450px'>
        <Inject services={[Sort]} />
      </GanttComponent></div>
    );
}
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { GanttComponent, Inject, Sort } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App () {
  let gantt: any;
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',

```



```

        progress: 'Progress',
        child: 'subtasks'
    };
    function clickHandler() {
        gantt.sortModule.sortColumn('TaskID', "Descending", false);
    }
    return (<div>
        <ButtonComponent onClick={clickHandler}>Sort
Column</ButtonComponent>
        <GanttComponent dataSource={data} ref={g => gantt = g}
taskFields={taskFields}
            allowSorting={true} height='450px'>
                <Inject services={[Sort]} />
            </GanttComponent></div>)
    };
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008cff;
            height: 40px;
            left: 45%;
            position: absolute;
            top: 45%;
            width: 30%;
        }
    </style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Clear all the sorted columns dynamically

In the Gantt component, you can clear all the sorted columns and return to previous position using the [clearSorting](#) public method. The following code snippet shows how to clear all the sorted columns by clicking the custom button.

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { GanttComponent, Inject, Sort } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    dependency: 'Predecessor',
    child: 'subtasks',
  };
  let ganttInstance;
  const sortingOptions = { columns: [{ field: 'TaskID', direction: 'Descending' }] };
  function clickHandler() {
    ganttInstance.clearSorting();
  }
  return (
    <div>
      <ButtonComponent onClick= { clickHandler}>Clear
        Sorting</ButtonComponent>
      <GanttComponent dataSource={data} taskFields={taskFields}
        ref={gantt => ganttInstance = gantt} allowSorting={true}
        sortSettings={sortingOptions} height='450px'>
        <Inject services={[Sort]} />
      </GanttComponent></div>
    );
}
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { GanttComponent, Inject, Sort, SortSettingsModel } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    dependency: 'Predecessor',
    child: 'subtasks',
  };
  let ganttInstance;
  const sortingOptions = { columns: [{ field: 'TaskID', direction: 'Descending' }] };
  function clickHandler() {
    ganttInstance.clearSorting();
  }
  return (
    <div>
      <ButtonComponent onClick= { clickHandler}>Clear
        Sorting</ButtonComponent>
      <GanttComponent dataSource={data} taskFields={taskFields}
        ref={gantt => ganttInstance = gantt} allowSorting={true}
        sortSettings={sortingOptions} height='450px'>
        <Inject services={[Sort]} />
      </GanttComponent></div>
    );
}
ReactDOM.render(<App />, document.getElementById('root'));
```

```

    };
    let ganttInstance: any;
    const sortingOptions: SortSettingsModel = { columns: [{ field: 'TaskID',
direction: 'Descending' }] };
    function clickHandler() {
      ganttInstance.clearSorting();
    }

    return (<div>
      <ButtonComponent onClick= { clickHandler}>Clear
Sorting</ButtonComponent>
      <GanttComponent dataSource={data} taskFields={taskFields}
ref={gantt => ganttInstance = gantt} allowSorting={true}
sortSettings={sortingOptions} height='450px'>
        <Inject services={ [Sort] } />
      </GanttComponent></div>)
  };
  ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Sorting events

During the sort action, the Gantt component triggers two events. The [actionBegin](#) event triggers before the sort action starts, and the [actionComplete](#) event triggers after the sort action is completed.

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Sort } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        dependency: 'Predecessor',
        child: 'subtasks'
    };
    function actionHandler (args) {
        alert(args.requestType + ' ' + args.type);
    }
    return <GanttComponent dataSource={data} taskFields={taskFields}
allowSorting={true}
        actionBegin={actionHandler} actionComplete={actionHandler}
height='450px'>
        <Inject services={[Sort]} />
    </GanttComponent>
    </App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Sort } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        dependency: 'Predecessor',
        child: 'subtasks'
    };
    function actionHandler (args: any) {
        alert(args.requestType + ' ' + args.type);
    }
    return <GanttComponent dataSource={data} taskFields={taskFields}
allowSorting={true}
        actionBegin={actionHandler} actionComplete={actionHandler}
height='450px'>
        <Inject services={[Sort]} />
    </App />, document.getElementById('root'));
```

```

    </GanttComponent>
  };
  ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

The `args.requestType` is the current action name. For example, for sorting the `args.requestType`, value is **sorting**.

Custom Sorting

In Gantt, you can sort custom columns of different types like string, numeric, etc., By adding the custom column in the column collection, you can perform initial sort using the `sortSettings` or you can also sort the column dynamically by a button click.

The following code snippets explains how to achieve this.

INDEX.JSX

```

let GanttData = [

```

```

    {
      TaskID: 1,
      TaskName: 'Project Initiation',
      StartDate: new Date('04/02/2019'),
      EndDate: new Date('04/21/2019'),
      subtasks: [
        { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50, /*CustomColumn:
'BCustomColumn'*/ CustomColumn: '2' },
        { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50, /*CustomColumn:
'BCustomColumn'*/ CustomColumn: '3' },
        { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50, /*CustomColumn:
'BCustomColumn'*/ CustomColumn: '4' },
      ]
    },
    {
      TaskID: 5,
      TaskName: 'Project Estimation',
      StartDate: new Date('04/02/2019'),
      EndDate: new Date('04/21/2019'),
      subtasks: [
        { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50,
/*CustomColumn: 'BCustomColumn'*/ CustomColumn: '6' },
        { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50, /*CustomColumn:
'BCustomColumn'*/ CustomColumn: '1' },
        { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50, /*CustomColumn:
'BCustomColumn'*/ CustomColumn: '5' }
      ]
    },
  ],
];
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { GanttComponent, Inject, Sort, ColumnsDirective, ColumnDirective }
from '@syncfusion/ej2-react-gantt';
function App() {
  let ganttInstance;
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  function clickHandler() {
    ganttInstance.sortModule.sortColumn('CustomColumn', 'Ascending', false);
  }
  return (<div>
    <ButtonComponent onClick={clickHandler}>Sort Custom
Column</ButtonComponent>

```

```

    <GanttComponent dataSource={GanttData} ref={gantt => ganttInstance =
gantt} taskFields={taskFields}
      allowSorting={true} height='450px'>
      <ColumnsDirective>
        <ColumnDirective field='TaskID'></ColumnDirective>
        <ColumnDirective field='TaskName' width='250'></ColumnDirective>
        <ColumnDirective field='StartDate'></ColumnDirective>
        <ColumnDirective field='EndDate'></ColumnDirective>
        <ColumnDirective field='Duration'></ColumnDirective>
        <ColumnDirective field='Progress'></ColumnDirective>
        <ColumnDirective field='CustomColumn'></ColumnDirective>
      </ColumnsDirective>
      <Inject services={[Sort]} />
    </GanttComponent></div>
  );
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

let GanttData = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50, /*CustomColumn:
'BCustomColumn'*/ CustomColumn: '2' },
      { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50, /*CustomColumn:
'BCustomColumn'*/ CustomColumn: '3' },
      { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50, /*CustomColumn:
'BCustomColumn'*/ CustomColumn: '4' },
    ],
  },
  {
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50,
/*CustomColumn: 'BCustomColumn'*/ CustomColumn: '6' },
      { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50, /*CustomColumn:
'BCustomColumn'*/ CustomColumn: '1' },
      { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50, /*CustomColumn:
'BCustomColumn'*/ CustomColumn: '5' }
    ],
  },
];
import * as React from 'react';

```

```

import * as ReactDOM from 'react-dom';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { GanttComponent, Inject, Sort, ColumnsDirective, ColumnDirective }
from '@syncfusion/ej2-react-gantt';
function App(){
let ganttInstance: any;
const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
};
function clickHandler() {
    ganttInstance.sortModule.sortColumn('CustomColumn', 'Ascending', false);
}
return (<div>
    <ButtonComponent onClick={clickHandler}>Sort Custom
Column</ButtonComponent>
    <GanttComponent dataSource={GanttData} ref={gantt => ganttInstance =
gantt} taskFields={taskFields}
        allowSorting={true} height='450px'>
        <ColumnsDirective>
            <ColumnDirective field='TaskID'></ColumnDirective>
            <ColumnDirective field='TaskName' width='250'></ColumnDirective>
            <ColumnDirective field='StartDate'></ColumnDirective>
            <ColumnDirective field='EndDate'></ColumnDirective>
            <ColumnDirective field='Duration'></ColumnDirective>
            <ColumnDirective field='Progress'></ColumnDirective>
            <ColumnDirective field='CustomColumn'></ColumnDirective>
        </ColumnsDirective>
        <Inject services={[Sort]} />
    </GanttComponent></div>)
);
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>

```



```

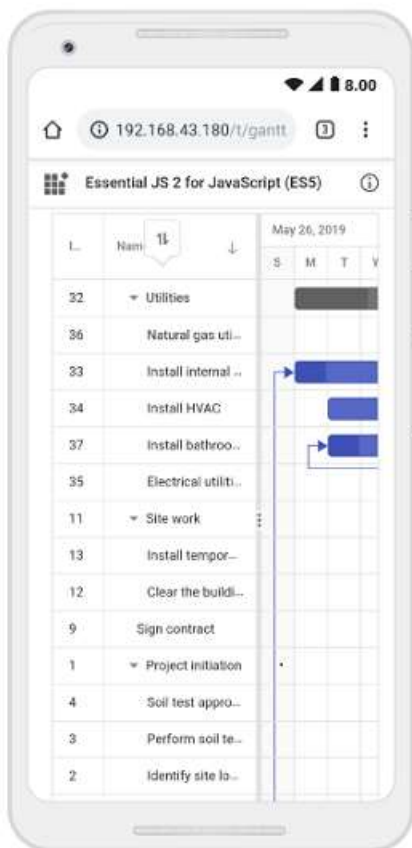
<script src="systemjs.config.js"></script>
<style>
  #loader {
    color: #008cff;
    height: 40px;
    left: 45%;
    position: absolute;
    top: 45%;
    width: 30%;
  }
</style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Touch interaction

To perform **tap** action on a column header, trigger [sorting](#) operation to the selected column. A popup is displayed for multi-column sorting. To sort multiple columns, tap the popup, and then tap the desired column headers.

The following screenshot shows Gantt touch sorting,



Selection in React Gantt component

Selection provides an option to highlight a row or a cell. It can be done using arrow keys or by scrolling down the mouse. To disable selection in the Gantt component, set the [allowSelection](#) to `false`.

To select data, inject the [Selection](#) module into the Gantt control.

The Gantt component supports two types of selection that can be set by using the [selectionSettings.type](#) property. They are:

- **Single:** Sets a single value by default and allows only selection of a single row or a cell.
- [Link to the Video](#): Allows you to select multiple rows or cells. To perform the multi-selection, press and hold the CTRL key and click the desired rows or cells.

To get start quickly with Selection and to know its type and behaviors, you can check on this video

Selection mode

The Gantt component supports three types of selection modes that can be set by using the [selectionSettings.mode](#). They are:

- **Row:** Allows you to select only rows, and the row value is set by default.
- **Cell:** Allows you to select only cells.
- **Both:** Allows you to select rows and cells at the same time.

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Selection } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const settings = {
        mode: 'Both'
    };
    return <GanttComponent dataSource={data} allowSelection={true}
taskFields={taskFields} selectionSettings={settings} height = '450px'>
        <Inject services={[Selection]} />
        </GanttComponent>
    );
}
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
```

```
import { GanttComponent, Inject, Selection, SelectionSettingsModel } from
'@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App(){
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const settings: SelectionSettingsModel = {
    mode: 'Both'
  };
  return <GanttComponent dataSource={data} allowSelection={true}
taskFields={taskFields} selectionSettings={settings} height = '450px'>
    <Inject services={[Selection]} />
    </GanttComponent>
  );
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
```

```

    </div>
  </body>
</html>

```

Toggle selection

The toggle selection allows you to select and deselect a specific row or cell. To enable toggle selection, set the `enableToggle` property of the selectionSettings to `true`. If you click the selected row or cell, then it will be deselected and vice versa.

By default, the `enableToggle` property is set to `false`.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { GanttComponent, Inject, Selection } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  let ganttInstance;
  const settings = {
    mode: 'Row',
    type: 'Multiple',
    enableToggle: true
  };
  function clickHandler() {
    ganttInstance.selectionSettings.enableToggle = false;
  }
  return (
    <div>
      <ButtonComponent onClick={ clickHandler}>Disable
      Toggle</ButtonComponent>
      <GanttComponent dataSource={data} ref={gantt => ganttInstance =
      gantt} allowSelection={true} taskFields={taskFields}
      selectionSettings={settings} height = '450px'>
        <Inject services={[Selection]} />
      </GanttComponent> </div>
    );
  ReactDOM.render(<App />, document.getElementById('root'));
}

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { GanttComponent, Inject, Selection, SelectionSettingsModel } from
 '@syncfusion/ej2-react-gantt';

```

```

import { data } from './datasource';
function App() {
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  let ganttInstance: any;
  const settings: SelectionSettingsModel = {
    mode: 'Row',
    type: 'Multiple',
    enableToggle: true
  };
  function clickHandler() {
    ganttInstance.selectionSettings.enableToggle = false;
  }
  return (
    <div>
      <ButtonComponent onClick={ clickHandler}>Disable
      Toggle</ButtonComponent>
      <GanttComponent dataSource={data} ref={gantt => ganttInstance =
      gantt} allowSelection={true} taskFields={taskFields}
      selectionSettings={settings} height = '450px'>
        <Inject services={[Selection]} />
      </GanttComponent> </div>
    );
  };
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
  />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
  rel="stylesheet" type="text/css"/>
  <link
  href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
  rel="stylesheet" />
  <script
  src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
  ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008c8c;
      height: 40px;
      left: 45%;
      position: absolute;

```

```

        top: 45%;
        width: 30%;
    }
</style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Clear selection

You can clear the selected cells and selected rows by using a method called [clearSelection](#). The following code example demonstrates how to clear the selected rows in Gantt Chart.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { GanttComponent, Inject, Selection } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    let ganttInstance;
    const settings = {
        mode: 'Row',
        type: 'Multiple'
    };
    function clickHandler() {
        ganttInstance.selectionModule.selectRows([1, 3, 5]); // passing the
        record index as array collection
    }
    function clickHandler1() {
        ganttInstance.clearSelection(); // Clear the selected rows
    }
    return (<div>
        <ButtonComponent onClick= { clickHandler}>Select Multiple
        Rows</ButtonComponent>
        <ButtonComponent onClick= { clickHandler1}>Clear
        Selection</ButtonComponent>
        <GanttComponent dataSource={data} ref={gantt => ganttInstance =
        gantt} allowSelection={true} taskFields={taskFields}
        selectionSettings={settings} height = '450px'>
        <Inject services={[Selection]} />
        </GanttComponent></div>)
};

```

```
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { GanttComponent, Inject, Selection, SelectionSettingsModel } from
 '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    let ganttInstance: any;
    const settings: SelectionSettingsModel = {
        mode: 'Row',
        type: 'Multiple'
    };
    function clickHandler() {
        ganttInstance.selectionModule.selectRows([1, 3, 5]); // passing the
        record index as array collection
    }
    function clickHandler1() {
        ganttInstance.clearSelection(); // Clear the selected rows
    }
    return (
        <div>
            <ButtonComponent onClick= { clickHandler}>Select Multiple
        </ButtonComponent>
            <ButtonComponent onClick= { clickHandler1}>Clear
        </ButtonComponent>
            <GanttComponent dataSource={data} ref={gantt => ganttInstance =
        gantt} allowSelection={true} taskFields={taskFields}
        selectionSettings={settings} height = '450px'>
                <Inject services={ [Selection]} />
            </GanttComponent>
        </div>
    );
    ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
```

```

    <link href="https://cdn.syncfusion.com/ej2/material.css"
    rel="stylesheet" type="text/css"/>
    <link
    href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
    rel="stylesheet" />
    <script
    src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
    ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008cff;
            height: 40px;
            left: 45%;
            position: absolute;
            top: 45%;
            width: 30%;
        }
    </style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Get selected row indexes and records

You can get the selected row indexes by using the [getSelectedRowIndex](#) method. And by using [getSelectedRecords](#) method, you can get the selected record details.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Selection } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const settings = {
        mode: 'Row',
        type: 'Multiple'
    };
    let ganttInstance ;
    function rowSelected(args) {
        let selectedRowIndex =
        ganttInstance.selectionModule.getSelectedRowIndex(); // get the selected
        row indexes.
    }

```



```

        alert(selectedrowindex); // to alert the selected row indexes.
        let selectedrecords =
ganttInstance.selectionModule.getSelectedRecords(); // get the selected
records.
        console.log(selectedrecords); // to print the selected records in
console window.
    }

    return <GanttComponent dataSource={data} allowSelection={true}
taskFields={taskFields}
        selectionSettings={settings} rowSelected={rowSelected} height =
'450px' ref={gantt => ganttInstance = gantt}>
        <Inject services={[Selection]} />
        </GanttComponent>
    );
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Selection, SelectionSettingsModel } from
'@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App(){
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const settings: SelectionSettingsModel = {
        mode: 'Row',
        type: 'Multiple'
    };
    let ganttInstance :any;
    function rowSelected(args:any) {
        let selectedrowindex: number[] =
ganttInstance.selectionModule.getSelectedRowIndex(); // get the selected
row indexes.
        alert(selectedrowindex); // to alert the selected row indexes.
        let selectedrecords: Object[] =
ganttInstance.selectionModule.getSelectedRecords(); // get the selected
records.
        console.log(selectedrecords); // to print the selected records in
console window.
    }

    return <GanttComponent dataSource={data} allowSelection={true}
taskFields={taskFields}
        selectionSettings={settings} rowSelected={rowSelected} height =
'450px' ref={gantt => ganttInstance = gantt}>
        <Inject services={[Selection]} />
        </GanttComponent>
    );
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Multiple Selection based on condition

You can select multiple rows based on condition by using the [selectRows](#) method.

In the following code, the rows which contains **TaskId** value as 3 and 4 are selected at initial rendering.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Selection } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App () {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',

```

```

    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const settings = {
    mode: 'Row',
    type: 'Multiple'
  };
  let ganttInstance ;
  function dataBound(args) {
    var rowIndexes = [];
    ganttInstance.treeGrid.grid.dataSource.forEach((data, index) => {
      if (data.TaskID === 3 || data.TaskID === 4) {
        rowIndexes.push(index);
      }
    });
    ganttInstance.selectRows(rowIndexes);
  }
  return <GanttComponent dataSource={data} allowSelection={true}
taskFields={taskFields}
  selectionSettings={settings} dataBound={dataBound} height = '450px'
ref={gantt => ganttInstance = gantt}>
    <Inject services={[Selection]} />
  </GanttComponent>
</>
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Selection, SelectionSettingsModel } from
'@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App () {
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const settings: SelectionSettingsModel = {
    mode: 'Row',
    type: 'Multiple'
  };
  let ganttInstance :any;
  function dataBound(args) {
    var rowIndexes = [];
    ganttInstance.treeGrid.grid.dataSource.forEach((data, index) => {
      if (data.TaskID === 3 || data.TaskID === 4) {
        rowIndexes.push(index);
      }
    });
    ganttInstance.selectRows(rowIndexes);
  }

```

```

    }
    return <GanttComponent dataSource={data} allowSelection={true}
taskFields={taskFields}
    selectionSettings={settings} dataBound={dataBound} height = '450px'
ref={gantt =>ganttInstance = gantt}>
    <Inject services={[Selection]} />
    </GanttComponent>
  };
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

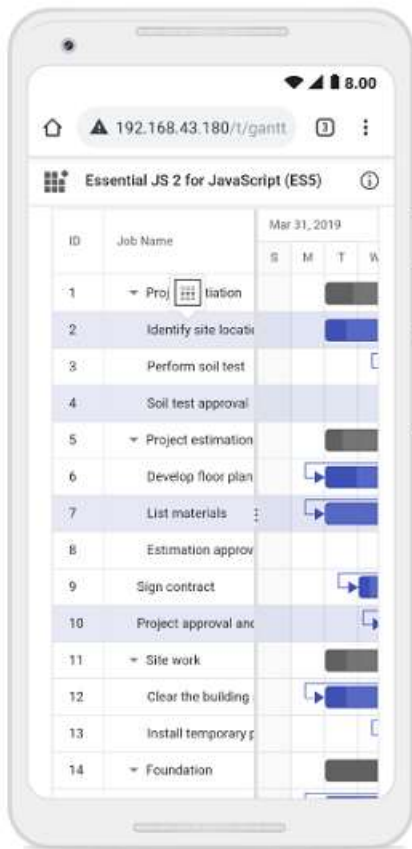
```

Touch interaction

When you **tap** gantt row, tapped row will be selected.

Single selection : To select a single row or cell, perform **single tap** on it.

Multiple selection : To perform multiple selection, **tap** on the multiple selection popup, and then tap the desired rows or cells.



See Also

- [Touch interaction](#)

Rows in React Gantt component

Row represents a task information from the data source, and it is possible to perform the following actions in Gantt rows.

Row height

It is possible to change the height of the row in Gantt by setting row height in pixels to the [rowHeight](#) property. The following code example explains how to change the row height in Gantt at load time.

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
}
```

```

    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
    rowHeight={60} height = '450px'>
      </GanttComponent>
    };
    ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
    rowHeight={60} height = '450px'>
      </GanttComponent>
    };
    ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008cff;
            height: 40px;
            left: 45%;
            position: absolute;
            top: 45%;
            width: 30%;

```

```
    }  
  </style>  
</head>  
<body>  
  <div id='root'>  
    <div id='loader'>Loading....</div>  
  </div>  
</body>  
</html>
```

Expand/Collapse Row

In Gantt parent tasks are expanded/collapsed by using expand/collapse icons, expand all/collapse all toolbar items and by using public methods. By default all tasks in Gantt was rendered in expanded state but we can change this status in Gantt.

Collapse all tasks at Gantt load

All tasks available in Gantt was rendered in collapsed state by setting [collapseAllParentTasks](#) property as **true**. The following code example shows how to use this property.

INDEX.JSX

```
import * as React from 'react';  
import * as ReactDOM from 'react-dom';  
import { GanttComponent } from '@syncfusion/ej2-react-gantt';  
import { data } from './datasource';  
function App () {  
  const taskFields = {  
    id: 'TaskID',  
    name: 'TaskName',  
    startDate: 'StartDate',  
    duration: 'Duration',  
    progress: 'Progress',  
    child: 'subtasks'  
  };  
  return <GanttComponent dataSource={data} taskFields={taskFields}  
    collapseAllParentTasks={true} height = '450px'>  
    </GanttComponent>  
  };  
  ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';  
import * as ReactDOM from 'react-dom';  
import { GanttComponent } from '@syncfusion/ej2-react-gantt';  
import { data } from './datasource';  
function App () {  
  const taskFields: any = {  
    id: 'TaskID',  
    name: 'TaskName',  
    startDate: 'StartDate',  
    duration: 'Duration',  
    progress: 'Progress',  
    child: 'subtasks'  
  };  
};
```

```

    return <GanttComponent dataSource={data} taskFields={taskFields}
      collapseAllParentTasks={true} height = '450px'>
    </GanttComponent>
  };
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Define expand/collapse status of tasks

In Gantt, we can render some tasks in collapsed state and some tasks in expanded state, this can be done by defining expand status of the task in data source. This value was mapped to Gantt component by using [expandState](#) property. The following code example shows how to use this property.

INDEX.JSX

```

let data = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',

```



```

        startDate: new Date('04/02/2019'),
        endDate: new Date('04/21/2019'),
        isExpand: true,
        subtasks: [
            { TaskID: 2, TaskName: 'Identify Site location', startDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
            { TaskID: 3, TaskName: 'Perform Soil test', startDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
            { TaskID: 4, TaskName: 'Soil test approval', startDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
        ]
    },
    {
        TaskID: 5,
        TaskName: 'Project Estimation',
        startDate: new Date('04/02/2019'),
        endDate: new Date('04/21/2019'),
        isExpand: false,
        subtasks: [
            { TaskID: 6, TaskName: 'Develop floor plan for estimation',
startDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
            { TaskID: 7, TaskName: 'List materials', startDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 },
            { TaskID: 8, TaskName: 'Estimation approval', startDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 }
        ]
    },
];

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';

function App () {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks',
        expandState: 'isExpand'
    };

    return <GanttComponent dataSource={data} taskFields={taskFields}
        height = '450px'>
        </GanttComponent>
};

ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

let data: Object[] = [
    {
        TaskID: 1,
        TaskName: 'Project Initiation',
        startDate: new Date('04/02/2019'),

```

```

        EndDate: new Date('04/21/2019'),
        isExpand:true,
        subtasks: [
            { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
            { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
            { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
        ]
    },
    {
        TaskID: 5,
        TaskName: 'Project Estimation',
        StartDate: new Date('04/02/2019'),
        EndDate: new Date('04/21/2019'),
        isExpand:false,
        subtasks: [
            { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
            { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 },
            { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 }
        ]
    },
];
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
function App () {
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks',
        expandState: 'isExpand'
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
        height = '450px'>
        </GanttComponent>
    };
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>

```

```

    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008cff;
            height: 40px;
            left: 45%;
            position: absolute;
            top: 45%;
            width: 30%;
        }
    </style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Customize expand/collapse action

On expand action [expanding](#) and [expanded](#) event will be triggered with current expanding row's information. Similarly on collapse action [collapsing](#) and [collapsed](#) event will be triggered. Using this events and it's arguments we can customize the expand/collapse action. The following code example shows how to prevent the particular row from expand/collapse action using [expanding](#) and [collapsing](#) event.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective } from
'@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App () {
    const taskFields= {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    function collapsing(args) {
        if (args.data.TaskID==1) {
            args.cancel=true;
        }
    }

```

```
function expanding(args) {
    if (args.data.TaskID==5) {
        args.cancel=true;
    }
}

return <GanttComponent dataSource={data} taskFields={taskFields}
collapsing={collapsing} expanding={expanding} height = '450px'>
</GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective } from
'@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App () {
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    function collapsing(args: any) {
        if (args.data.TaskID==1) {
            args.cancel=true;
        }
    }
    function expanding(args: any) {
        if (args.data.TaskID==5) {
            args.cancel=true;
        }
    }
    return <GanttComponent dataSource={data} taskFields={taskFields}
collapsing={collapsing} expanding={expanding} height = '450px'>
</GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
```

```

<link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
<script src="systemjs.config.js"></script>
<style>
    #loader {
        color: #008cff;
        height: 40px;
        left: 45%;
        position: absolute;
        top: 45%;
        width: 30%;
    }
</style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Customize rows and cells

While rendering the TreeGrid part in Gantt, the [rowDataBound](#) and [queryCellInfo](#) events trigger for every row and cell. Using these events, you can customize the rows and cells. The following code example shows how to customize the cell and row elements using these events.

INDEX.JSX

```

let data = [
    {
        TaskID: 1,
        TaskName: 'Project Initiation',
        StartDate: new Date('04/02/2019'),
        EndDate: new Date('04/21/2019'),
        subtasks: [
            { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 80 },
            { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
            { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
        ]
    },
    {
        TaskID: 5,
        TaskName: 'Project Estimation',
        StartDate: new Date('04/02/2019'),
        EndDate: new Date('04/21/2019'),
        subtasks: [
            { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
        ]
    }
]

```

```

        { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 60 },
        { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 }
    ]
},
];

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';

function App(){
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const splitterSettings = {
        columnIndex: 5
    };
    function customizeCell(args) {
        if (args.column.field == "Progress") {
            if (args.data.Progress < 60)
                args.cell.style.backgroundColor="lightgreen"
            else
                args.cell.style.backgroundColor="yellow"
        }
    };
    function rowDataBound(args) {
        if(args.data.TaskID==4)
            args.row.style.backgroundColor="red"
    }

    return <GanttComponent dataSource={data} taskFields={taskFields}
        splitterSettings={splitterSettings} queryCellInfo={customizeCell}
        rowDataBound={rowDataBound}
        height = '450px'>
        </GanttComponent>
    );
}
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

let data: Object[] = [
    {
        TaskID: 1,
        TaskName: 'Project Initiation',
        StartDate: new Date('04/02/2019'),
        EndDate: new Date('04/21/2019'),
        subtasks: [
            { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 80 },

```

```

        { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
        { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
    ]
},
{
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
        { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
        { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 60 },
        { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 }
    ]
},
];

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';

function App() {
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const splitterSettings: any = {
        columnIndex: 5
    };
    function customizeCell(args: any) {
        if (args.column.field === "Progress") {
            if (args.data.Progress < 60)
                args.cell.style.backgroundColor="lightgreen"
            else
                args.cell.style.backgroundColor="yellow"
        }
    };
    function rowDataBound(args: any) {
        if(args.data.TaskID==4)
            args.row.style.backgroundColor="red"
    }

    return <GanttComponent dataSource={data} taskFields={taskFields}
        splitterSettings={splitterSettings} queryCellInfo={customizeCell}
        rowDataBound={rowDataBound}
        height = '450px'>
    </GanttComponent>
};

```

```
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>
```

Styling alternate rows

You can change the background colour of alternative rows in Gantt chart, by overriding the class as shown below.

```
`css
.e-altrow, tr.e-chart-row:nth-child(even) {
background-color: #f2f2f2;
}
`
```

INDEX.JSX

```
let data = [
```



```

    {
      TaskID: 1,
      TaskName: 'Project Initiation',
      StartDate: new Date('04/02/2019'),
      EndDate: new Date('04/21/2019'),
      subtasks: [
        { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
        { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 70 },
        { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 80 },
      ]
    },
    {
      TaskID: 5,
      TaskName: 'Project Estimation',
      StartDate: new Date('04/02/2019'),
      EndDate: new Date('04/21/2019'),
      subtasks: [
        { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
        { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 },
        { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 70 }
      ]
    },
  ];
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
function App() {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  return <GanttComponent dataSource={data} taskFields={taskFields}
height='450px'>
    </GanttComponent>
  };
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

let data = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [

```

```

        { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
        { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 70 },
        { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 80 },
    ]
},
{
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
        { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
        { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 },
        { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 70 }
    ]
},
];
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
height='450px'>
        </GanttComponent>
    };
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>

```

```

<link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
<script src="systemjs.config.js"></script>
<style>
  #loader {
    color: #008cff;
    height: 40px;
    left: 45%;
    position: absolute;
    top: 45%;
    width: 30%;
  }
  .e-altrow, tr.e-chart-row:nth-child(even) {
    background-color: #f2f2f2;
  }
</style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Row spanning

Gantt chart has an option to span row cells. You can achieve this using [rowSpan](#) attribute to span cells in the [QueryCellInfo](#) event.

In the following demo, **Soil test approval** cell is spanned to two rows in the **TaskName** column.

INDEX.JSX

```

let data = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
      { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 70 },
      { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 80 },
    ]
  },
  {
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
  }
]

```

```

        subtasks: [
            { TaskID: 6, TaskName: 'Develop floor plan for estimation',
              StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
            { TaskID: 7, TaskName: 'List materials', StartDate: new
              Date('04/04/2019'), Duration: 3, Progress: 50 },
            { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
              Date('04/04/2019'), Duration: 3, Progress: 70 }
        ]
    },
];
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    function queryCellInfo(args) {
        if (args.data['TaskID'] == 4 && args.column.field === 'TaskName') {
            args.rowSpan = 2;
        }
        return <GanttComponent dataSource={data} taskFields={taskFields}
        queryCellInfo={queryCellInfo} height='450px'>
            </GanttComponent>
        </GanttComponent>
    };
    ReactDOM.render(<App />, document.getElementById('root'));
}

```

INDEX.TSX

```

let data = [
    {
        TaskID: 1,
        TaskName: 'Project Initiation',
        StartDate: new Date('04/02/2019'),
        EndDate: new Date('04/21/2019'),
        subtasks: [
            { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
              Date('04/02/2019'), Duration: 4, Progress: 50 },
            { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
              Date('04/02/2019'), Duration: 4, Progress: 70 },
            { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
              Date('04/02/2019'), Duration: 4, Progress: 80 },
        ]
    },
    {
        TaskID: 5,
        TaskName: 'Project Estimation',
        StartDate: new Date('04/02/2019'),
        EndDate: new Date('04/21/2019'),
        subtasks: [

```

```

        { TaskID: 6, TaskName: 'Develop floor plan for estimation',
        StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
        { TaskID: 7, TaskName: 'List materials', StartDate: new
        Date('04/04/2019'), Duration: 3, Progress: 50 },
        { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
        Date('04/04/2019'), Duration: 3, Progress: 70 }
    ]
    },
];
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    function queryCellInfo(args) {
        if (args.data['TaskID'] == 4 && args.column.field === 'TaskName') {
            args.rowSpan = 2;
        }
    }
    return <GanttComponent dataSource={data} taskFields={taskFields}
    queryCellInfo={queryCellInfo} height='450px'>
        </GanttComponent>
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008cff;
            height: 40px;
            left: 45%;
```

```

        position: absolute;
        top: 45%;
        width: 30%;
    }
</style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Clip mode

The clip mode provides options to display its overflow cell content and it can be defined by the [columns.clipMode](#) property.

The following are three types of `clipMode`:

- **Clip**: Truncates the cell content when it overflows its area.
- **Ellipsis**: Displays ellipsis when content of the cell overflows its area.
- **EllipsisWithTooltip**: Displays ellipsis when content of the cell overflows its area; it displays the tooltip content when hover over ellipsis.

NOTE

By default, all the column's [clipMode](#) property is defined as `EllipsisWithTooltip`.

Cell tooltip

You can enable or disable the Grid cell tooltip using the [columns.clipMode](#) property.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective } from
'@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
height = '450px'>
        <ColumnsDirective>
            <ColumnDirective field='TaskID' width='100'
></ColumnDirective>
            <ColumnDirective field='TaskName' headerText='Job Name'
clipMode='EllipsisWithTooltip' width='120'></ColumnDirective>
            <ColumnDirective field='StartDate'></ColumnDirective>

```

```

        <ColumnDirective field='Duration'></ColumnDirective>
        <ColumnDirective field='Progress'></ColumnDirective>
    </ColumnsDirective>
</GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective } from
 '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App(){
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
height = '450px'>
        <ColumnsDirective>
            <ColumnDirective field='TaskID' width='100'
></ColumnDirective>
            <ColumnDirective field='TaskName' headerText='Job Name'
clipMode='EllipsisWithTooltip' width='120'></ColumnDirective>
            <ColumnDirective field='StartDate'></ColumnDirective>
            <ColumnDirective field='Duration'></ColumnDirective>
            <ColumnDirective field='Progress'></ColumnDirective>
        </ColumnsDirective>
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />

```

```

<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Export

Excel export in React Gantt component

Gantt supports client-side exporting, which allows you to export its data to the Excel and CSV formats. Use the [excelExport](#) and [csvExport](#) methods for exporting. To enable Excel export in the Gantt, set the [allowExcelExport](#) to true.

To export data to Excel and CSV, inject the [Link to the Video](#) module in Gantt.

To get start quickly with Excel exporting and to know its functionalities, you can check on this video

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ClickEventArgs } from '@syncfusion/ej2-navigations';
import { GanttComponent, Inject, Toolbar, ToolbarItem, ExcelExport,
Selection } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App () {
  let ganttInstance;
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const toolbarOptions = ['ExcelExport', 'CsvExport'];
  function toolbarClick(args) {
    if (args.item.id === 'GanttExport_excelexport') {
      ganttInstance.excelExport();
    } else if (args.item.id === 'GanttExport_csvexport') {
      ganttInstance.csvExport();
    }
  }
}

```



```

    }
    };
    return <GanttComponent id='GanttExport' dataSource={data}
taskFields={taskFields} toolbar={toolbarOptions}
    toolbarClick={toolbarClick} allowExcelExport={true} height='400px'
ref={gantt => ganttInstance = gantt}>
    <Inject services={[Toolbar, ExcelExport, Selection]} />
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ClickEventArgs } from '@syncfusion/ej2-navigations';
import { GanttComponent, Inject, Toolbar, ToolbarItem, ExcelExport,
Selection } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App () {
    let ganttInstance: any;
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const toolbarOptions: ToolbarItem[] = ['ExcelExport', 'CsvExport'];
    function toolbarClick(args: ClickEventArgs): void {
        if (args.item.id === 'GanttExport_excelexport') {
            ganttInstance.excelExport();
        } else if (args.item.id === 'GanttExport_csvexport') {
            ganttInstance.csvExport();
        }
    };
    return <GanttComponent id='GanttExport' dataSource={data}
taskFields={taskFields} toolbar={toolbarOptions}
    toolbarClick={toolbarClick} allowExcelExport={true} height='400px'
ref={gantt => ganttInstance = gantt}>
    <Inject services={[Toolbar, ExcelExport, Selection]} />
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>

```

```

    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008cff;
            height: 40px;
            left: 45%;
            position: absolute;
            top: 45%;
            width: 30%;
        }
        .e-gantt .e-gantt-chart .e-custom-holiday {
            background-color:lightgreen;
        }
    </style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Export

Pdf export in React Gantt component

PDF export allows exporting Gantt data to PDF document. You need to use the [pdfExport](#) method for exporting. To enable PDF export in the Gantt, set the [allowPdfExport](#) to true.

To export data to PDF document, inject the [Link to the Video](#) module in Gantt.

To get start quickly with PDF exporting and to know its functionalities, you can check on this video

Note: Currently, we do not have support for exporting manually scheduled tasks.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ClickEventArgs } from '@syncfusion/ej2-
navigations/src/toolbar/toolbar';
import { GanttComponent, Inject, Toolbar, ToolbarItem, PdfExport, Selection
} from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    let ganttChart;
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',

```

```

        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const toolbarOptions = ['PdfExport'];
    function toolbarClick(args) {
        if (args.item.text === 'Pdf export') {
            ganttChart.pdfExport();
        }
    };
    return <GanttComponent id='root' dataSource={data}
taskFields={taskFields}
toolbar={toolbarOptions}
toolbarClick={toolbarClick} allowPdfExport={true} height='400px'
ref={gantt => ganttChart = gantt}>
        <Inject services={[Toolbar, PdfExport, Selection]} />
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ClickEventArgs } from '@syncfusion/ej2-
navigations/src/toolbar/toolbar';
import { GanttComponent, Inject, Toolbar, ToolbarItem, PdfExport, Selection
} from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    let ganttChart: any;
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    const toolbarOptions: ToolbarItem[] = ['PdfExport'];
    function toolbarClick(args: ClickEventArgs): void {
        if (args.item.text === 'Pdf export') {
            ganttChart.pdfExport();
        }
    };
    return <GanttComponent id='root' dataSource={data}
taskFields={taskFields}
toolbar={toolbarOptions}
toolbarClick={toolbarClick} allowPdfExport={true} height='400px'
ref={gantt => ganttChart = gantt}>
        <Inject services={[Toolbar, PdfExport, Selection]} />
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
    .e-gantt .e-gantt-chart .e-custom-holiday {
      background-color:lightgreen;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Indicators in PDF exporting

The PDF export functionality allows users to export Gantt charts enriched with dynamic indicators and accompanying images.

These indicators, represented by images, can be effortlessly defined using the [base64](#) encoding value in the data object of datasource. This data object field should be mapped to indicator property of [task fields](#).

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ClickEventArgs } from '@syncfusion/ej2-
navigations/src/toolbar/toolbar';

```

```

import { GanttComponent, Inject, Toolbar, ToolbarItem, PdfExport, Selection
} from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App(){
    let ganttChart;
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks',
        indicators: 'Indicators'
    };
    const toolbarOptions = ['PdfExport'];
    function toolbarClick(args) {
        if (args.item.text === 'Pdf export') {
            ganttChart.pdfExport();
        }
    };
    return <GanttComponent id='root' dataSource={data}
taskFields={taskFields}
toolbar={toolbarOptions}
toolbarClick={toolbarClick} allowPdfExport={true} height='400px'
ref={gantt => ganttChart = gantt}>
        <Inject services={[Toolbar, PdfExport, Selection]} />
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ClickEventArgs } from '@syncfusion/ej2-
navigations/src/toolbar/toolbar';
import { GanttComponent, Inject, Toolbar, ToolbarItem, PdfExport, Selection
} from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App(){
    let ganttChart: any;
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks',
        indicators: 'Indicators'
    };
    const toolbarOptions: ToolbarItem[] = ['PdfExport'];
    function toolbarClick(args: ClickEventArgs): void {
        if (args.item.text === 'Pdf export') {
            ganttChart.pdfExport();
        }
    };
}

```

```

    return <GanttComponent id='root' dataSource={data}
taskFields={taskFields}
toolbar={toolbarOptions}
toolbarClick={toolbarClick} allowPdfExport={true} height='400px'
ref={gantt => ganttChart = gantt}>
    <Inject services={[Toolbar, PdfExport, Selection]} />
  </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
    .e-gantt .e-gantt-chart .e-custom-holiday {
      background-color:lightgreen;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Exporting Gantt data as a blob object

In Gantt, you can export the Gantt chart data as a blob object, which allows you to preview or modify the data before exporting it.

To export the Gantt chart data as a blob object, follow these steps:

step 1: pdfExport fourth argument set as `true`.

step 2: Then , `pdfExpComplete` return as blob object.

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Toolbar, PdfExport, Selection, ExcelExport }
from '@syncfusion/ej2-react-gantt';
import { ClickEventArgs } from '@syncfusion/ej2-
navigations/src/toolbar/toolbar';
import { data } from '../datasource';
function App () {
  const excelExpComplete = (args) => {
    //This event will be triggered when excel exporting.
    if (args.promise) {
      args.promise.then((e) => {
        //In this `then` function, we can get blob data through the arguments
        after promise resolved.
        exportBlob(e.blobData);
      });
    }
  };
  const pdfExpComplete = (args) => {
    //This event will be triggered when pdf exporting.
    if (args.promise) {
      args.promise.then((e) => {
        //In this `then` function, we can get blob data through the arguments
        after promise resolved.
        exportBlob(e.blobData);
      });
    }
  };
  const exportBlob = (blob) => {
    let a = document.createElement('a');
    document.body.appendChild(a);
    a.style.display = 'none';
    let url = window.URL.createObjectURL(blob);
    a.href = url;
    a.download = 'Export';
    a.click();
    window.URL.revokeObjectURL(url);
    document.body.removeChild(a);
  }

  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };

  const toolbarOptions = ['PdfExport', 'ExcelExport'];
  let ganttChart;
  function toolbarClick(args) {
```

```

        if (args.item.text === "Pdf export") {
            ganttChart.pdfExport(null, null, null, true);
        }
        if (args.item.text === 'Excel export') {
            ganttChart.excelExport(null, null, null, true);
        }
    };

    return <GanttComponent id='root' dataSource={data}
taskFields={taskFields} toolbar={toolbarOptions}
pdfExportComplete={pdfExpComplete} excelExportComplete={excelExpComplete}
toolbarClick={toolbarClick} allowPdfExport={true} allowExcelExport={true}
height='400px' ref={gantt => ganttChart = gantt}>
    <Inject services={[Toolbar, PdfExport, Selection, ExcelExport]} />
</GanttComponent>
</>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Toolbar, PdfExport,
Selection, ExcelExport, ExcelExportCompleteArgs, PdfExportCompleteArgs } from
'@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App () {
    let excelExpComplete = (args: ExcelExportCompleteArgs) => {
        //This event will be triggered when excel exporting.
        if (args.promise) {
            args.promise.then((e: { blobData: Blob }) => {
                //In this `then` function, we can get blob data through the arguments
                after promise resolved.
                exportBlob(e.blobData);
            });
        }
    };
    let pdfExpComplete = (args: PdfExportCompleteArgs) => {
        //This event will be triggered when pdf exporting.
        if (args.promise) {
            args.promise.then((e: { blobData: Blob }) => {
                //In this `then` function, we can get blob data through the arguments
                after promise resolved.
                exportBlob(e.blobData);
            });
        }
    };
    let exportBlob: Function = (blob: Blob) => {
        let a: HTMLAnchorElement = document.createElement('a');
        document.body.appendChild(a);
        a.style.display = 'none';
        let url: string = window.URL.createObjectURL(blob);
        a.href = url;
        a.download = 'Export';
        a.click();
    };
}

```



```

window.URL.revokeObjectURL(url);
document.body.removeChild(a);
}

const taskFields = {
  id: 'TaskID',
  name: 'TaskName',
  startDate: 'StartDate',
  duration: 'Duration',
  progress: 'Progress',
  child: 'subtasks'
};

const toolbarOptions = ['PdfExport', 'ExcelExport'];
let ganttChart:any;
function toolbarClick(args:any) {
  if (args.item.text === "Pdf export") {
    ganttChart.pdfExport(null,null,null,true);
  }
  if (args.item.text === 'Excel export') {
    ganttChart.excelExport(null,null,null,true);
  }
};

return <GanttComponent id='root' dataSource={data}
taskFields={taskFields} pdfExportComplete={pdfExpComplete}
excelExportComplete={excelExpComplete} toolbar={toolbarOptions}
toolbarClick={toolbarClick} allowPdfExport={true} allowExcelExport={true}
height='400px' ref={gantt =>ganttChart = gantt}>
  <Inject services={[Toolbar, PdfExport, Selection, ExcelExport]}/>
</GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;

```

```

        left: 45%;
        position: absolute;
        top: 45%;
        width: 30%;
    }
</style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Single page exporting in gantt

In Gantt, we have provided support to export the Gantt component where each rows are auto-fit to the PDF document page width by setting [isFitToWidth](#) as true in `fitToWidthSettings` of `PdfExportProperties`.

Also, we can customize the chart width and grid width in exported file using [chartWidth](#) and [gridWidth](#) by defining it as percentage in string.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ClickEventArgs } from '@syncfusion/ej2-
navigations/src/toolbar/toolbar';
import { GanttComponent, Inject, Toolbar, ToolbarItem, PdfExport, Selection
} from '@syncfusion/ej2-react-gantt';
import { GanttData } from './datasource';
function App() {
    let ganttChart;
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        endDate: 'EndDate',
        duration: 'Duration',
        progress: 'Progress',
        dependency: 'Predecessor',
        child: 'subtasks',
    };
    const toolbarOptions = ['PdfExport'];
    function toolbarClick(args) {
        if (args.item.text === 'Pdf export') {
            var exportProperties = {
                fitToWidthSettings: {
                    isFitToWidth: true,
                }
            };
            ganttChart.pdfExport(exportProperties);
        }
    };
    return <GanttComponent id='root' dataSource={GanttData}
taskFields={taskFields}

```

```

        toolbar={toolbarOptions}
        toolbarClick={toolbarClick} allowPdfExport={true} height='400px'
        ref={gantt => ganttChart = gantt}>
        <Inject services={[Toolbar, PdfExport, Selection]} />
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ClickEventArgs } from '@syncfusion/ej2-
navigations/src/toolbar/toolbar';
import { GanttComponent, Inject, Toolbar, ToolbarItem, PdfExport, Selection,
PdfExportProperties } from '@syncfusion/ej2-react-gantt';
import { GanttData } from './datasource';
function App() {
    let ganttChart: any;
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        endDate: 'EndDate',
        duration: 'Duration',
        progress: 'Progress',
        dependency: 'Predecessor',
        child: 'subtasks',
    };
    const toolbarOptions: ToolbarItem[] = ['PdfExport'];
    function toolbarClick(args: ClickEventArgs): void {
        if (args.item.text === 'Pdf export') {
            let exportProperties : PdfExportProperties= {
                fitToWidthSettings: {
                    isFitToWidth: true,
                }
            };
            ganttChart.pdfExport(exportProperties);
        }
    };
    return <GanttComponent id='root' dataSource={GanttData}
taskFields={taskFields}
toolbar={toolbarOptions}
toolbarClick={toolbarClick} allowPdfExport={true} height='400px'
ref={gantt => ganttChart = gantt}>
        <Inject services={[Toolbar, PdfExport, Selection]} />
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>

```

```

<meta charset="utf-8" />
<meta name="viewport" content="width=device-width, initial-scale=1.0" />
<meta name="description" content="Essential JS 2 for React Components"
/>
<meta name="author" content="Syncfusion" />
<link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
<link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
<script src="systemjs.config.js"></script>
<style>
    #loader {
        color: #008cff;
        height: 40px;
        left: 45%;
        position: absolute;
        top: 45%;
        width: 30%;
    }
    .e-gantt .e-gantt-chart .e-custom-holiday {
        background-color:lightgreen;
    }
</style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Exporting with templates

Exporting with column template

The PDF export functionality allows to export Grid columns that include images, hyperlinks, and custom text to an PDF document using [pdfQueryCellInfo](#) event.

In the following sample, the hyperlinks and images are exported to PDF using [hyperlink](#) and [image](#) properties in the [pdfQueryCellInfo](#) event.

Note: PDF Export supports base64 string to export the images.

INDEX.JSX

```

let ProjectResources = [
    { resourceId: 1, resourceName: 'Martin Tamer' },
    { resourceId: 2, resourceName: 'Rose Fuller' },
    { resourceId: 3, resourceName: 'Margaret Buchanan' },
    { resourceId: 4, resourceName: 'Fuller King' },
    { resourceId: 5, resourceName: 'Davolio Fuller' },
    { resourceId: 6, resourceName: 'Van Jack' },
    { resourceId: 7, resourceName: 'Fuller Buchanan' },
    { resourceId: 8, resourceName: 'Jack Davolio' },

```

```

    { resourceId: 9, resourceName: 'Tamer Vinet' },
    { resourceId: 10, resourceName: 'Vinet Fuller' },
    { resourceId: 11, resourceName: 'Bergs Anton' },
    { resourceId: 12, resourceName: 'Construction Supervisor' }
  ];

  let data = [
    {
      TaskID: 1,
      TaskName: 'Product concept',
      StartDate: new Date('04/02/2019'),
      EndDate: new Date('04/21/2019'),
      EmailId: 'MartinTamer@gmail.com',
      subtasks: [
        { TaskID: 2, TaskName: 'Defining the product and its usage',
          StartDate: new Date('04/02/2019'),
            Duration: 3, Progress: 30, resources: [2], EmailId:
            'RoseFuller@gmail.com', resourcesImage:
            '/9j/4AAQSkZJRgABAQAAQABAAD//gAfQ29tcHJlc3NlZCBieSBqcGVnLXJlY29tcHJlc3P/2wC
            EAAQEBAQEBAQEBAQGBgUGBggHBwcHCAwJCQkJCQwTDA4MDA4MExEUEA8QFBEeFxFVFX4iHRsdIio
            lJS00MjRERFwBBAQEBAQEBAQEBAQYGBQYGCACHBwcIDAKJCQkJDBMMDgWMDgWTERQDxAUER4XFRU
            XHiIdGx0iKiUlKjQyNEREXP/CABEiADcANwMBiGACEQEDEQH/xAAbAAADAAMBAQAAAAAAAAAAAAA
            FBwgEBgkCA//aAAGBAQAAAC/hQFOvYjnCinKzbmZbGH5zuQtL+rjE/fO5y7I93/rpMhES5qCgxO
            TPERMqDaDCzVpNoBsPfbf/8QAGGEEAAQUBAIAAAAAAAAAAAAAAAAAAAECAwQFBv/aAAGBAhAAAAAOWZj
            mNLVM6a2Pan//xAXAQEBAQEAAAAAAAAAAAAAAAAABAUG/9oACAEDAAAAAGjNO7PFxm1FEH//xAA
            3EAAcAgECBAMFBgQHAAAAAAAAABAgMEBQAGBxESQSExMhATUVKBCBQiYWKhFiNxxkTNCU2RygrH/2gA
            IAQEAAAT8A0chavSvWwcaFUYrJdlBMSkeYja9Z/bW5b209pY98xvncBff57UrKRP8ACOGl1H8gCdR
            cfOB8txaopTojeU5p8o9Uq+OuVuv7XzrLE4DIYpvvNduY+Vif2I1VyK0NiPH5eBYLD+EUqEmCc/B
            SfJv0n2ZB5MjajwLZ2RCnvvbkinkViJ5CMH5n/APNdNajV5L0Q14IyflREUeJ1vDP53jTu65l72QM
            OMWZ4MbW/yQwBuW+Yj1HW3OAEF1lntZ50iHNRGkHiSe/MtrbEF3ghuPEWkyktvbt2daeQRx4oH8E
            fKPk1PTr5CrLVtRBom5fkQR3B7EdjrD2Z1exibrdVury/mf6sLeiT+vY6wRV69rJv671mSX4n3an
            oRfoo1l6pv4rKUAWQ2ak8AY+QMiFef76x2VbacmNrvjnnmjAMiGRU5OW9IB8WotucRXk2ra3FiMK
            9panISQGTpCv+ZAJ1ZvZjiJgbr28VBVimjmmj6RYVo2V/DwljQN3BI1Gysqub5hgCNZ2VcbZx2Z7
            Rl683LzaORSw/syJW3HUYHFfEVkB9m7sNitqby3LVzlFmKhLkmrFVKO6MSY+nXBvN0Zq+YoLQsix
            LKr9DxosBhKSCxAXvRfTRzyDCrSjhnM6x9KgCFwT6l5dtIOLFX4Aa3uhG3bCjxYyxU9WsEfu5v
            4lvBqlhygPeGY9aH9yPZ9rHEQ0M5tvOo/4sjVnqSoP9uQQw+kuuFMAd0DW4pK5J61lkYsOf8A28D
            rYaU23dFVqoohgWWdlTyDEcv7nnz9mShTIZGhiTzaNfElZ5dlAKIPqTrK1bEU8GYx8ZezApSWIec
            8BPMqP1DzXXEn7Ue2dlT2sNisLfyGzi7TxmrWT+rP+JtY7c03GVty/wAVSKcnNcjsQyJ4CCLoEaJ
            EOypyltjgruGnuypizcpXkSWMWVevZVHeH5mTnzGt75ylwWweJkw5jnzlu5FyD94IiGm+jenWy+N
            G1N60m+4CxHlo4laTGshMhZjyHQw8GBosZTmrJNaukNftMJJyPJeyxj9KD2cReDu0OJNUnJVBDdH
            +Hai/C6nW2+AWe4ZbrOTe3VvYKeKSByT0ypzIKkL31tfZ+8It62tx5a37h6+T+/0pY5FKycj0CAG
            EkRmPwluJg/n+Ke7XzuRvpTwcaJBvjRg0vuk8T/xJ0tmcPtu7EpJVw9VRL0/zJ28XY+z/xAAiEQAC
            AQMEAgMAAAAAAAAAAABAgMABBEQEhNRISIFQYH/2gAIAQIBAT8AQW/hjk4y/tlioJ0nTemtyA0
            pYREOjeT3XxjFufxhcg/ut5aMw5Ez7H6Gas7ZraHa4wzHcdVYjaOjmiSTk6f/xAAiEQACAQIGAwE
            AAAAAAAAAAABAgMEEQAFEBITISJBuZH/2gAIAQMBAT8AXFltRJGsvH4H3fFTTTPsf2LjWlBECh
            plaNk8V+YzdVUWdDdrH81y6t4xxkjpSLsbdYr6hamfehuoULr91//2Q==',
            { TaskID: 3, TaskName: 'Defining target audience', StartDate:
            new Date('04/02/2019'),
              Duration: 3, resources: [3], EmailId:
              'MargaretBuchanan@gmail.com', resourcesImage:
              '/9j/4AAQSkZJRgABAQAAQABAAD//gAfQ29tcHJlc3NlZCBieSBqcGVnLXJlY29tcHJlc3P/2wC
              EAAQEBAQEBAQEBAQGBgUGBggHBwcHCAwJCQkJCQwTDA4MDA4MExEUEA8QFBEeFxFVFX4iHRsdIio
              lJS00MjRERFwBBAQEBAQEBAQEBAQYGBQYGCACHBwcIDAKJCQkJDBMMDgWMDgWTERQDxAUER4XFRU
              XHiIdGx0iKiUlKjQyNEREXP/CABEiADcANwMBiGACEQEDEQH/xAAZAAACAwEAAAAAAAAAAAAAAAAA
              EBwMFCAB/2gAIAQEAAAAAAAA39UUCnct2dVSZMV11tS5G5fmOGS73fU8SeVXNvlpWZ6WVEOtoiTVwgB
              tW2poSoCztszrv//EABoBAAICAwAAAAAAAAAAAAAAAAAUGAAMBAgT/2gAIAQIQAAAA1WTBChM72vC
              cdKyI+f/EABkBAAIDAQAAAAAAAAAAAAAAAAAAGAQMFBP/aAAGBAxAAAACWjF4L3/LTR/WMcvoP/8Q
            }
          ]
        }
      ]
    }
  ]

```

```
{ TaskID: 4, TaskName: 'Prepare product sketch and notes',
StartDate: new Date('04/02/2019'),
Duration: 2, Predecessor: '2', Progress: 30, resources: [4],
EmailId: 'FullerKing@gmail.com', resourcesImage:
'/9j/4AAQSkZJRgABAQAAQABAAD//gAfQ29tcHJlc3NlZCBieSBqcGVnLXJlY29tcHJlc3P/2wC
EAAQEBAQEBAQEBAQGBgUGBgqHBwCHCAwJCQkJCQwTDA4MDA4MExEUEA8QFBEeFxUVFfx4iHRsdIi
LJS0oMjRERFwBBAQEBAQEBAQEBAQYGBQYGCACHBwCIDAKJCQkJDBMMDgWMDgWTERQQDxAUER4XFRU
XHiIdGx0iKiU1KjQyNEREXP/CABEIAcANwMBIGACEQEDEQH/xAABAAACAwEBAQAAAAAAAAAAAAAA
FBwQGCAMCCf/aAAGBAQAAAAADfwhV0x/EZ4hW5npVo+hcTlnMn4TW6ofZUBIXDSIEnOzwAaDYEyIC
YV79vc+aEqNLSbBM//8QAGAEAAwEBAAAAAAAAAAAAAAAAAAAGQFAwD/2gAIAQIQAAAAABNvRaHSpjAg
O9hof/8QAGQEAAgMBAAAAAAAAAAAAAAAAAAGUDBAYA/9oACAEDAAAAADbLIbutRIi2OdXdagD/xAA
fEAAcAwEBAQADAQAAAAAAAAAEBQIDBgEHABITFBX/2gAIAQEAAQgA+/0izrLKEuj9081zxtwL2r3
Pze87lUFwwDEEVrlQ21sL617X47th5VaUf2TS1Z/00Z9IT468vpqspb+dtFYNhQ3jnpLFFP61zAo
QY4aY5acm+MyFJqOf5jlMu+12WWaxaJBjugEFv8cG+5kMlobU70irSgntaue+rF0rHtsVpK5z9n
Z/iYVc56fmiTmueaDMjVjKtEUVxnnCKIGcUJurma0oRaHRWYYeO3h3mdIjxf3+fp6mRlA5dMxyHy
ykbZuDVfCbTyTfueAdVdpILKz5lTBgxAU9aikV30OALTIDMBnQ9akbk12vEOl7YmeLi9xrWtZKdU6t
YqvF7IVYHcNC4o35zmhjLJmCfqbZwqBJeqGzphcDs2mzjIsTN8WJ84Ak7K2H3/8QAMxAAAQEDAGM
ECQMFAAAAAAAAAAQIDAAQREjETIVEFQWGHQBjMkJicXKBBIzUloCkbH/2gAIAQEACT8Ape0IxWS
915xKRuEHxnyrt687Wv4v5o4Q7oh8Fj0pX6PuY7HIBunjJdjqdCk12xItvOghkZJDPbSpH9D58iD
UKw3D8opUJME6KTS3yn0SMq10LeyqcFYicCNT1f/AJXsZryMxkxjBSHbC/dUS3XEjDSaSoYN/kR
VndZikKSppJKMOoHcakkXseadI7mCbKhdZwZUB2K0gaKTGANwe4g9xFNqu7XHTp7sLe5J9e40My3
1zJL1IjU6EH4UUTxNFsR0KvIVxVnLPPGig5dIkzjnguQTiuxxi4bHtpAgBHzYNWcEc9rexJrt51n
DRzciCQBugaQ20RYg55ledbRl7ebG7RyKWH+mUVv6sgPhgUoYiWO3lDclVUBiqSfrUEMlyrH4QWO
fOpFdopjmAxMMNOC489qgRtckMiRON3WQPjyonTFEeqDPRRIubGWL8nVXJrS4coOsMxlofMiw6Hc
VcvBLLMdMyAF10/xCnLXnMLcNAMdNVScd7ePEkxULqZ+/C4A9GWjRXurnHcoBRB+Saj13MAKSxDe
eA8yo+YbrUmt2HMEEAfr4ipHkljYm4Qe+veGHUULFpZsamWpGnyWSdlHvTIobC/aDtUrTTNgJbqh
EruTyUCiGv7phJPjZcDCxj5UHok9WvH95gMxyfevXxFW4MWzNFIGR1+hwaaw2u5c8UJEBFkjGcMV
w3iKs/Ubaxt7mOX1iZzuJLOysZMpgs37eg3ocW9fOudhjGdwg7h6P/8QAIREBAABBAEFAAAAA
AAAAAQIDAAQQETESBSJBYYH/2gAIAQIBAT8AnMhFk4a2Euph+ZXYWG2rOax6yTxEdr5z015jMD2
m0kB5yyLXKzkAVTND4RoiHart31lNdkGE48mRhGIeMTonv//EACIRAQACAQMEAwEAAAAAAAAAAAE
CAxEABIEBTfHfFSEiNP/aAAGBAwEBBPwCuuVs4wj5dfFTBzFUPGdXUyplxdx3/ANURQyOq6xCUs5c
Ydd7hwnUyRk7R5cjj510t5QqGP2kQfSa7k2T6qyUj6MB62FETVHU3U2RsrniXh96nZ0aspLlV2//
Z' }
```

```

    },
    {
        TaskID: 5, TaskName: 'Concept approval', StartDate: new
Date('04/02/2019'), Duration: 0, Predecessor: '3,4', resources: [5],
EmailId: 'Davoliofuller@gmail.com', resourcesImage:
'/9j/4AAQSkZJRgABAQAAQABAAD//gAfQ29tcHJlc3NlZCBieSBqcGVnLXJlY29tcHJlc3P/2wC
EAAQEBAQEBAQEBAQGBgUGBgHBwCHCAwJCQkJCQwTDA4MDA4MExEUEA8QFBEEfxUVF4iHRsdIio
lJS00MjRERFwBBAQEBAQEBAQEBAYGBQYGCACHBwCIDAkJCQkJDBMMDgwMDgwTERQQDxAUER4XFRU
XHiIdGx0iKiUlKjQyNEREXP/CABEiADcANwMBiGACEQEDEQH/xAAaAAACAwEBAQAAAAAAAAAAAAA
HCAQFBgID/9oACAEBAAAAAH+qsdiSrczqiUBMb22cXitDeKqHJh+9YFRxtGA87Oevw2Kx1qZOdFq
/gVwmsmjsTDfKu9sf/8QAGQEAAwEBAQAAAAAAAAAAAAAAQFBgED/9oACAECCEAAAAORaDfjmqN0
zlhsZWP/EABkBAAlDAQAAAAAAAAAAAAAAGAwQFAf/aAAgBAxAAAADu/10535dXB6VKBDMf/8Q
ANRAAAgIBAgQDBgUCBwAAAAAAAAAQAIDBAUABhESIUEHIjEQEzJhgZEIFFJicRYjQkNRU6Gx0f/aAAg
BAQABPwDRyFq9K9bBxoVRis12UEExKR6iMD4z/AMa3ZuPa001jG6stav3JFLpVVizn5iKMqqL821S
8WPC675v6duQR8SDK9VOA+fkYnWJfE5eimT2jnZFhPoFcywhv0vHJ1U/Y6qZSeGePHZeAQWHPCKV
OsE5/0Un0b9p9mRle9ZTDV5GSMoJLkingViJ4CNT+p/8ArWSsLicRZkpQKERQkRRjopb0UfxqvtK
DJy5DI5ZFnuW3LyyP1PA/4RrM7OxVPnaJCir5Qo462Bck2luuCerZc46+Vgnic9FPz/j1GrVWtfr
SVbKB42HXsQexB7Eaw9mdXsYm63Nbq8P7n+7C3wSfz2OsEVkr2snJ1e9ZklHc+7Q8kY+gGt3OYMR
zMqQvNGp+p1l/ELD7fdaj15ZmLBCyPGOB+QZgW+glu/etWq8cEVI2PeRrM3K4H1ZebSCTrbmWpZq
JrEdaeKeOVeEfu3kC9QOY1AeH11i7iXMXRlSVZCY1DFTxBZeh+xlnZVxtnHZntGXrzcPV05FLD7M
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import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective ,Inject,
Toolbar, PdfExport, Selection ,PdfQueryCellInfoEventArgs} from
'@syncfusion/ej2-react-gantt';

function App () {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks',
    resourceInfo: 'resources'
  };
  const toolbarOptions = ['PdfExport'];
  let ganttChart;
  function toolbarClick(args) {
    if (args.item.text === 'Pdf export') {
      let exportProperties = {
        enableFooter: false
      };
      ganttChart.pdfExport(exportProperties);
    }
  }
}

```



```

    };
    function pdfQueryCellInfo(args) {
        if (args.column.headerText === 'Resources') {
            {
                args.image = { height:40,width:40, base64:
                (args).data.taskData.resourcesImage };
            }
        }
        if (args.column.headerText === 'Email ID') {
            args.hyperLink = {
                target: 'mailto:' + (args).data.taskData.EmailId,
                displayText: (args).data.taskData.EmailId
            };
        }
    }
    const splitterSettings = {
        columnIndex: 7
    };
    const resourceFields = {
        id: 'resourceId',
        name: 'resourceName',
    };
    function ganttTemplate(props) {
        var src = props.TaskID + '.png';
        return (<div className='image' >
            <img src={src} style={{height:'42px'}}/>
            </div>);
    };
    const template = ganttTemplate;
    return <GanttComponent dataSource={data} rowHeight={60}
    taskFields={taskFields} toolbar={toolbarOptions} pdfQueryCellInfo =
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        </ColumnsDirective>
        <Inject services={[Toolbar, PdfExport, Selection]}/>
    </GanttComponent>
    };
    ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

let ProjectResources: Object[] = [
    { resourceId: 1, resourceName: 'Martin Tamer' },
    { resourceId: 2, resourceName: 'Rose Fuller' },
    { resourceId: 3, resourceName: 'Margaret Buchanan' },

```

```

    { resourceId: 4, resourceName: 'Fuller King' },
    { resourceId: 5, resourceName: 'Davolio Fuller' },
    { resourceId: 6, resourceName: 'Van Jack' },
    { resourceId: 7, resourceName: 'Fuller Buchanan' },
    { resourceId: 8, resourceName: 'Jack Davolio' },
    { resourceId: 9, resourceName: 'Tamer Vinet' },
    { resourceId: 10, resourceName: 'Vinet Fuller' },
    { resourceId: 11, resourceName: 'Bergs Anton' },
    { resourceId: 12, resourceName: 'Construction Supervisor' }
  ];

  let data: Object[] = [
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      TaskName: 'Product concept',
      StartDate: new Date('04/02/2019'),
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          StartDate: new Date('04/02/2019'),
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1zJL1IjU6EH4UUTxNFsR0KvIVxVnLPPGig5dIkzjnguQTIuxxi4bHtpAgBHzYNWcEc9rexJrt51n
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AAAAAQIDAAQOETESBSJBYYH/2gAIAQIBAT8AnMhFk4a2Euph+ZXYWG2rOaX6yTxEdr5z015jMD2

```

m0kB5yyLXKzkAVTND4RoiHart3l1NdKGE48mRhGIeMTonV//EACIRAQACAQMEAwEAAAAAAAAAAAAAE
CAxEAEIEBTfFhFSEiNP/aAAgBAwEBPwCuuVs4wj5dfFTBzFUPGdXUyplxdx3/ANURQyOq6xCUs5c
Ydd7hwnUyRk7R5cjj510t5OqGP2kQfSa7k2T6qyUj6MB62FETVHU3U2RsrniXh96nZOaspLlV2//
Z' }

    ],
    {
        TaskID: 5, TaskName: 'Concept approval', StartDate: new
Date('04/02/2019'), Duration: 0, Predecessor: '3,4', resources: [5],
EmailId: 'Davoliofuller@gmail.com', resourcesImage:
'/9j/4AAQSkZJRgABAQAAQABAAD//gAfQ29tcHJlc3NlZCBieSBqcGVnLXJlY29tcHJlc3P/2wC
EAAQEBAQEBAQEBAQGBgUGBgqHBwcHCAwJCQkJCQkTDA4MDA4MExEUEA8QFBEEfxUVFxi4iHRsdIio
lJS00MjRERFwBBAQEBAQEBAQYGBQYGCACHBwcIDAKJCQkJDBMMDgwMDgwTERQQDxAUER4XFRU
XHiIdGx0iKiUlKjQyNEREXP/CABEIAIDcANwMBIgaCEQEDEQH/xAAaAAACAwEBAAAAAAAAAAAAAA
HCAQFBgID/9oACAEBAAAAAH+qsdiSrczqiUBMb22cXitDeKqHJh+9YFRxtGA870evw2Kx1qZOdFq
/gVwmsmjsTDfKu9sf/8QAGQEAAwEBAQAAAAAAAAAAAAAAAAAQFBgED/9oACAECCEAAAAORaDfjmqNo
zlhsZWP/EABkBAAIDAQAAAAAAAAAAAAAAAAAGAwQFAf/aAAgBAxAAAADu/10535dXB6VKBDMf/8Q
ANRAAAgIBAgQDBgUCBwAAAAAAAAQIDBAUABhESIUEHIjEQEzJhgZEIFFJicRYjQkNRU6Gx0f/aAAg
BAQABPwDRyFq9K9bBxoVRis12UExKR6iMD4z/AMA3ZuPa001jG6stav3JFLpVvVizn5iKMqql821S
8WPC675v6duQR8SDK9VOA+fkYnWJfE5eimT2jnZFhPoFcywhv0vHJ1U/Y6qZSeGePHZeAQWHPCKV
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DJy5DI5ZFnuW3LyyP1PA/4RrM7OxVPnaJCir5Qo462Bck2luuCerZc46+Vgnic9FPz/j1GrVWtfr
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o1txlGCxRHxCsgOt2442sM3lDGJxMVB0IH/gPHVuth1s1oI4meRuMrhVBVFxuen2lubKY07gi9yv
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XMTw1vdCNu2FHVjLF9TzawZ/Lm/iWPBqdhgyPeGY86EfcjUsayK6OoZWUqQfQg6yuCWPMGvYkmik
qWRMhjdk94i9VDcpHMPHqNbrxUty4VmhgEDyBnMMUKbso7czSPw9O2vDivEk/AgK5aOMD08yedvt
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QMQUtIUEim3L/2gAIAQIBAT8AJABJ4FSdWChmwOPANaPVJq4s15HO0/0y/k1IUKhcSUHqulKEzwS
ysLnzvPBjFM0CDk3Xx6NaOJooQrizHfJTAD2o8wbCS3yrtv//EACMRAAEDAwQCAwAAAAAAAAAAAAAE
CAxEABBI FECEXFCJBUXH/2gAIAQMBAT8AAJIA7JimNELsAujoORV7Zrs3i0v9B2tY8liTHuO6t7V
cyk4qUJyNa8Bn3C3cnEKCRA7ESd9OvG3rYXD6uQnE8/IrUXkv3K1oVkn73BcDpSHlhCuSifUnf/9k
='

    },
    {
        TaskID: 6,
        TaskName: 'Market research',
        StartDate: new Date('04/02/2019'),
        EndDate: new Date('04/21/2019'),
        EmailId: 'Vanjack@gmail.com',
        subtasks: [
            {
                TaskID: 7,
                TaskName: 'Demand analysis',
                StartDate: new Date('04/04/2019'),
                EndDate: new Date('04/21/2019'),
                EmailId: 'RoseFuller@gmail.com',
                subtasks: [
                    { TaskID: 8, TaskName: 'Customer strength', StartDate:
new Date('04/04/2019'),

```

```

        Duration: 4, Predecessor: '5', Progress: 30,
resources: [7], EmailId: 'Fullerbuchanan@gmail.com', resourcesImage:
'/9j/4AAQSkZJRgABAQAAQABAAD//gAfQ29tcHJlc3NlZCBieSBqcGVnLXJlY29tcHJlc3P/2wC
EAAQEBAQEBAQEBAQGBgUGBgGHBwcHCAwJCQkJCQwTDA4MDA4MExEUEA8QFBEeFxUVFx4iHRsdIio
lJS00MjRERFwBBAQEBAQEBAQEBAQYGBQYGCACHBwcIDAKJCQkJDBMMDgwMDgwTERQQDxAUER4XFRU
XHiIdGx0iKiUlKjQyNEREXP/CABEiADcANwMBiGACEQEDEQH/xAAaAAACAgIDAQAAAAAAAAAAAAAA
EBwUIAwYAAQKc/9oACAEBAAAAAL/RKXSL6ch0UrvNI3nqPuPwL9aaldWm688LUdtYd922TOpawDH
viJKrZ2W4J00JAp+yjGkf/8QAGgEAAgMBAQAAAAAAAAAAAAAAMBBAUcBv/aAAGBAhAAAAAR2yP
O2tkxrv8S+P/EABkBAAIDAQAAAAAAAAAAAAAFAAQGA//aAAGBAxAAAACb9ev01i5AbFIpGC8
//8QANBAAAgIBAgMFBgUEAwAAAAAAQIDBAUABgcREhMhIjFBFDJRYnKBCBAVQqFTYXGRI3Ox/9o
ACAEBAAE/ANHIW70skGFRcQErJdlHOFcPMRj95/jXEHi/w32HA4zmb13BmA5Q42pYDuJJz60jISI
D5tVvxT7auTOIOFkIh9Ge6Fcj7Ra4ecUtmB96Ku28xaw+Y6S36bccOj/QGJDj6DqrlJobEePy8Cw
WH7opUJME5+Ck+TfKfyYDyZG1HhKzsiFO1uSKerWInkIwfRn/APNceN0vsvhhlxiXNa1cVMZS7Lw
1DP3Mw/uqAnUXC3dt5Ip6dSSwHTqPQpY6j2LuvFiT23b2TLwqSI46jv8AfuGrWA3ttaLG7nt46xT
AkVon6ws0bDxo3h5sp/zrhruJeJfDbb2dycQ7W5Ay2QP68DmIuvwJK8xrD2ZlexibrdVury/5P6s
Le5J/n0OsB0tWs5Jh47tmSQep7NT0IPsBr8RWIN/bG1JSOMdbdGMef/rdyhlw8kQ0olji7h5nUzy
PA6dIOuL2MsWtp5/2eEuUgEpUeYER6iRr8LmThv8ACbFQIXvp2bUJT4EuXlnZVxtnHZn0jL15uXm
0cilh/plGtuOowOK+IrIDrfmHOC2jk6ar4laGwn1VpVmH8rrAVt9YaGfLpmIVhWszmvKhkhceagE
KvTrN4e/uGtUavlLtVexR2SvMU5u68+Z5FQwHwOptvLj6EyT2J7HbR9EomIIAI5eQ7tcFtvRbY2Z
QxUUaDs1DSunk8rgF21vdCNu2FHexli+56tYI+zm/iW7mqWHKA+sMx60P8kamj7WGAmnkHUr/ALG
s5kbuJ2xkaMkDA17TVJH8kVonAKuf2gj11j8hkMpiqlubHSU4Y4lQ8uouXA5c1Ze4aFu1Yov7eJE
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PpX7n7DWMpzVkmTxsGv2mEk5HkvosY+VB+VvDv2817FWjUuP7/hDRS/Wnx/uNcSeHlzcYpWc7EDL
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RABAhMQQFYRIyQVFi/9oACAECAQE/AOMHUpn7WA4tsWi4SBHjQ7g4ulxkv1A2Tx5zthK5MT+r1mm
KmygRyLGdCqQLZgGtt9WwilsJz5oDL+BSPoaf/8QAIhEAAgEDAwUBAAAAAAAAAAAAAQMCAAQREBI
hBRMiMwFi/9oACAEDAQE/AlgyIiPzo2D1kdxUqeISCBIEfDok7WrP6FXEJMYGY2j7XVYhioOzyAI
6puZXNpBwwDE811RsT2oGXkStt+a2125FuxK8beSMjkZo5lIzkSZH2T70/9k=' },
    ],
  },
];

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective
, PdfQueryCellInfoEventArgs, Inject, Toolbar, PdfExport, Selection } from
 '@syncfusion/ej2-react-gantt';

function App () {
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks',
    resourceInfo: 'resources'
  };
  const toolbarOptions = ['PdfExport'];
  let ganttChart:any;
  function toolbarClick(args) {
    if (args.item.text === 'Pdf export') {

```

```

    let exportProperties: PdfExportProperties = {
        enableFooter: false
    };
    ganttChart.pdfExport(exportProperties);
}
};
function pdfQueryCellInfo(args :PdfQueryCellInfoEventArgs) {
    if (args.column.headerText === 'Resources') {
        {
            args.image = { height:40,width:40, base64: (args as
any).data.taskData.resourcesImage };
        }
    }
    if (args.column.headerText === 'Email ID') {
        args.hyperLink = {
            target: 'mailto:' + (args as any).data.taskData.EmailId,
            displayText: (args as any).data.taskData.EmailId
        };
    }
}
const splitterSettings: any = {
    columnIndex: 7
};
const resourceFields: any = {
    id: 'resourceId',
    name: 'resourceName',
};
function ganttTemplate(props:any) {
    var src = props.TaskID + '.png';
    return (<div className='image' >
        <img src={src} style={{height:'42px'}}/>
    </div>);
};
const template: any = ganttTemplate;
return <GanttComponent dataSource={data} rowHeight={60}
taskFields={taskFields} pdfQueryCellInfo = {pdfQueryCellInfo}
toolbar={toolbarOptions} toolbarClick={toolbarClick} allowPdfExport={true}
ref={gantt => ganttChart = gantt}
splitterSettings={splitterSettings}
resourceFields={resourceFields} resources={ProjectResources} height =
'450px'>
    <ColumnsDirective>
        <ColumnDirective field='TaskID'></ColumnDirective>
        <ColumnDirective field='resources'
headerText='Resources' width='250' template={template}
textAlign='Center'></ColumnDirective>
        <ColumnDirective field='TaskName'></ColumnDirective>
        <ColumnDirective field='EmailId' headerText='Email ID'
width='250' ></ColumnDirective>
    </ColumnsDirective>
    <Inject services={[Toolbar, PdfExport, Selection]}/>
</GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Exporting with taskbar template

The PDF export functionality allows to export taskbar templates that include **images** and **text** to an PDF document using [pdfQueryTaskbarInfo](#) event. Taskbars in the exported PDF document can be customized or formatted using the [pdfQueryTaskbarInfo](#) event for parent taskbar templates, taskbar templates and milestone templates.

In the following sample, taskbar templates with images and text are exported to PDF using [taskbarTemplate](#) properties in the [pdfQueryTaskbarInfo](#) event.

Note: PDF Export supports base64 string to export the images.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { PdfColor } from '@syncfusion/ej2-pdf-export';
import { GanttComponent, ColumnsDirective, ColumnDirective, Inject, Toolbar, PdfExport, Selection, PdfQueryCellInfoEventArgs } from '@syncfusion/ej2-react-gantt';
import { base64Data } from './datasource';

```



```

function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks',
        resourceInfo: 'resources'
    };
    const toolbarOptions = ['PdfExport'];
    let ganttChart;
    function toolbarClick(args) {
        if (args.item.text === 'Pdf export') {
            let exportProperties = {
                enableFooter: false
            };
            ganttChart.pdfExport(exportProperties);
        }
    };
    function pdfQueryTaskbarInfo(args) {
        if (!args.data.hasChildRecords) {
            if (args.data.ganttProperties.resourceNames) {
                args.taskbarTemplate.image = [{
                    width: 20, base64: (args).data.taskData.resourcesImage,
height: 20
                }]
            }
            args.taskbarTemplate.value = args.data.TaskName;
            args.taskbarTemplate.fontStyle = {
                fontColor: new PdfColor(255, 255, 255),
                fontFamily: 'TimesRoman',
            }
        }
        if (args.data.hasChildRecords) {
            if (args.data.ganttProperties.resourceNames) {
                args.taskbarTemplate.image = [{
                    width: 20, base64: (args).data.taskData.resourcesImage,
height: 20
                }]
            }
            args.taskbarTemplate.value = args.data.TaskName;
            args.taskbarTemplate.fontStyle = {
                fontColor: new PdfColor(255, 255, 255),
                fontFamily: 'TimesRoman',
            }
        }
        if (args.data.ganttProperties.duration === 0) {
            if (args.data.ganttProperties.resourceNames) {
                args.taskbarTemplate.image = [{
                    width: 20, base64: (args).data.taskData.resourcesImage,
height: 20,
                }]
            }
            args.taskbarTemplate.value = args.data.TaskName,
            args.taskbarTemplate.fontStyle = {
                fontColor: new PdfColor(255, 255, 255),

```



```

        fontFamily: 'TimesRoman'
    }
}
}
const splitterSettings = {
    columnIndex: 2
};
function TaskbarTemplate(props) {
    return (
        <div className="e-gantt-child-taskbar-inner-div e-gantt-child-taskbar" style={{ height: "100%" }} >
            <div className="e-gantt-child-progressbar-inner-div e-gantt-child-progressbar" style={{ width: props.ganttProperties.progressWidth + "px", height: "100%" }} >
                <img className="image"
src={`./images/${props.ganttProperties.resourceNames}.png`} style={{
height: '30px', width: '30px', top: '10px' }} />
                </div>
                <span
                    className="e-task-label"
                    style={{ position: "absolute", fontSize: "12px", color: "white", top: "5px", left: "30px", fontFamily: "Segoe UI", cursor: "move", overflow: "hidden" }} >
                        {props.TaskName}
                    </span>
            </div>
        );
}
function ParentTaskbarTemplate(props) {
    return (
        <div className="e-gantt-parent-taskbar-inner-div e-gantt-parent-taskbar" style={{ height: "100%" }} >
            <div className="e-gantt-parent-progressbar-inner-div e-row-expand e-gantt-parent-progressbar" style={{ width: props.ganttProperties.progressWidth + "px", height: "100%" }} >
                </div>
                <span className="e-task-label" style={{ position: "absolute", fontSize: "12px", color: "white", top: "5px", left: "10px", fontFamily: "Segoe UI", cursor: "move" }} >
                    {props.TaskName}
                </span>
            </div>
        );
}
function MilestoneTemplate(props) {
    return (
        <div className="e-gantt-milestone" style={{ position: "relative", display: "inline-block" }}>
            <div className="e-milestone-top" style={{ position: "absolute", borderRightWidth: "20px", borderLeftWidth: "20px", borderBottomWidth: "20px" }} />
            <div className="e-milestone-bottom" style={{ position: "absolute", top: "20px", borderRightWidth: "20px", borderLeftWidth: "20px", borderTopWidth: "20px" }} />
            <img className="image"
src={`./images/${props.ganttProperties.resourceNames}.png`} style={{

```

```

height: '30px', width: '30px', position: 'absolute', top: '1px', left:
'80%', transform: 'translateX(-50%)' }} />
    </div>

    );
}
const resourceFields = {
    id: 'resourceId',
    name: 'resourceName',
};
return <GanttComponent dataSource={base64Data} rowHeight={45}
taskFields={taskFields} toolbar={toolbarOptions}
pdfQueryTaskbarInfo={pdfQueryTaskbarInfo} toolbarClick={toolbarClick}
allowPdfExport={true} ref={gantt => ganttChart = gantt}
    splitterSettings={splitterSettings} resourceFields={resourceFields}
resources={editingResources} taskbarTemplate={TaskbarTemplate}
parentTaskbarTemplate={ParentTaskbarTemplate}
milestoneTemplate={MilestoneTemplate} height='450px'>
    <ColumnsDirective>
        <ColumnDirective field='TaskID'></ColumnDirective>
        <ColumnDirective field='TaskName'></ColumnDirective>
    </ColumnsDirective>
    <Inject services={[Toolbar, PdfExport, Selection]} />
</GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective, Inject, Toolbar,
PdfExport, Selection, PdfExportProperties, PdfQueryTaskbarInfoEventArgs }
from '@syncfusion/ej2-react-gantt';
import { base64Data, editingResources } from '../datasource';
import { ClickEventArgs } from '@syncfusion/ej2-
navigations/src/toolbar/toolbar';
function App() {
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        child: 'subtasks',
        resourceInfo: 'resources'
    };
    const toolbarOptions = ['PdfExport'];
    let ganttChart: any;
    function toolbarClick(args: ClickEventArgs) {
        if (args.item.text === 'Pdf export') {
            let exportProperties: PdfExportProperties = {
                enableFooter: false
            };
            ganttChart.pdfExport(exportProperties);
        }
    };
    function pdfQueryTaskbarInfo(args: PdfQueryTaskbarInfoEventArgs) {

```

```

        if (!args.data.hasChildRecords) {
            if (args.data.ganttProperties.resourceNames) {
                args.taskbarTemplate.image = [{
                    width: 20, base64: (args as
any).data.taskData.resourcesImage, height: 20
                }]
            }
            args.taskbarTemplate.value = args.data.TaskName;
        }
        if (args.data.hasChildRecords) {
            if (args.data.ganttProperties.resourceNames) {
                args.taskbarTemplate.image = [{
                    width: 20, base64: (args as
any).data.taskData.resourcesImage, height: 20
                }]
            }
            args.taskbarTemplate.value = args.data.TaskName;
        }
        if (args.data.ganttProperties.duration === 0) {
            if (args.data.ganttProperties.resourceNames) {
                args.taskbarTemplate.image = [{
                    width: 20, base64: (args as
any).data.taskData.resourcesImage, height: 20,
                }]
            }
            args.taskbarTemplate.value = args.data.TaskName;
        }
    }
    const splitterSettings: any = {
        columnIndex: 2
    };
    const resourceFields: any = {
        id: 'resourceId',
        name: 'resourceName',
    };
    function TaskbarTemplate(props: any) {
        return (
            <div className="e-gantt-child-taskbar-inner-div e-gantt-child-
taskbar" style={{ height: "100%" }} >
                <div className="e-gantt-child-progressbar-inner-div e-gantt-
child-progressbar" style={{ width: props.ganttProperties.progressWidth +
"px", height: "100%" }} >
                    <img className="image"
src={`./images/${props.ganttProperties.resourceNames}.png`} style={{ height:
'30px', width: '30px', top: '10px' }} />
                </div>
                <span
                    className="e-task-label"
                    style={{ position: "absolute", fontSize: "12px", color:
"white", top: "5px", left: "30px", fontFamily: "Segoe UI", cursor: "move",
overflow: "hidden" }}>
                        {props.TaskName}
                    </span>
                </div>
        );
    }
    function ParentTaskbarTemplate(props: any) {

```

```

    return (
      <div className="e-gantt-parent-taskbar-inner-div e-gantt-parent-taskbar" style={{ height: "100%" }} >
        <div className="e-gantt-parent-progressbar-inner-div e-row-expand e-gantt-parent-progressbar" style={{ width: props.ganttProperties.progressWidth + "px", height: "100%" }} >
          </div>
          <span className="e-task-label" style={{ position: "absolute", fontSize: "12px", color: "white", top: "5px", left: "10px", fontFamily: "Segoe UI", cursor: "move" }} >
            {props.TaskName}
          </span>
        </div>
      </div>
    );
  }
  function MilestoneTemplate(props: any) {
    return (
      <div className="e-gantt-milestone" style={{ position: "relative", display: "inline-block" }}>
        <div className="e-milestone-top" style={{ position: "absolute", borderRightWidth: "20px", borderLeftWidth: "20px", borderBottomWidth: "20px" }} />
        <div
          className="e-milestone-bottom"
          style={{ position: "absolute", top: "20px", borderRightWidth: "20px", borderLeftWidth: "20px", borderTopWidth: "20px" }}
        />
        <img className="image"
          src={`./images/${props.ganttProperties.resourceNames}.png`} style={{ height: '30px', width: '30px', position: 'absolute', top: '1px', left: '80%', transform: 'translateX(-50%)' }} />
      </div>
    );
  }
  return <GanttComponent dataSource={base64Data} rowHeight={45}
    taskFields={taskFields} pdfQueryTaskbarInfo={pdfQueryTaskbarInfo}
    toolbar={toolbarOptions} toolbarClick={toolbarClick} allowPdfExport={true}
    ref={gantt => ganttChart = gantt}
    splitterSettings={splitterSettings} resourceFields={resourceFields}
    resources={editingResources} taskbarTemplate={TaskbarTemplate}
    parentTaskbarTemplate={ParentTaskbarTemplate}
    milestoneTemplate={MilestoneTemplate} height='450px'>
    <ColumnsDirective>
      <ColumnDirective field='TaskID'></ColumnDirective>
      <ColumnDirective field='TaskName'></ColumnDirective>
    </ColumnsDirective>
    <Inject services={[Toolbar, PdfExport, Selection]} />
  </GanttComponent>
</div>
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>

```

```

<title>Syncfusion React Gantt</title>
<meta charset="utf-8" />
<meta name="viewport" content="width=device-width, initial-scale=1.0" />
<meta name="description" content="Essential JS 2 for React Components"
/>
<meta name="author" content="Syncfusion" />
<link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
<link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
<script src="systemjs.config.js"></script>
<style>
    #loader {
        color: #008cff;
        height: 40px;
        left: 45%;
        position: absolute;
        top: 45%;
        width: 30%;
    }
</style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Exporting with task label template

The PDF export functionality allows to export task label template that include images and text to an PDF document using [pdfQueryTaskbarInfo](#) event.

In the following sample, task label template with images and text are exported to PDF using [labelSettings](#) properties in the [pdfQueryTaskbarInfo](#) event.

Note: PDF Export supports base64 string to export the images.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective, Inject, Toolbar,
PdfExport, Selection, PdfQueryCellInfoEventArgs } from '@syncfusion/ej2-
react-gantt';
function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',

```

```

        child: 'subtasks',
        resourceInfo: 'resources'
    };
    const toolbarOptions = ['PdfExport'];
    let ganttChart;
    function toolbarClick(args) {
        if (args.item.text === 'Pdf export') {
            let exportProperties = {
                enableFooter: false
            };
            ganttChart.pdfExport(exportProperties);
        }
    };
    function pdfQueryTaskbarInfo(args) {
        args.labelSettings.leftLabel.value =
args.data.ganttProperties.taskName + '[' +
args.data.ganttProperties.progress + '];
        if (args.data.ganttProperties.resourceNames) {
            args.labelSettings.rightLabel.value =
args.data.ganttProperties.resourceNames;
            args.labelSettings.rightLabel.image = [{
                base64: (args).data.taskData.resourcesImage, width: 20,
height: 20
            }]
        }
        args.labelSettings.taskLabel.value =
args.data.ganttProperties.progress + '%'
    }
    const LeftLabelTemplate = (props) => {
        return (<span>{props.TaskName} [ {props.Progress}% ]</span>);
    };
    const templateLeft = LeftLabelTemplate;
    const RightLabelTemplate = (props) => {
        if (props.ganttProperties.resourceInfo) {
            let resources = props.ganttProperties.resourceInfo;
            let out = [];
            for (let index = 0; index < resources.length; index++) {
                let src =
'https://ej2.syncfusion.com/react/demos/src/gantt/images/' +
resources[index].resourceName + '.png';
                let img = <img src={src} height='40px' />;
                let span = <span style={{ marginLeft: '5px', marginRight:
'5px' }}>{resources[index].resourceName}</span>;
                out.push(img, span);
            }
            return (<div>{out}</div>);
        } else {
            return <div></div>
        }
    };
    const templateRight = RightLabelTemplate;
    const labelSettings = {
        leftLabel: templateLeft.bind(this),
        rightLabel: templateRight.bind(this),
        taskLabel: '$ {Progress}%'
    };
    const splitterSettings = {

```

```

        columnIndex: 2
    };
    const resourceFields = {
        id: 'resourceId',
        name: 'resourceName',
    };
    const projectStartDate = new Date('03/24/2019');
    const projectEndDate = new Date('04/30/2019');
    return <GanttComponent dataSource={base64Data} rowHeight={60}
    taskFields={taskFields} toolbar={toolbarOptions}
    pdfQueryTaskbarInfo={pdfQueryTaskbarInfo} toolbarClick={toolbarClick}
    allowPdfExport={true} ref={gantt => ganttChart = gantt}
        splitterSettings={splitterSettings} labelSettings={labelSettings}
    resourceFields={resourceFields} resources={editingResources}
    projectStartDate={projectStartDate} projectEndDate={projectEndDate}
    height='450px'>
        <ColumnsDirective>
            <ColumnDirective field='TaskID'></ColumnDirective>
            <ColumnDirective field='TaskName'></ColumnDirective>
        </ColumnsDirective>
        <Inject services={[Toolbar, PdfExport, Selection]} />
    </GanttComponent>
    };
    ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective,
PdfExportProperties, ColumnDirective, pdfQueryTaskbarInfoEventArgs, Inject,
Toolbar, PdfExport, Selection } from '@syncfusion/ej2-react-gantt';
import { base64Data, editingResources } from './datasource';
import { ClickEventArgs } from '@syncfusion/ej2-navigations';
function App() {
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks',
        resourceInfo: 'resources'
    };
    const toolbarOptions = ['PdfExport'];
    let ganttChart: any;
    function toolbarClick(args : ClickEventArgs) {
        if (args.item.text === 'Pdf export') {
            let exportProperties: PdfExportProperties = {
                enableFooter: false
            };
            ganttChart.pdfExport(exportProperties);
        }
    };
    function pdfQueryTaskbarInfo(args: pdfQueryTaskbarInfoEventArgs) {

```

```

        args.labelSettings.leftLabel.value =
args.data.ganttProperties.taskName + '[' +
args.data.ganttProperties.progress + '];
        if (args.data.ganttProperties.resourceNames) {
            args.labelSettings.rightLabel.value =
args.data.ganttProperties.resourceNames;
            args.labelSettings.rightLabel.image = [{
                base64: (args as any).data.taskData.resourcesImage, width:
20, height: 20
            }]
        }
        args.labelSettings.taskLabel.value =
args.data.ganttProperties.progress + '%'
    }
    const LeftLabelTemplate = (props : any) => {
        return (<span>{props.TaskName} [ {props.Progress}% ]</span>);
    };
    const templateLeft: any = LeftLabelTemplate;
    const RightLabelTemplate = (props : any) => {
        if (props.ganttProperties.resourceInfo) {
            let resources = props.ganttProperties.resourceInfo;
            let out : any = [];
            for (let index = 0; index < resources.length; index++) {
                let src =
'https://ej2.syncfusion.com/react/demos/src/gantt/images/' +
resources[index].resourceName + '.png';
                let img = <img src={src} height='40px' />;
                let span = <span style={{ marginLeft: '5px', marginRight:
'5px' }}>{resources[index].resourceName}</span>;
                out.push(img, span);
            }
            return (<div>{out}</div>);
        } else {
            return <div></div>
        }
    };
    const templateRight: any = RightLabelTemplate;
    const labelSettings: any = {
        leftLabel: templateLeft.bind(this),
        rightLabel: templateRight.bind(this),
        taskLabel: '$ {Progress}%'
    };
    const splitterSettings: any = {
        columnIndex: 2
    };
    const resourceFields: any = {
        id: 'resourceId',
        name: 'resourceName',
    };
    const projectStartDate = new Date('03/24/2019');
    const projectEndDate = new Date('04/30/2019');
    return <GanttComponent dataSource={base64Data} rowHeight={60}
taskFields={taskFields} pdfQueryTaskbarInfo={pdfQueryTaskbarInfo}
toolbar={toolbarOptions} toolbarClick={toolbarClick} allowPdfExport={true}
ref={gantt => ganttChart = gantt}
        splitterSettings={splitterSettings} labelSettings={labelSettings}
resourceFields={resourceFields} resources={editingResources}

```



```

projectStartDate={projectStartDate} projectEndDate={projectEndDate}
height='450px'>
    <ColumnsDirective>
        <ColumnDirective field='TaskID'></ColumnDirective>
        <ColumnDirective field='TaskName'></ColumnDirective>
    </ColumnsDirective>
    <Inject services={[Toolbar, PdfExport, Selection]} />
</GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components" />
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008cff;
            height: 40px;
            left: 45%;
            position: absolute;
            top: 45%;
            width: 30%;
        }
    </style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Exporting with header template

The PDF export functionality allows to export header template that include **images** and **text** to an PDF document using [pdfColumnHeaderQueryCellInfo](#) event.

In the following sample, header template with images and text are exported to PDF using [headerTemplate](#) properties in the [pdfColumnHeaderQueryCellInfo](#) event.

Note: PDF Export supports base64 string to export the images.

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, ColumnsDirective, ColumnDirective, Inject, Toolbar, PdfExport, Selection, PdfQueryCellInfoEventArgs, pdfColumnHeaderQueryCellInfo } from '@syncfusion/ej2-react-gantt';
function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks',
        resourceInfo: 'resources'
    };
    const toolbarOptions = ['PdfExport'];
    let ganttChart;
    function toolbarClick(args) {
        if (args.item.text === 'Pdf export') {
            let exportProperties = {
                enableFooter: false
            };
            ganttChart.pdfExport(exportProperties);
        }
    };
    function pdfColumnHeaderQueryCellInfo(args) {
        let base64Array = [
            { 'TaskName':
                '/9j/4AAQSkZJRgABAQIAHAAcAAD/4QBIRXhpZGAgAATU0AKgAAAAGABQESAAMAAAAABAAEAAAAEAaAU
                AAAABAAAAASgEbAAUAAAAABAAAAAugEOAAMAAAAABAAMAAAI TAAMAAAAABAAEAAAAAAAAAACAAAAQA
                AABwAAAAAB/9saQWADAgICAgIDAglCAWMdAwQGBAQEBAQIBgyYFBGkICgoJCAkJCgwPDAoLDgsJCQO
                RDQ4PEBAREAoMEhmMSEBMFEBAQ/9saQWEADawMEAWQIBAQEIEAsJCxAQEBaqEBaqEBaqEBaqEBaqEBA
                QEBaqEBaqEBaqEBaqEBaqEBaqEBaqEBaqEBaqEBaqEBaqEBaqEBaqEBaqEBaqEBaqEBaqEBaqEBaqEBA
                BAQEAAAAAAAAAAAAAYIAAcF/8QALBAAAQQCagEDAwI HAAAAAAAAAQIDBAUGBxEsAAgTIRQVQRy
                xFzhXdpa01f/EABQBAQAAAAAAAAAAAAAAAAAAD/xAAUEQEAAAAAAAAAAAAAAAAAA/9oADAMBAAIRAxEAPwB7gessOlaiw2zpdS4Ld2cqngOyl2rLbHcqjpLiY6IZylL7/gp/J+RxxwQt68w6mew
                u7XrfEKc+azXGuiqi02r2ybqKnHD3stLVy2TyOG/cj5A5IXr4G8CF9+aD0XT6K2Nb1GLsEgz40JW
                8mLKjY5DaeYdRDdUhxC0thSVJUaQoEEEEajWNW2XofprGLblE/QEGdBerJiyoztK08w6hQUhxCOkf
                KkqAIUCCCAR4CDD9sbv2RWSSol9r3BrDGza2NfWWEnOH21T2yst2MJKUslryAhws1SeHFfBHyrWs
                HnW26tv12qp05Ier8GtmDYovZI2qJm01L0icGPfc0IeqEcKLfyErKT+DwfjwFvqO/l62h/Zl3/ov
                eB0TWJTte2FRyxX5RqrLrj065HUuZRdzXIOQ7GRHC6YLv+YlmVDcgPJS6044AQVHHty/I58Ao3lmJ
                UeibfRWBZH6bkCFbul1K7PTTrpzjsQRlzJCWqxOPyFiSKqwepUQOfj48Ctdj4j/ABA15lGB/cP
                oPlJSzaj6v2vd+n+oYW17ntsnv1789ew5445H7+Ad+x+ox+qGu/8AA53/AGPA5drHb+D4rru/Xsy
                3nrPG8615hkwnOXDjbTIkg9lrU4qcQY271W0R0BFJSFI5UVqqQKWw5cot6NMhxTZO+9dsF172ByI
                YjqrmM9LMoloQll0ixIMuSH+3Z9BSlaiFBCeOSH//2Q==' },
            { 'StartDate':
                '/9j/4AAQSkZJRgABAQIAHAAcAAD/4QBIRXhpZGAgAATU0AKgAAAAGABQESAAMAAAAABAAEAAAAEAaAU
                AAAABAAAAASgEbAAUAAAAABAAAAAugEOAAMAAAAABAAMAAAI TAAMAAAAABAAEAAAAAAAAAACAAAAQA
                AABwAAAAAB/9saQWADAgICAgIDAglCAWMdAwQGBAQEBAQIBgyYFBGkICgoJCAkJCgwPDAoLDgsJCQO
                RDQ4PEBAREAoMEhmMSEBMFEBAQ/9saQWEADawMEAWQIBAQEIEAsJCxAQEBaqEBaqEBaqEBaqEBaqEBA
                QEBaqEBaqEBaqEBaqEBaqEBaqEBaqEBaqEBaqEBaqEBaqEBaqEBaqEBaqEBaqEBaqEBaqEBaqEBA
                BAQEAAAAAAAAAAAAACABgx/xAAZEAAAABQDBwEGBwAAAAAAAAAABAgMEBQYHEQgSEWAUFRYYITI
                0IiOxmZVCN0NRVWaCq//EABUBAQEAAAAAAAAAAAAAAAAAAAB/8OAGBEBAQEBAQAAAAAAAAAAAAAAAA
```

```

AABEBIUH/2gAMAwEAAhEDEQA/AG2t2PafKP4qHFI3sLlRGR4bE4QlEIi4Yu1XqLJdBsQ5UAU1spj
EKqoJQBIfEoZTD8QCJcXxTdhwp3JlI6RxQ5yYQmGOVYjEVYbE8oPVoi8VFNmVRanEoInbjcUvIx
wAw27BTHjim7EfTuc6R1ciEhyawi0MbKw6IpQ2J5ReoxFmqCagpC6OBRRi4G4JeRSAJgv3B3ojj2
nysGKhvSNlC5UWkeJROLpQ+It2LtJ6syQQcqt1BFRbKUxypJiYBSyMGUo/AOtP7GoFVcRtTZRkW
jGHiLcm8F3qKTVLi68Qd72wIoTMSlm1MmmcgXAtigmAXsO1lSwYwJKqEwV0mLD8yw54TiTFLMNJF
XblWUHAMjpHK2MAJnC5xNZ2n2EgB2N37BdCqOpVQl+uku4fnuHPCceYpmhp4q0cpSg4FkRIhXJhB
Q42OBrNFOWEE05e/cbIUnSAXqBSrEbTKUZ6oxh4hPOXGt1likkS4uhEGm6MDqHyrK5dPPqEINgNco
qANrhskLWameB0/jWL2uPPWiuYaV6PLO68Jm5CB8SvCy58+qA62nYlreOqN/INmGiCT5cpetjBnm
EvcV00w2XUIAio0ndKem6L2Jq5GN2ykQEMixQEYgaYBcN3KH5Y7PTxThLlL0cYMjQlliummJS6vA
FlHc7qz03WewxXI+s2TiABkRKIlTDTELjvBg/MDZ6eF+WIHT+C4vaHci4i5hqprczblxabkI5w20
LNkyaQBo6lZ3v5aQW8R2aYz1VOKrq9rPlSfx3gXlP9rJvPof8PP8Ar92zDQxLHQ71NzbzJ+EBBku
AfV/X5Gefw968t8+Z7P6fZs4dUz9DvU3KXLf4QcGV4/8AV/X5HmTz968tz+X7P6/fs4dM9K+krq9
ox0t/yLjv1P8Aaz7t67/fw/t9uzTH/9k=' },
]
while (i < base64Array.length) {
  const key = Object.keys(base64Array[i])[0];
  const value = base64Array[i][key];
  if (key === args.column.field) {
    args.headerTemplate.image = [{
      base64: value, width: 20, height: 20
    }];
    args.headerTemplate.value = args.column.field;
    break;
  }
  i++;
}
const splitterSettings = {
  columnIndex: 2
};
const resourceFields = {
  id: 'resourceId',
  name: 'resourceName',
};
const projectStartDate = new Date('03/24/2019');
const projectEndDate = new Date('04/30/2019');
return <GanttComponent dataSource={base64Data} rowHeight={60}
taskFields={taskFields} toolbar={toolbarOptions}
pdfColumnHeaderQueryCellInfo={pdfColumnHeaderQueryCellInfo}
toolbarClick={toolbarClick} allowPdfExport={true} ref={gantt => ganttChart =
gantt}
splitterSettings={splitterSettings} labelSettings={labelSettings}
resourceFields={resourceFields} resources={editingResources}
projectStartDate={projectStartDate} projectEndDate={projectEndDate}
height='450px'>
  <ColumnsDirective>
    <ColumnDirective field='TaskName'
headerText='TaskName' headerTemplate={() => {
      return <div>
      <b className='e-header'>Task
Name</b></div>);
    }} ></ColumnDirective>
    <ColumnDirective field='StartDate' headerText='Start
Date' headerTemplate={() => {

```

```

        return (<div>
                <b className='e-header'>Start
Date</b></div>);
    }}</ColumnDirective>
</ColumnsDirective>
    <Inject services={[Toolbar, PdfExport, Selection]} />
</GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

[illegible]

```

8mLKjY5DaeYdRDdUhxC0thSVJUAQoEEEEjwNW2XoFprGLb1E/QEGdBerJiyoztK08w6hQUhxC0kF
KkqAIUCCCAR4CDD9sbV2RWSs019r3BrDGza2NfWWEhOH21T2Yst2MJKUs1ryAhwslSeHfFBHyRwS
HnW26tv12qp05Ier8GtMdYoVZI2qJm01L0iCGPfC0IeqEcKlfyErKT+DwfjwFvqO/162h/Zl3/ov
eB0TwJTe2FRYxX5RqrLrj065HUuZRdzXIOQ7GRHc6yLV+YlmVDcgPJS6044AQVHhTY/I58Ao3lmJ
UeibfRWBZH6bKCFbUL1K7PTtRpTrzjsQRlZJCWqxoPyFISkqWepUQOfj48Ctdj4j/ABA151GB/cP
oPlJSzaj6v2vd+n+oYW17nTsnv1789ew5445H7+Ad+x+oX+qGu/8AA53/AGPA5drHb+D4rru/xSy
3nrPG86i5hkwnOXDjbTikG9lrU4qCqY271W0R0BfJSFI5UvqQQKWW5cOT6NMhxTZO+9d5F172ByI
YjQrmM9LM0loQ110iXIMuSH+3Z9BSlaiFBCeOSH//2Q==' },
    { 'StartDate':
      '/9j/4AAQSkZJRgABAQIAAAAcAAD/4QBiRXhpZgAATU0AKgAAAAGABQESAAMAAAABAAEAAAEaAAU
      AAAABAAAASgEbAAUAAAABAAAUgEoAAMAAAABAAMAAAITAAMAAAABAAEAAAAAAAAAAACAAAAQA
      AABwAAAAB/9sAQwADAgICAgIDAgICAwMDAwQGBAQEBAQIBgYFBGkICgoJCAkJCgWPDAoLDgsJCQ0
      RDQ4PEBAREAoMEhmMSEBMPEBAQ/9sAQwEDAwMEAwQIBAQIEAsJCxAQEBAQEBAQEBAQEBAQEBA
      QEBAQEBAQEBAQEBAQEBAQEBAQEBAQEBAQEBAQ/8AAEQgAIAAgAwERAAIRAQMRAf/EABCAAQE
      BAQAAAAAAAAAAAAAAAAAAcABgX/xAAzEAAABAQDBwEGBwAAAAAAAAABAgMEBQYHEQgSEwAUFRYYITI
      0IiQxMzVCN0NRVWacg//EABUBAQEAAAAAAAAAAAAAAAAAAAB/8QAGBEBQEBQAAAAAAAAAAAAA
      AABEBIUH/2gAMAwEAAhEDEQA/AG2t2PafKP4qHFI3sLlRGR4bE4QlEi4Yu1XqLJdBsq5UAU1spj
      EKqoJQBIfEoZTD8QCJcxtDhwp3JlI6RxQ5yYQmGOVYjEVYbE8oPVoi8VFNMRanEoInbjcUvIx
      wAw27BTHjim7EfTuc6R1ciEhyawi0MbKw6IpQ2J5ReoxFmqCagpC6OBRI4G4JeRSAJgv3B3ojj2
      nysGKhvSNlC5UWkeJROLpQ+It2LtJ6syQQcqt1BFRbKUxypJiYBSDyMGUo/AOtP7GoFVcRtTZRkW
      jGHilcm8F3qKTvLi68Qd72wIoTmslm1MmmcgXatigmAXs01lSwYwJKqEwV0mLD8yw54TiTFLMNJF
      XblWUHAMjpHK2MAJnC5xNZ2n2EgB2N37BdCqOpVQ1+uku4fnuHPCceYpmhp4q0cpSg4FkRIhXJhB
      Q420BrNFOWEE05e/cbIUnSAXqBSrEbTKUZ6oxh4hPOXGt1ikkS4uhEGm6MDqHyrK5dPPqEINgNco
      qANrhskLWameB0/jWL2uPPWIuYaV6PLO68Jm5CB8SvCy58+qA62nYlreOqN/INmGiCT5cpetjBnm
      EvcV00w2XUIAio0ndKem6L2Jq5GN2ykQEMixQEYgaYBcN3KH5Y7PTxThLlL0cYMjQlIiummJS6vA
      FlHc7qz03WewxXI+s2TiABkRKIlTDTELjvBg/MDZ6eF+WlHT+C4vaHci4i5hqprczblxabkI5w20
      LNkyaQBo61z3v5aQW8R2aYz1Vokrq9rPlSfx3gXlP9rJvPof8PP8Ar92zDQxLHQ71NzbzJ+EHbku
      AfV/X5Gefw968t8+Z7P6fZs4dUz9DvU3KXLf4QcGV4/8AV/X5HmTz968tz+X7P6/fs4dM9K+krq9
      ox0t/yLjv1P8Aaz7t67/fw/t9uzTH/9k=' },
  ]
  while (i < base64Array.length) {
    const key = Object.keys(base64Array[i])[0];
    const value = base64Array[i][key];
    if (key === args.column.field) {
      args.headerTemplate.image = [{
        base64: value, width: 20, height: 20
      }];
      args.headerTemplate.value = args.column.field;
      break;
    }
    i++;
  }
}
const splitterSettings: any = {
  columnIndex: 2
};
const resourceFields: any = {
  id: 'resourceId',
  name: 'resourceName',
};
const projectStartDate = new Date('03/24/2019');
const projectEndDate = new Date('04/30/2019');
return (
  <div className='control-pane'>
    <div className='control-section'>
      <GanttComponent dataSource={base64Data} rowHeight={60}
      taskFields={taskFields}

```

```

pdfColumnHeaderQueryCellInfo={pdfColumnHeaderQueryCellInfo}
toolbar={toolbarOptions} toolbarClick={toolbarClick} allowPdfExport={true}
ref={gantt => ganttChart = gantt}
    splitterSettings={splitterSettings}
resourceFields={resourceFields} resources={editingResources}
projectStartDate={projectStartDate} projectEndDate={projectEndDate}
height='450px'>
    <ColumnsDirective>
        <ColumnDirective field='TaskName'
headerText='TaskName' headerTemplate={() => {
            return <div>
            <b className='e-header'>Task
Name</b></div>;
        }} ></ColumnDirective>
        <ColumnDirective field='StartDate' headerText='Start
Date' headerTemplate={() => {
            return <div>
            <b className='e-header'>Start
Date</b></div>;
        }}></ColumnDirective>
    </ColumnsDirective>
    <Inject services={[Toolbar, PdfExport, Selection]} />
  </GanttComponent>
</div>
</div>
)
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;

```

```

        height: 40px;
        left: 45%;
        position: absolute;
        top: 45%;
        width: 30%;
    }
</style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Context menu in React Gantt component

The Gantt control allows you to perform quick actions by using context menu. When right-clicking the context menu, the context menu options are shown. To enable this feature, set the [enableContextMenu](#) to true. The default context menu options are enabled using the [editSettings](#) property. The context menu options can be customized using the [contextMenuItems](#) property.

To use the context menu, inject the [ContextMenu](#) module into the Gantt component.

The default items are listed in the following table.

Items | Description

AutoFit | Auto-fits the current column.

AutoFitAll | Auto-fits all columns.

SortAscending | Sorts the current column in ascending order.

SortDescending | Sorts the current column in descending order.

TaskInformation | Edits the current task.

Add | Adds a new row to the Gantt.

Indent | Indent the selected record to one level.

Outdent | Outdent the selected record to one level.

DeleteTask | Deletes the current task.

Save | Saves the edited task.

Cancel | Cancels the edited task.

DeleteDependency | Deletes the current dependency task link.

Convert | Converts current task to milestone or vice-versa.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit, Selection, ContextMenu, Sort, Resize
} from '@syncfusion/ej2-react-gantt';

```

```
import { data } from './datasource';
function App() {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    dependency: 'Predecessor',
    child: 'subtasks'
  };
  const editSettings = {
    allowAdding: true,
    allowEditing: true,
    allowDeleting: true
  };
  return <GanttComponent dataSource={data} taskFields={taskFields}
    editSettings={editSettings} allowSorting={true} allowResizing={true}
    enableContextMenu={true} height = '450px'>
    <Inject services={[Edit, ContextMenu, Selection, Sort, Resize]}
  />
  </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit, Selection, ContextMenu, Sort, Resize,
  EditSettingsModel } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    dependency: 'Predecessor',
    child: 'subtasks'
  };
  const editSettings: EditSettingsModel = {
    allowAdding: true,
    allowEditing: true,
    allowDeleting: true
  };
  return <GanttComponent dataSource={data} taskFields={taskFields}
    editSettings={editSettings} allowSorting={true} allowResizing={true}
    enableContextMenu={true} height = '450px'>
    <Inject services={[Edit, ContextMenu, Selection, Sort, Resize]}
  />
  </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));
```


INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Custom context menu items

The custom context menu items can be added by defining the [contextMenuItems](#) as a collection of [contextMenuItemModel](#). Actions for the customized items can be defined in the [contextMenuClick](#) event and the visibility of customized items can be defined in the [contextMenuOpen](#) event.

To create custom context menu items for header area, define the target property as `.e-gridheader`.

The following sample shows context menu item for parent rows to expand or collapse child rows in the content area and a context menu item to hide columns in the header area.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit, Selection, ContextMenu, Sort, Resize,
EditSettingsModel, IGanttData } from '@syncfusion/ej2-react-gantt';
import { data } from '../datasource';
function App() {

```

```

let ganttInstance;
const taskFields = {
  id: 'TaskID',
  name: 'TaskName',
  startDate: 'StartDate',
  duration: 'Duration',
  progress: 'Progress',
  dependency: 'Predecessor',
  child: 'subtasks'
};
const editSettings = {
  allowAdding: true,
  allowEditing: true,
  allowDeleting: true
};
const contextMenuItems = ['AutoFitAll', 'AutoFit', 'TaskInformation',
'DeleteTask', 'Save', 'Cancel', 'SortAscending', 'SortDescending', 'Add',
'DeleteDependency', 'Convert',
  { text: 'Collapse the Row', target: '.e-content', id: 'collapserow'
},
  { text: 'Expand the Row', target: '.e-content', id: 'expandrow' },
  { text: 'Hide Column', target: '.e-gridheader', id: 'hidecols' }
];
function contextMenuClick (args) {
  let record = args.rowData;
  if (args.item.id === 'collapserow') {
ganttInstance.collapseByID(Number(record.ganttProperties.taskId));
  }
  if (args.item.id === 'expandrow') {
    ganttInstance.expandByID(Number(record.ganttProperties.taskId));
  }
  if (args.item.id === 'hidecols') {
    ganttInstance.hideColumn(args.column.headerText);
  }
};
function contextMenuOpen (args) {
  let record = args.rowData;
  if (args.type !== 'Header') {
    if (!record.hasChildRecords) {
      args.hideItems.push('Collapse the Row');
      args.hideItems.push('Expand the Row');
    } else {
      if(record.expanded){
        args.hideItems.push("Expand the Row");
      } else {
        args.hideItems.push("Collapse the Row");
      }
    }
  }
};
return <GanttComponent dataSource={data} taskFields={taskFields}
editSettings={editSettings} allowSorting={true} allowResizing={true}
enableContextMenu={true} contextMenuItems={contextMenuItems}
contextMenuClick={contextMenuClick} contextMenuOpen={contextMenuOpen}
ref={gantt => ganttInstance = gantt} height = '450px'>

```

```

        <Inject services={[Edit, ContextMenu, Selection, Sort, Resize]}
    />
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit, Selection, ContextMenu, Sort, Resize,
EditSettingsModel, IGanttData } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    let ganttInstance: any;
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        dependency: 'Predecessor',
        child: 'subtasks'
    };
    const editSettings: EditSettingsModel = {
        allowAdding: true,
        allowEditing: true,
        allowDeleting: true
    };
    const contextMenuItems: any = ['AutoFitAll', 'AutoFit', 'TaskInformation',
'DeleteTask', 'Save', 'Cancel', 'SortAscending', 'SortDescending', 'Add',
'DeleteDependency', 'Convert',
    { text: 'Collapse the Row', target: '.e-content', id: 'collapserow'
},
    { text: 'Expand the Row', target: '.e-content', id: 'expandrow' },
    { text: 'Hide Column', target: '.e-gridheader', id: 'hidecols' }
    ];
    function contextMenuClick (args: any) {
        let record: IGanttData = args.rowData;
        if (args.item.id === 'collapserow') {
            ganttInstance.collapseByID(Number(record.ganttProperties.taskId));
        }
        if (args.item.id === 'expandrow') {
            ganttInstance.expandByID(Number(record.ganttProperties.taskId));
        }
        if (args.item.id === 'hidecols') {
            ganttInstance.hideColumn(args.column.headerText);
        }
    };
    function contextMenuOpen (args: any) {
        let record: IGanttData = args.rowData;
        if (args.type !== 'Header') {
            if (!record.hasChildRecords) {
                args.hideItems.push('Collapse the Row');
                args.hideItems.push('Expand the Row');
            }
        }
    }
}

```

```

        } else {
            if(record.expanded) {
                args.hideItems.push("Expand the Row");
            } else {
                args.hideItems.push("Collapse the Row");
            }
        }
    }
};
return <GanttComponent dataSource={data} taskFields={taskFields}
editSettings={editSettings} allowSorting={true} allowResizing={true}
enableContextMenu={true} contextMenuItems={contextMenuItems}
contextMenuClick={contextMenuClick} contextMenuOpen={contextMenuOpen}
ref={gantt => ganttInstance = gantt} height = '450px'>
    <Inject services={[Edit, ContextMenu, Selection, Sort, Resize]}
/>
    </GanttComponent>
</>
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008cff;
            height: 40px;
            left: 45%;
            position: absolute;
            top: 45%;
            width: 30%;
        }
    </style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>

```

```
</html>
```

You can show an specific item in context menu for header/content area in the Gantt control by defining the `target` property.

Touch interaction

To perform `long press` action on a row, [context menu](#) is opened, and then tap a menu item to trigger its action.

State persistence in React Gantt component

State persistence refers to the Gantt's state maintained in the browser's [localStorage](#) even if the browser is refreshed or if you move to the next page within the browser. State persistence stores gantt's model object in the local storage when the [enablePersistence](#) is defined as true.

Get or set localStorage value

If the [enablePersistence](#) property is set to true, the gantt property value is saved in the `window.localStorage` for reference. You can get/set the localStorage value by using the `getItem/setItem` method in the `window.localStorage`.

```
`ts
```

```
//get the Gantt model.
```

```
let value: string = window.localStorage.getItem('ganttGantt'); //"ganttGantt" is component name + component id.
```

```
let model: Object = JSON.parse(model);
```

```
,
```

```
`ts
```

```
//set the Gantt model.
```

```
window.localStorage.setItem('ganttGantt', JSON.stringify(model)); //"ganttGantt" is component name + component id.
```

```
,
```

You can refer to our [React Gantt](#) feature tour page for its groundbreaking feature representations. You can also explore our [React Gantt example](#) to knows how to present and manipulate data.

Prevent columns from persisting

When the [enablePersistence](#) property is set to true, the Gantt properties such as [Filtering](#), [Sorting](#), and [Columns](#) will persist. You can use the `addOnPersist` method to prevent these Gantt properties from persisting.

The following example demonstrates how to prevent Gantt columns from persisting. In the [dataBound](#) event of the Gantt, you can override the `addOnPersist` method and remove the columns from the key list given for persistence.

Note: When the `enablePersistence` property is set to true, the Gantt features such as column template, column formatter, header text, and value accessor will not persist.

INDEX.JSX

```

let data = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
      { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
      { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
    ]
  },
  {
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
      { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 },
      { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 }
    ]
  },
];
import { GanttComponent, ColumnsDirective, ColumnDirective } from
'@syncfusion/ej2-react-gantt';
import { Gantt } from '@syncfusion/ej2-react-gantt';
import * as ReactDOM from 'react-dom';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
function App () {
  let ganttInstance;
  function dataBound() {
    let cloned = ganttInstance.addOnPersist;
    ganttInstance.addOnPersist = function (key) {
      key = key.filter((item) => item !== "columns");
      return cloned.call(this, key);
    };
  }
  function addColumn() {
    let obj = { field: "Progress", headerText: 'Progress', width: 100 };
    ganttInstance.columns.push(obj); //you can add the columns by using the
Gantt columns method
    ganttInstance.treeGrid.refreshColumns();
  }
  function removeColumn() {
    ganttInstance.columns.pop();
    ganttInstance.treeGrid.refreshColumns();
  }
  const taskFields = {
    id: 'TaskID',

```

```

name: 'TaskName',
startDate: 'StartDate',
duration: 'Duration',
progress: 'Progress',
child: 'subtasks'
};
return( <div> <ButtonComponent onClick= { addColumn }>Add
Columns</ButtonComponent>
<ButtonComponent onClick= { removeColumn }>Remove
Columns</ButtonComponent><GanttComponent id="Gantt" dataSource={data}
enablePersistence={true} dataBound={dataBound} height={430}
taskFields={taskFields}
ref={gantt => ganttInstance = gantt}>
  <ColumnsDirective>
    <ColumnDirective field='TaskID' width='100' />
    <ColumnDirective field='TaskName' width='100' />
    <ColumnDirective field='StartDate' width='100' />
    <ColumnDirective field='Duration' width='100' />
  </ColumnsDirective>
</GanttComponent></div>)
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

let data: Object[] = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
      { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
      { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
    ]
  },
  {
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
      { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 },
      { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 }
    ]
  },
];

```

```

import { GanttComponent, ColumnsDirective, ColumnDirective } from
 '@syncfusion/ej2-react-gantt';
import { Gantt } from '@syncfusion/ej2-react-gantt';
import * as ReactDOM from 'react-dom';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
function App () {
  let ganttInstance: any;
  function dataBound() {
    let cloned = ganttInstance.addOnPersist;
    ganttInstance.addOnPersist = function (key: any) {
      key = key.filter((item: string) => item !== "columns");
      return cloned.call(this, key);
    };
  }
  function addColumn() {
    let obj = { field: "Progress", headerText: 'Progress', width: 100 };
    ganttInstance.columns.push(obj as any); //you can add the columns by using
    the Gantt columns method
    ganttInstance.treeGrid.refreshColumns();
  }
  function removeColumn() {
    ganttInstance.columns.pop();
    ganttInstance.treeGrid.refreshColumns();
  }
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  return ( <div> <ButtonComponent onClick= { addColumn }>Add
  Columns</ButtonComponent>
  <ButtonComponent onClick= { removeColumn }>Remove
  Columns</ButtonComponent><GanttComponent id="Gantt" dataSource={data}
  enablePersistence={true} dataBound={dataBound} height={430}
  taskFields={taskFields}
  ref={gantt => ganttInstance = gantt}>
  <ColumnsDirective>
    <ColumnDirective field='TaskID' width='100' />
    <ColumnDirective field='TaskName' width='100' />
    <ColumnDirective field='StartDate' width='100' />
    <ColumnDirective field='Duration' width='100' />
  </ColumnsDirective>
  </GanttComponent></div>
  );
  ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>

```



```

<meta charset="utf-8" />
<meta name="viewport" content="width=device-width, initial-scale=1.0" />
<meta name="description" content="Essential JS 2 for React Components"
/>
<meta name="author" content="Syncfusion" />
<link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
<link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
<script src="systemjs.config.js"></script>
<style>
    #loader {
        color: #008cff;
        height: 40px;
        left: 45%;
        position: absolute;
        top: 45%;
        width: 30%;
    }
</style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Persist the header template and header Text

By default, the Gantt properties such as column template, header text, header template, column formatter, and value accessor will not persist when [enablePersistence](#) is set to true. Because the column template and header text can be customized at the application level.

If you wish to restore all these column properties, then you can achieve it by cloning the gantt columns property using JavaScript Object's assign method and storing this along with the persist data manually. While restoring the settings, this column object must be assigned to the gantt's columns property to restore the column settings as demonstrated in the following sample.

INDEX.JSX

```

let data: Object[] = [
    {
        TaskID: 1,
        TaskName: 'Project Initiation',
        StartDate: new Date('04/02/2019'),
        EndDate: new Date('04/21/2019'),
        subtasks: [
            { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
            { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },

```

```

        { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
    ],
    },
    {
        TaskID: 5,
        TaskName: 'Project Estimation',
        StartDate: new Date('04/02/2019'),
        EndDate: new Date('04/21/2019'),
        subtasks: [
            { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
            { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 },
            { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 }
        ]
    },
    ],
];
import { ColumnDirective, ColumnsDirective, GanttComponent } from
'@syncfusion/ej2-react-gantt';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Gantt } from '@syncfusion/ej2-react-gantt';
import * as ReactDOM from 'react-dom';
import * as React from 'react';
function App () {
    let ganttInstance;
    function clickHandler() {
        let savedProperties = JSON.parse(ganttInstance.getPersistData());
        let gridColumnsState = Object.assign([], ganttInstance.ganttColumns);
        savedProperties.columns.forEach((col) => {
            let headerText = gridColumnsState.find((colColumnsState) =>
colColumnsState.field === col.field)['headerText'];
            let colTemplate = gridColumnsState.find((colColumnsState) =>
colColumnsState.field === col.field)['template'];
            let headerTemplate = gridColumnsState.find((colColumnsState) =>
colColumnsState.field === col.field)['headerTemplate'];
            col.headerText = 'Text Changed';
            col.template = colTemplate;
            col.headerTemplate = headerTemplate; //likewise you can restore required
column properties as per your wants.
        });
    };
    console.log(savedProperties);
    ganttInstance.treeGrid.setProperties(savedProperties);
}
const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
};
const headerTemplate = customerTemplate;
function customerTemplate(props) {
    return (<div>

```

```

    <span className="e-icons e-header" ></span>Task Name
  </div>);
}
return( <div> <ButtonComponent onClick= { clickHandler
}>Restore</ButtonComponent> <GanttComponent id="Gantt" dataSource={data}
taskFields={taskFields} enablePersistence={true} height={230}
ref={gantt => ganttInstance = gantt}>
  <ColumnsDirective>
    <ColumnDirective field='TaskID' width='100' textAlign="Right"/>
    <ColumnDirective field='TaskName' width='100'
headerTemplate={headerTemplate}/>
    <ColumnDirective field='StartDate' width='100' />
    <ColumnDirective field='Duration' width='100' />
  </ColumnsDirective>
</GanttComponent></div>
);
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

let data: Object[] = [
  {
    TaskID: 1,
    TaskName: 'Project Initiation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 2, TaskName: 'Identify Site location', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
      { TaskID: 3, TaskName: 'Perform Soil test', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
      { TaskID: 4, TaskName: 'Soil test approval', StartDate: new
Date('04/02/2019'), Duration: 4, Progress: 50 },
    ]
  },
  {
    TaskID: 5,
    TaskName: 'Project Estimation',
    StartDate: new Date('04/02/2019'),
    EndDate: new Date('04/21/2019'),
    subtasks: [
      { TaskID: 6, TaskName: 'Develop floor plan for estimation',
StartDate: new Date('04/04/2019'), Duration: 3, Progress: 50 },
      { TaskID: 7, TaskName: 'List materials', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 },
      { TaskID: 8, TaskName: 'Estimation approval', StartDate: new
Date('04/04/2019'), Duration: 3, Progress: 50 }
    ]
  },
];
import { ColumnDirective, ColumnsDirective, GanttComponent } from
'@syncfusion/ej2-react-gantt';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Gantt } from '@syncfusion/ej2-react-gantt';
import * as ReactDOM from 'react-dom';
import * as React from 'react';

```

```

function App () {
  let ganttInstance: Gantt | null;
  function clickHandler() {
    let savedProperties = JSON.parse(ganttInstance.getPersistData());
    let gridColumnsState = Object.assign([], ganttInstance.ganttColumns);
    savedProperties.columns.forEach((col: {
      field: any;
      headerText: any;
      template: any;
      headerTemplate: any;
    }) => {
      let headerText = gridColumnsState.find((colColumnsState) =>
        colColumnsState.field === col.field)['headerText'];
      let colTemplate = gridColumnsState.find((colColumnsState) =>
        colColumnsState.field === col.field)['template'];
      let headerTemplate = gridColumnsState.find((colColumnsState) =>
        colColumnsState.field === col.field)['headerTemplate'];
      col.headerText = 'Text Changed';
      col.template = colTemplate;
      col.headerTemplate = headerTemplate; //likewise you can restore required
      column properties as per your wants.
    });
    console.log(savedProperties);
    ganttInstance.treeGrid.setProperties(savedProperties);
  }
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  const headerTemplate: any = customerTemplate;
  function customerTemplate(props: any): any {
    return (<div>
      <span className="e-icons e-header" ></span>Task Name
    </div>);
  }
  return (<div> <ButtonComponent onClick= { clickHandler
  }>Restore</ButtonComponent> <GanttComponent id="Gantt" dataSource={data}
  taskFields={taskFields} enablePersistence={true} height={230}
  ref={gantt => ganttInstance = gantt}>
    <ColumnsDirective>
      <ColumnDirective field='TaskID' width='100' textAlign="Right"/>
      <ColumnDirective field='TaskName' width='100'
    headerTemplate={headerTemplate}/>
      <ColumnDirective field='StartDate' width='100' />
      <ColumnDirective field='Duration' width='100' />
    </ColumnsDirective>
  </GanttComponent></div>);
};
ReactDOM.render(<App />, document.getElementById('root'));

```

[INDEX.HTML](#)

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Accessibility in React Gantt component

The Gantt component followed the accessibility guidelines and standards, including [ADA, Section 508](#), [WCAG 2.2](#) standards, and [WCAG roles](#) that are commonly used to evaluate accessibility.

The accessibility compliance for the Gantt component is outlined below.

| Accessibility Criteria | Compatibility |

| -- | -- |

| [WCAG 2.2](#) Support | |

| [Section 508](#) Support | |

| Screen Reader Support | |

```
| Right-To-Left Support |  |  
  
| Color Contrast |  |  
  
| Mobile Device Support |  |  
  
| Keyboard Navigation Support |  |  
  
| Accessibility Checker Validation |  |  
  
| Axe-core Accessibility Validation |   
|  
<style>  
.post .post-content img {  
display: inline-block;  
margin: 0.5em 0;  
}  
</style>  
<div> - All  
features of the component meet the requirement.</div>  
  
<div> - Some features of the component do not meet the requirement.</div>  
  
<div> - The component does not meet the requirement.</div>
```

WAI-ARIA attributes

The Gantt component followed the [WAI-ARIA](#) patterns to meet the accessibility. The following ARIA attributes are used in the Gantt component:

The following ARIA attributes are used in Gantt:

| Attributes | Purpose |

| --- | --- |

| **grid (role)** | This attribute is added to the **e-table** element present in the Gantt, which represents Grid part |

| **gridcell (role)** | This attribute is added to the **td** elements present within the **e-table**, which represents the work cells of Gantt |

| **columnheader (role)** | This attribute is added to the **th** elements within the **e-table**, which represents the header cells of Grid table |

| **separator (role)** | This attribute is added to the **e-split-bar** element, which represents the splitter between the Grid table and Chart |

| **dialog (role)** | This attribute is added to the **e-dialog** element, which represents the pop-up dialog |

| **toolbar (role)** | This attribute is added to the **e-gantt-toolbar** element, which represents the toolbars of Gantt |

| **aria-label** | It indicates the element's information
It is assigned to the Gantt UI elements such as timeline cell, taskbar, left label, right label, dependency line, and event markers. |

| **aria-selected** | This attribute is assigned to the Gantt chart row, and it defaults to **false**. The value is changed to **true** when the user selects a grid cell or task |

| **aria-expanded** | This attribute is assigned to the Gantt chart parent task row. The value is changed to **true** when the user clicks a parent taskbar to expand. After the user clicked a parent taskbar to collapse, the attribute value is changed to **false** |

| **aria-grabbed** | This attribute is assigned to the taskbars of Gantt when the user tries to achieve taskbar editing |

Keyboard navigation

The Gantt component followed the [keyboard interaction](#) guideline, making it easy for people who use assistive technologies (AT) and those who completely rely on keyboard navigation. The following keyboard shortcuts are supported by the Gantt component.

| **Press** | **To do this** |

| --- | --- |

| **Home** | Selects the first row. |

| **End** | Selects the last row. |

| **DownArrow** | Moves the cell focus/row or cell selection downward. |

| **UpArrow** | Moves the cell focus/row or cell selection upward. |

| **LeftArrow** | Moves the cell focus/row or cell selection left side. |

| **RightArrow** | Moves the cell focus/row or cell selection right side. |

| **Ctrl + Up Arrow** | Collapses all tasks. |

| **Ctrl + Down Arrow** | Expands all tasks. |

| **Ctrl + Shift + Up Arrow** | Collapses the selected row. |

| **Ctrl + Shift + Down Arrow** | Expands the selected row. |

| **Enter** | Saves request. |

| **Esc** | Cancels request. |

| **Insert** | Adds a new row. |

| **Ctrl + Insert** | Opens addRowDialog. |

| **Ctrl + F2** | Opens editRowDialog. |

- | Delete | Deletes the selected row. |
- | Shift + F5 | FocusTask |
- | Ctrl + Shift + F | Focus search |
- | Shift + DownArrow | Extends the row/cell selection downwards. |
- | Shift + UpArrow | Extends the row/cell selection upwards. |
- | Shift + LeftArrow | Extends the cell selection to the left side. |
- | Shift + RightArrow | Extends the cell selection to the right side. |
- | Tab / Shift + Tab | To focus the close icon in the message. |
- | Alt + j | Focus Gantt component. |

Ensuring accessibility

The Gantt component's accessibility levels are ensured through an [accessibility-checker](#) and [axe-core](#) software tools during automated testing.

The accessibility compliance of the Gantt component is shown in the following sample. Open the [sample](#) in a new window to evaluate the accessibility of the Gantt component with accessibility tools.

See also

- [Accessibility in Syncfusion React components](#)

Global local in React Gantt component

Localization

The [Localization](#) library allows you to localize default text content of the Gantt. The Gantt component has static text on some features (like column headers, add and edit dialog, tooltip, toolbar, etc.) that can be changed to other cultures (Arabic, Deutsch, French, etc.) by defining the

[locale](#) value and translation object.

The following list of properties and its values are used in the Gantt.

Locale key words | Text

emptyRecord | No records to display

id | ID

name | Name

startDate | Start Date

endDate | End Date

duration | Duration

progress | Progress

dependency | Dependency

notes | Notes

baselineStartDate | Baseline Start Date

baselineEndDate | Baseline End Date

type | Type

offset | Offset

resourceName | Resources

resourceID | Resource ID

day | day

hour | hour

minute | minute

days | days

hours | hours

minutes | minutes

generalTab | General

customTab | Custom Columns

writeNotes | Write Notes

addDialogTitle | New Task

editDialogTitle | Task Information

add | Add

edit | Edit

update | Update

delete | Delete

cancel | Cancel

search | Search

task | task

tasks | tasks

zoomIn | Zoom in

zoomOut | Zoom out

zoomToFit | Zoom to fit

expandAll | Expand all

collapseAll | Collapse all

nextTimeSpan | Next timespan

prevTimeSpan | Previous timespan

saveButton | Save

taskBeforePredecessor_FS | You moved "{0}" to start before "{1}" finishes and the two tasks are linked. As the result, the links cannot be honored. Select one action below to perform

taskAfterPredecessor_FS | You moved "{0}" away from "{1}" and the two tasks are linked. As the result, the links cannot be honored. Select one action below to perform

taskBeforePredecessor_SS | You moved "{0}" to start before "{1}" starts and the two tasks are linked. As the result, the links cannot be honored. Select one action below to perform

taskAfterPredecessor_SS | You moved "{0}" to start after "{1}" starts and the two tasks are linked. As the result, the links cannot be honored. Select one action below to perform

taskBeforePredecessor_FF | You moved "{0}" to finish before "{1}" finishes and the two tasks are linked. As the result, the links cannot be honored. Select one action below to perform

taskAfterPredecessor_FF | You moved "{0}" to finish after "{1}" finishes and the two tasks are linked. As the result, the links cannot be honored. Select one action below to perform

taskBeforePredecessor_SF | You moved "{0}" away from "{1}" to starts and the two tasks are linked. As the result, the links cannot be honored. Select one action below to perform

taskAfterPredecessor_SF | You moved "{0}" to finish after "{1}" starts and the two tasks are linked. As the result, the links cannot be honored. Select one action below to perform

okText | Ok

confirmDelete | Are you sure you want to Delete Record?

from | From

to | To

taskLink | Task Link

lag | Lag

start | Start

finish | Finish

enterValue | Enter the value

taskInformation | Task Information

deleteTask | Delete Task

deleteDependency | Delete Dependency

convert | Convert

save | Save

above | Above

below | Below

child | Child

milestone | Milestone

toTask | To Task

toMilestone | To Milestone

eventMarkers | Event markers

leftTaskLabel | Left task label

rightTaskLabel | Right task label

timelineCell | Timeline cell

confirmPredecessorDelete | Are you sure you want to remove dependency link?taskMode | Task Mode

changeScheduleMode | Change Schedule Mode

subTasksStartDate | SubTasks Start Date

subTasksEndDate | SubTasks End Date

scheduleStartDate | Schedule Start Date

scheduleEndDate | Schedule End Date

auto | Auto

manual | Manual

excelExport | Excel export

csvExport | CSV export

pdfExport | Pdf export

unit | Unit

work | Work

taskType | Task Type

unassignedTask | Unassigned Task

group | Group

Loading translations

To load translation object in an application use [load](#) function of [L10n](#) class.

The below example demonstrates the Gantt in **Deutsch** culture.

INDEX.JSX

```
import { L10n, setCulture } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject } from '@syncfusion/ej2-react-gantt';
import { data } from '../datasource';
setCulture('de-DE');
L10n.load({
  'de-DE': {
    'gantt': {
      "id": "Ich würde",
      "name": "Name",
      "startDate": "Anfangsdatum",
      "duration": "Dauer",
      "progress": "Fortschritt",
    }
  }
})
```

```
});
function App () {
  const taskFields= {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  return <GanttComponent dataSource={data} locale='de-DE'
allowSelection={true} taskFields={taskFields} height = '450px'>
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import { L10n, setCulture } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
setCulture('de-DE');
L10n.load({
  'de-DE': {
    'gantt': {
      "id": "Ich würde",
      "name": "Name",
      "startDate": "Anfangsdatum",
      "duration": "Dauer",
      "progress": "Fortschritt",
    }
  }
});
function App () {
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  return <GanttComponent dataSource={data} locale='de-DE'
allowSelection={true} taskFields={taskFields} height = '450px'>
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
```

```

<meta charset="utf-8" />
<meta name="viewport" content="width=device-width, initial-scale=1.0" />
<meta name="description" content="Essential JS 2 for React Components"
/>
<meta name="author" content="Syncfusion" />
<link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
<link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
<script src="systemjs.config.js"></script>
<style>
    #loader {
        color: #008cff;
        height: 40px;
        left: 45%;
        position: absolute;
        top: 45%;
        width: 30%;
    }
</style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Internationalization

The [Internationalization](#) library is used to globalize number, date, and time values in gantt component.

INDEX.JSX

```

import { L10n, loadCldr, setCulture } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
import * as cagregorian from './ca-gregorian.jsx';
import * as numbers from './numbers.jsx';
loadCldr(cagregorian, numbers);
setCulture('de-DE');
L10n.load({
    'de-DE': {
        'gantt': {
            "id": "Ich würde",
            "name": "Name",
            "startDate": "Anfangsdatum",
            "duration": "Dauer",
            "progress": "Fortschritt",
        }
    }
})

```

```
});
function App() {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  return <GanttComponent dataSource={data} locale='de-DE'
allowSelection={true} taskFields={taskFields} height = '450px'>
    </GanttComponent>
  };
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import { L10n, loadCldr, setCulture } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
import * as cagregorian from './ca-gregorian.tsx';
import * as numbers from './numbers.tsx';
loadCldr(cagregorian, numbers);
setCulture('de-DE');
L10n.load({
  'de-DE': {
    'gantt': {
      "id": "Ich würde",
      "name": "Name",
      "startDate": "Anfangsdatum",
      "duration": "Dauer",
      "progress": "Fortschritt",
    }
  }
});
function App() {
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  return <GanttComponent dataSource={data} locale='de-DE'
allowSelection={true} taskFields={taskFields} height = '450px'>
    </GanttComponent>
  };
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.HTML

```
<!DOCTYPE html>
```

```

<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

* In the above sample, **Timeline** is formatted by **NumberFormatOptions** and **DateFormatOptions**.

* By default, **locale** value is **en-US**. If you want to change **en-US** culture, then set the **locale**.

Right to left (RTL)

RTL provides an option to switch the text direction and layout of the Gantt component from right to left. It improves the user experiences and accessibility for users who use right-to-left languages (Arabic, Urdu, etc.). To enable RTL Gantt, set the **enableRtl** to **true**.

INDEX.JSX

```

import { L10n, loadCldr, setCulture } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
setCulture('ar-AE');
L10n.load({
  'ar-AE': {
    'gantt': {
      'emptyRecord': "لا سجلات لعرضها",

```

```

    "id": "هوية شخصية",
    "name": "اسم",
    "startDate": "تاريخ البدء",
    "endDate": "تاريخ الانتهاء",
    "duration": "المدة الزمنية",
    "progress": "تقدم",
    "dependency": "الاعتماد",
    "notes": "ملاحظات",
    "baselineStartDate": "تاريخ البدء الأساسي",
    "baselineEndDate": "تاريخ نهاية خط الأساس",
    "taskMode": "وضع المهام",
    "changeScheduleMode": "تغيير وضع الجدول",
    "subTasksStartDate": "تاريخ بدء المهام الفرعية",
    "subTasksEndDate": "تاريخ انتهاء المهام الفرعية",
    "scheduleStartDate": "جدولة تاريخ البدء",
    "scheduleEndDate": "تاريخ انتهاء الجدول الزمني",
    "auto": "تلقائي",
    "manual": "كتيب",
    "type": "اكتب",
    "offset": "عوض",
    "resourceName": "مصادر",
    "resourceID": "معرف المورد",
    "day": "يوم",
    "hour": "ساعة",
    "minute": "دقيقة",
    "days": "أيام",
    "hours": "ساعات",
    "minutes": "الدقائق",
    "generalTab": "جنرال لواء",
    "customTab": "أعمدة مخصصة",
    "writeNotes": "اكتب ملاحظات",
    "addDialogTitle": "مهمة جديدة",
    "editDialogTitle": "معلومات المهمة",
    "saveButton": "حفظ",
    "add": "إضافة",
    "edit": "تعديل",
    "update": "تحديث",
    "delete": "حذف",
    "cancel": "إلغاء",
    "search": "بحث",
    "task": "مهمة",
    "tasks": "مهام",
    "zoomIn": "تكبير",
    "zoomOut": "تصغير",
    "zoomToFit": "تكبير لتناسب",
    "excelExport": "اكسل التصدير",
    "csvExport": "تصدير CSV",
    "expandAll": "توسيع الكل",
    "collapseAll": "انهيار جميع",
    "nextTimeSpan": "الجدول الزمني التالي",
    "prevTimeSpan": "الجدول الزمني السابق",
    "okText": "حسنًا",
    "confirmDelete": "هل أنت متأكد أنك تريد حذف السجل؟",
    "from": "من عند",
    "to": "إلى",
    "taskLink": "رابط المهمة",
    "lag": "بطيء",

```



```

        "start": "بداية",
        "finish": "إنهاء",
        "enterValue": "أدخل القيمة",
        "taskBeforePredecessor_FS": "0 '{للبدء قبل انتهاء}'  

        ويتم ربط المهمتين. ونتيجة لذلك ، لا يمكن احترام الروابط. حدد إجراء '{1}'  

        "واحدًا أدناه للقيام به",
        "taskAfterPredecessor_FS": "0 '{بعيدًا عن 1}'  

        ويتم ربط المهمتين. ونتيجة لذلك ، لا يمكن احترام الروابط. حدد إجراء واحدًا أدناه  

        للقيام به",
        "taskBeforePredecessor_SS": "0 '{للبدء قبل أن يبدأ}'  

        وربط المهمتين. ونتيجة لذلك ، لا يمكن احترام الروابط. حدد إجراء واحدًا '{1}'  

        "أدناه للقيام به",
        "taskAfterPredecessor_SS": "0 '{للبدء بعد بدء 1}'  

        وربط المهمتين. ونتيجة لذلك ، لا يمكن احترام الروابط. حدد إجراء واحدًا أدناه  

        للقيام به",
        "taskBeforePredecessor_FF": "0 '{للإنهاء قبل انتهاء}'  

        ويتم ربط المهمتين. ونتيجة لذلك ، لا يمكن احترام الروابط. حدد إجراء '{1}'  

        "واحدًا أدناه للقيام به",
        "taskAfterPredecessor_FF": "0 '{للإنهاء بعد انتهاء}'  

        ويتم ربط المهمتين. ونتيجة لذلك ، لا يمكن احترام الروابط. حدد إجراء '{1}'  

        "واحدًا أدناه للقيام به",
        "taskBeforePredecessor_SF": "0 '{بعيدًا عن 1}'  

        التشغيل وترتبط المهمتان. ونتيجة لذلك ، لا يمكن احترام الروابط. حدد إجراء  

        "واحدًا أدناه للقيام به",
        "taskAfterPredecessor_SF": "0 '{للإنهاء بعد بدء 1}'  

        وربط المهمتين. ونتيجة لذلك ، لا يمكن احترام الروابط. حدد إجراء واحدًا أدناه  

        للقيام به",
        "taskInformation": "معلومات المهمة",
        "deleteTask": "حذف المهمة",
        "deleteDependency": "حذف التبعية",
        "convert": "تحويل",
        "save": "حفظ",
        "above": "في الأعلى",
        "below": "أدناه",
        "child": "طفل",
        "milestone": "معلما",
        "toTask": "لمهمة",
        "toMilestone": "إلى معلم",
        "eventMarkers": "علامات الحدث",
        "leftTaskLabel": "تسمية المهمة اليسرى",
        "rightTaskLabel": "تسمية المهمة الصحيحة",
        "timelineCell": "خلية الجدول الزمني",
        "confirmPredecessorDelete": "هل أنت متأكد أنك تريد إزالة رابط",
        "التبعية؟",
        "unit": "وحدة",
        "work": "عمل",
        "taskType": "نوع المهمة",
        "unassignedTask": "مهمة غير محددة",
        "group": "مجموعة",
        "indent": "مسافة بادئة",
        "outdent": "عفا عليها الزمن",
        "segments": "شرائح",
        "splitTask": "تقسيم المهمة",
        "mergeTask": "مهمة الدمج",
        "left": "اليسار",
        "right": "حق"
    }

```

```

    }
  });
function App () {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  return <GanttComponent dataSource={data} locale='ar-AE'
allowSelection={true} taskFields={taskFields} enableRtl= {true} height =
'450px'>
    </GanttComponent>
  };
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import { L10n, loadCldr, setCulture } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
setCulture('ar-AE');
L10n.load({
  'ar-AE': {
    "gantt": {
      "emptyRecord": "لا سجلات لعرضها",
      "id": "هوية شخصية",
      "name": "اسم",
      "startDate": "تاريخ البدء",
      "endDate": "تاريخ الانتهاء",
      "duration": "المدة الزمنية",
      "progress": "تقدم",
      "dependency": "الاعتماد",
      "notes": "ملاحظات",
      "baselineStartDate": "تاريخ البدء الأساسي",
      "baselineEndDate": "تاريخ نهاية خط الأساس",
      "taskMode": "وضع المهام",
      "changeScheduleMode": "تغيير وضع الجدول",
      "subTasksStartDate": "تاريخ بدء المهام الفرعية",
      "subTasksEndDate": "تاريخ انتهاء المهام الفرعية",
      "scheduleStartDate": "جدولة تاريخ البدء",
      "scheduleEndDate": "تاريخ انتهاء الجدول الزمني",
      "auto": "تلقائي",
      "manual": "كتيب",
      "type": "اكتب",
      "offset": "عوض",
      "resourceName": "مصادر",
      "resourceID": "معرف المورد",
      "day": "يوم",
      "hour": "ساعة",
      "minute": "دقيقة",
      "days": "أيام",
    }
  }
});

```

```

"hours": "ساعات",
"minutes": "الدقائق",
"generalTab": "جنرال لواء",
"customTab": "أعمدة مخصصة",
"writeNotes": "اكتب ملاحظات",
"addDialogTitle": "مهمة جديدة",
"editDialogTitle": "معلومات المهمة",
"saveButton": "حفظ",
"add": "إضافة",
"edit": "تعديل",
"update": "تحديث",
"delete": "حذف",
"cancel": "إلغاء",
"search": "بحث",
"task": "مهمة",
"tasks": "مهام",
"zoomIn": "تكبير",
"zoomOut": "تصغير",
"zoomToFit": "تكبير لتناسب",
"excelExport": "اكسل التصدير",
"csvExport": "تصدير CSV",
"expandAll": "توسيع الكل",
"collapseAll": "انهيار جميع",
"nextTimeSpan": "الجدول الزمني التالي",
"prevTimeSpan": "الجدول الزمني السابق",
"okText": "حسنًا",
"confirmDelete": "هل أنت متأكد أنك تريد حذف السجل؟",
"from": "من عند",
"to": "إلى",
"taskLink": "رابط المهمة",
"lag": "بطئ",
"start": "بداية",
"finish": "إنهاء",
"enterValue": "أدخل القيمة",
"taskBeforePredecessor_FS": "0 '{للبدء قبل انتهاء}'  

ويتم ربط المهمتين. ونتيجة لذلك ، لا يمكن احترام الروابط. حدد إجراء '{1}'  

واحدًا أدناه للقيام به",
"taskAfterPredecessor_FS": "0 '{بعيدًا عن 1}'  

ربط المهمتين. ونتيجة لذلك ، لا يمكن احترام الروابط. حدد إجراء واحدًا أدناه  

للقيام به",
"taskBeforePredecessor_SS": "0 '{للبدء قبل أن يبدأ}'  

وربط المهمتين. ونتيجة لذلك ، لا يمكن احترام الروابط. حدد إجراء واحدًا '{1}'  

أدناه للقيام به",
"taskAfterPredecessor_SS": "0 '{للبدء بعد بدء 1}'  

وربط المهمتين. ونتيجة لذلك ، لا يمكن احترام الروابط. حدد إجراء واحدًا أدناه  

للقيام به",
"taskBeforePredecessor_FF": "0 '{للإنهاء قبل انتهاء}'  

ويتم ربط المهمتين. ونتيجة لذلك ، لا يمكن احترام الروابط. حدد إجراء '{1}'  

واحدًا أدناه للقيام به",
"taskAfterPredecessor_FF": "0 '{للإنهاء بعد انتهاء}'  

ويتم ربط المهمتين. ونتيجة لذلك ، لا يمكن احترام الروابط. حدد إجراء '{1}'  

واحدًا أدناه للقيام به",
"taskBeforePredecessor_SF": "0 '{بعيدًا عن 1}'  

التشغيل وترتبط المهمتان. ونتيجة لذلك ، لا يمكن احترام الروابط. حدد إجراء  

واحدًا أدناه للقيام به",

```

```

"taskAfterPredecessor_SF": "1'0' {لإنهاء بعد بدء }1'0' {قمت بنقل  

وربط المهمتين. ونتيجة لذلك ، لا يمكن احترام الروابط. حدد إجراء واحدًا أدناه  

للقيام به",
"taskInformation": "معلومات المهمة",
"deleteTask": "حذف المهمة",
"deleteDependency": "حذف التبعية",
"convert": "تحويل",
"save": "حفظ",
"above": "في الاعلى",
"below": "أدناه",
"child": "طفل",
"milestone": "معلم",
"toTask": "للمهمة",
"toMilestone": "إلى معلم",
"eventMarkers": "علامات الحدث",
"leftTaskLabel": "تسمية المهمة اليسرى",
"rightTaskLabel": "تسمية المهمة الصحيحة",
"timelineCell": "خلية الجدول الزمني",
"confirmPredecessorDelete": "هل أنت متأكد أنك تريد إزالة رابط؟",
"unit": "وحدة",
"work": "عمل",
"taskType": "نوع المهمة",
"unassignedTask": "مهمة غير محددة",
"group": "مجموعة",
"indent": "مسافة بادئة",
"outdent": "عفا عليها الزمن",
"segments": "شرائح",
"splitTask": "تقسيم المهمة",
"mergeTask": "مهمة الدمج",
"left": "اليسار",
"right": "حق"
}
});
function App () {
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  return <GanttComponent dataSource={data} locale='ar-AE'
allowSelection={true} taskFields={taskFields} enableRtl= {true} height =
'450px'>
    </GanttComponent>
  };
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>

```

```

<title>Syncfusion React Gantt</title>
<meta charset="utf-8" />
<meta name="viewport" content="width=device-width, initial-scale=1.0" />
<meta name="description" content="Essential JS 2 for React Components"
/>
<meta name="author" content="Syncfusion" />
<link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
<link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
<script src="systemjs.config.js"></script>
<style>
    #loader {
        color: #008cff;
        height: 40px;
        left: 45%;
        position: absolute;
        top: 45%;
        width: 30%;
    }
</style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

See Also

- [Internationalization](#)
- [Localization](#)

Style and appearance in React Gantt component

To modify the Gantt Chart appearance, you need to override the default CSS of gantt chart. Please find the list of CSS classes and its corresponding section in Gantt Chart. Also, you have an option to create your own custom theme for all the JavaScript controls using our [Theme Studio](#).

Section | CSS Class | Purpose of Class

Root | e-gantt | This class is in the root element (div) of the gantt chart control.

Header | e-gridheader | This class is added in the root element of header element. In this class, You can override thin line between header and content of the gantt chart.

| e-table | This class is added at 'table' of the gantt chart header. This CSS class makes table width as 100 %.

| e-columnheader | This class is added at 'tr' of the gantt chart header.

Grid Content |e-gridcontent| This class is added at root of body content. This is to override background color of the body.

|e-table| This class is added to table of content. This CSS class makes table width as 100 %.

|e=row| This class is added to rows of gantt chart.

|e-altrow| This class is added to alternate rows of gantt chart. This is to override alternate row color of the gantt chart.

|e-rowcell| This class is added to all cells in the gantt chart. This is to override cells appearance and styling.

Chart Content |e-gantt-chart| This class is added to the chart side of the gantt chart.

|e-chart-row| This class is added to rows of gantt chart.

Timeline |e-timeline-header-container| This class is added to timeline of the gantt chart.

|e-header-cell-label| This class is added to the header cell of the timeline.

|e-weekend-header-cell| This class is added to the weekend cells.

Taskbar |e-taskbar-main-container| This class is added to taskbar of the gantt chart.

|e-gantt-parent-taskbar| This class is added to the parent task bar of the gantt chart.

|e-gantt-milestone| This class is added to the milestone tasks of the gantt chart.

|e-gantt-unscheduled-taskbar| This class is added to the unscheduled tasks.

|e-gantt-manualparenttaskbar| This class is added to the manual scheduled parent taskbar.

|e-gantt-child-manualtaskbar| This class is added to the manual scheduled child taskbar.

|e-gantt-unscheduled-manualtask| This class is added to the manual unscheduled tasks.

Splitter |e-split-bar| This class is added to the gantt chart splitter.

|e-resize-handler| This class is added to the resize handler of the gantt chart splitter.

|e-arrow-left| This class is added to the left arrow of the resize handler.

|e-arrow=right| This class is added to the right arrow of the resize handler.

Connector Lines |e-line| This class is added to the connector lines.

|e-connector-line-right-arrow| This class is added to the right arrow of the connector line.

|e-connector-line-left-arrow| This class is added to the left arrow of the connector line.

Labels |e-task-label| This class is added to the task labels.

|e-right-label-container| This class is added to the right label.

|e-left-label-container| This class is added to the left label.

Event Markers |e-event-markers| This class is added to the event markers.

Baseline |e-baseline-bar| This class is added to the baseline.

|e-baseline-gantt-milestone-container| This class is added to the baseline of milestone tasks.

Tooltip |e-gantt-tooltip| This class is added to the tooltip.

Grid lines

In the Gantt component, you can show or hide the grid lines in the TreeGrid side and chart side by using the [gridLines](#) property.

The following options are available in the Gantt component for rendering the grid lines:

- Horizontal: The horizontal grid lines alone will be visible.
- Vertical: The vertical grid lines alone will be visible.
- Both: Both the horizontal and vertical grid lines will be visible on the TreeGrid and chart sides.
- None: Gridlines will not be visible on TreeGrid and chart sides.

By default, the [gridLines](#) property is set to Horizontal type.

The following code example shows how to change the gridlines rendering mode in the Gantt component.

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import {data} from './datasource';
function App(){
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    return <GanttComponent dataSource={data} gridLines='Both'
taskFields={taskFields} height = '450px'>
        </GanttComponent>
    );
};
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import {data} from './datasource';
function App(){
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    return <GanttComponent dataSource={data} gridLines='Both'
taskFields={taskFields} height = '450px'>
        </GanttComponent>
    );
};
```

```
};  
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.HTML

```
<!DOCTYPE html>  
<html lang="en">  
<head>  
  <title>Syncfusion React Gantt</title>  
  <meta charset="utf-8" />  
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />  
  <meta name="description" content="Essential JS 2 for React Components"  
</>  
  <meta name="author" content="Syncfusion" />  
  <link href="https://cdn.syncfusion.com/ej2/material.css"  
rel="stylesheet" type="text/css"/>  
  <link  
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"  
rel="stylesheet" />  
  <script  
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc  
ript>  
  <script src="systemjs.config.js"></script>  
  <style>  
    #loader {  
      color: #008cff;  
      height: 40px;  
      left: 45%;  
      position: absolute;  
      top: 45%;  
      width: 30%;  
    }  
  </style>  
</head>  
<body>  
  <div id='root'>  
    <div id='loader'>Loading....</div>  
  </div>  
</body>  
</html>
```

Timezone in React Gantt component

The Gantt makes use of the current system time zone by default. If it needs to follow some other user-specific time zone, then the `timezone` property needs to be used.

Understanding date manipulation in JavaScript

The `new Date()` in JavaScript returns the exact current date object with complete time and timezone information. For example, it may return value such as `Wed Dec 12 2018 05:23:27 GMT+0530 (India Standard Time)` which indicates that the current date is December 12, 2018 and the current time is 5.23 AM on browsers following the IST timezone.

Display same time everywhere with no time difference

Setting `timezone` to UTC for Gantt will display the same time as in the database for all the users in different time zone.

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit, Selection } from '@syncfusion/ej2-react-gantt';
function App() {
  const timezoneData = [
    { taskID: 1, taskName: 'Project Schedule', startDate: new Date('02/04/2019 08:00'), endDate: new Date('03/10/2019') },
    { taskID: 2, taskName: 'Planning', startDate: new Date('02/04/2019 08:00'), endDate: new Date('02/10/2019'), parentID: 1 },
    { taskID: 3, taskName: 'Plan timeline', startDate: new Date('02/04/2019 08:00'), endDate: new Date('02/10/2019'), duration: 6, progress: '60', parentID: 2 },
    { taskID: 4, taskName: 'Plan budget', startDate: new Date('02/04/2019 08:00'), endDate: new Date('02/10/2019'), duration: 6, progress: '90', parentID: 2 },
    { taskID: 5, taskName: 'Allocate resources', startDate: new Date('02/04/2019 08:00'), endDate: new Date('02/10/2019'), duration: 6, progress: '75', parentID: 2 },
    { taskID: 6, taskName: 'Planning complete', startDate: new Date('02/06/2019 08:00'), endDate: new Date('02/10/2019'), duration: 0, predecessor: '3FS,4FS,5FS', parentID: 2 },
    { taskID: 7, taskName: 'Design', startDate: new Date('02/13/2019 08:00'), endDate: new Date('02/17/2019 08:00'), parentID: 1 },
    { taskID: 8, taskName: 'Software Specification', startDate: new Date('02/13/2019 08:00'), endDate: new Date('02/15/2019'), duration: 3, progress: '60', predecessor: '6FS', parentID: 7 },
    { taskID: 9, taskName: 'Develop prototype', startDate: new Date('02/13/2019 08:00'), endDate: new Date('02/15/2019'), duration: 3, progress: '100', predecessor: '6FS', parentID: 7 },
    { taskID: 10, taskName: 'Get approval from customer', startDate: new Date('02/16/2019 08:00'), endDate: new Date('02/17/2019 08:00'), duration: 2, progress: '100', predecessor: '9FS', parentID: 7 },
    { taskID: 11, taskName: 'Design complete', startDate: new Date('02/17/2019 08:00'), endDate: new Date('02/17/2019 08:00'), duration: 0, predecessor: '10FS', parentID: 7 }
  ];
  const taskFields = {
    id: 'taskID',
    name: 'taskName',
    startDate: 'startDate',
    duration: 'duration',
    progress: 'progress',
    dependency: 'predecessor',
    parentID: 'parentID'
  };
  const timelineSettings = {
    timelineUnitSize: 65,
    topTier: {
      unit: 'Day',
      format: 'MMM dd, yyyy'
    }
  };
}
```

```

    },
    bottomTier: {
      unit: 'Hour',
      format: 'hh:mm a'
    }
  };
  let dayWorkingTime = [{ from: 0, to: 24 }];
  return <GanttComponent dataSource={timezoneData} taskFields={taskFields}
    timelineSettings={timelineSettings} allowSelection={true}
    timezone='UTC' height='450px' dateFormat='hh:mm a'
    dayWorkingTime={dayWorkingTime} durationUnit='Hour'
    includeWeekend={true}>
    <Inject services={[Edit, Selection]} />
  </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit, Selection } from '@syncfusion/ej2-react-gantt';
function App() {
  const timezoneData: any = [
    { taskID: 1, taskName: 'Project Schedule', startDate: new
Date('02/04/2019 08:00'), endDate: new Date('03/10/2019') },
    { taskID: 2, taskName: 'Planning', startDate: new Date('02/04/2019
08:00'), endDate: new Date('02/10/2019'), parentID: 1 },
    { taskID: 3, taskName: 'Plan timeline', startDate: new Date('02/04/2019
08:00'), endDate: new Date('02/10/2019'), duration: 6, progress: '60',
parentID: 2 },
    { taskID: 4, taskName: 'Plan budget', startDate: new Date('02/04/2019
08:00'), endDate: new Date('02/10/2019'), duration: 6, progress: '90',
parentID: 2 },
    { taskID: 5, taskName: 'Allocate resources', startDate: new
Date('02/04/2019 08:00'), endDate: new Date('02/10/2019'), duration: 6,
progress: '75', parentID: 2 },
    { taskID: 6, taskName: 'Planning complete', startDate: new
Date('02/06/2019 08:00'), endDate: new Date('02/10/2019'), duration: 0,
predecessor: '3FS,4FS,5FS', parentID: 2 },
    { taskID: 7, taskName: 'Design', startDate: new Date('02/13/2019
08:00'), endDate: new Date('02/17/2019 08:00'), parentID: 1 },
    { taskID: 8, taskName: 'Software Specification', startDate: new
Date('02/13/2019 08:00'), endDate: new Date('02/15/2019'), duration: 3,
progress: '60', predecessor: '6FS', parentID: 7 },
    { taskID: 9, taskName: 'Develop prototype', startDate: new
Date('02/13/2019 08:00'), endDate: new Date('02/15/2019'), duration: 3,
progress: '100', predecessor: '6FS', parentID: 7 },
    { taskID: 10, taskName: 'Get approval from customer', startDate: new
Date('02/16/2019 08:00'), endDate: new Date('02/17/2019 08:00'), duration:
2, progress: '100', predecessor: '9FS', parentID: 7 },
    { taskID: 11, taskName: 'Design complete', startDate: new
Date('02/17/2019 08:00'), endDate: new Date('02/17/2019 08:00'), duration:
0, predecessor: '10FS', parentID: 7 }
  ];
}

```

```

const taskFields: any = {
  id: 'taskID',
  name: 'taskName',
  startDate: 'startDate',
  duration: 'duration',
  progress: 'progress',
  dependency: 'predecessor',
  parentID: 'parentID'
};
const timelineSettings: any = {
  timelineUnitSize: 65,
  topTier: {
    unit: 'Day',
    format: 'MMM dd, yyyy'
  },
  bottomTier: {
    unit: 'Hour',
    format: 'hh:mm a'
  }
};
let dayWorkingTime: any = [{ from: 0, to: 24 }];
return <GanttComponent dataSource={timezoneData} taskFields={taskFields}
  timelineSettings={timelineSettings} allowSelection={true}
  timezone='UTC' height='450px' dateFormat='hh:mm a'
  dayWorkingTime={dayWorkingTime} durationUnit='Hour'
  includeWeekend={true}>
  <Inject services={[Edit, Selection]} />
</GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;

```

```

        position: absolute;
        top: 45%;
        width: 30%;
    }
</style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

CRUD operations with timezone

CRUD operations can be performed with timezone, and the gantt is rendered based on the timezone specified in the load time. All the editing actions will be done based on the user timezone, but on database save action, we have reversed this conversion to local time and provided data to client side events for better understanding purpose. Refer to the following code example.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Selection, Edit } from '@syncfusion/ej2-react-gantt';
function App() {
    const timezoneData = [
        {
            taskID: 1,
            taskName: 'Project Schedule',
            startDate: new Date('02/04/2019 08:00'),
            endDate: new Date('03/10/2019')
        },
        {
            taskID: 2,
            taskName: 'Planning',
            startDate: new Date('02/04/2019 08:00'),
            endDate: new Date('02/10/2019'),
            parentID: 1
        },
        {
            taskID: 3,
            taskName: 'Plan timeline',
            startDate: new Date('02/04/2019 08:00'),
            endDate: new Date('02/10/2019'),
            duration: 6,
            progress: '60',
            parentID: 2
        },
        {
            taskID: 4,
            taskName: 'Plan budget',
            startDate: new Date('02/04/2019 08:00'),
            endDate: new Date('02/10/2019'),
            duration: 6,
            progress: '90',

```

```
    parentID: 2
  },
  {
    taskID: 5,
    taskName: 'Allocate resources',
    startDate: new Date('02/04/2019 08:00'),
    endDate: new Date('02/10/2019'),
    duration: 6,
    progress: '75',
    parentID: 2
  },
  {
    taskID: 6,
    taskName: 'Planning complete',
    startDate: new Date('02/06/2019 08:00'),
    endDate: new Date('02/10/2019'),
    duration: 0,
    predecessor: '3FS,4FS,5FS',
    parentID: 2
  },
  {
    taskID: 7,
    taskName: 'Design',
    startDate: new Date('02/13/2019 08:00'),
    endDate: new Date('02/17/2019 08:00'),
    parentID: 1
  },
  {
    taskID: 8,
    taskName: 'Software Specification',
    startDate: new Date('02/13/2019 08:00'),
    endDate: new Date('02/15/2019'),
    duration: 3,
    progress: '60',
    predecessor: '6FS',
    parentID: 7
  },
  {
    taskID: 9,
    taskName: 'Develop prototype',
    startDate: new Date('02/13/2019 08:00'),
    endDate: new Date('02/15/2019'),
    duration: 3,
    progress: '100',
    predecessor: '6FS',
    parentID: 7
  },
  {
    taskID: 10,
    taskName: 'Get approval from customer',
    startDate: new Date('02/16/2019 08:00'),
    endDate: new Date('02/17/2019 08:00'),
    duration: 2,
    progress: '100',
    predecessor: '9FS',
    parentID: 7
  },
}
```

```

    {
      taskID: 11,
      taskName: 'Design complete',
      startDate: new Date('02/17/2019 08:00'),
      endDate: new Date('02/17/2019 08:00'),
      duration: 0,
      predecessor: '10FS',
      parentID: 7
    }
  ]];
  const taskFields = {
    id: 'taskID',
    name: 'taskName',
    startDate: 'startDate',
    duration: 'duration',
    progress: 'progress',
    dependency: 'predecessor',
    parentID: 'parentID'
  };
  const editSettings = {
    allowAdding: true,
    allowEditing: true,
    allowDeleting: true,
    allowTaskbarEditing: true,
    showDeleteConfirmDialog: true
  };
  const timelineSettings= {
    timelineUnitSize: 65,
    topTier: {
      unit: 'Day',
      format: 'MMM dd, yyyy'
    },
    bottomTier: {
      unit: 'Hour',
      format: 'hh:mm a'
    }
  };
  function actionComplete(args) {
    if(args.action == "TaskbarEditing") {
      console.log(args.data.ganttProperties.endDate);
    }
  }
  let dayWorkingTime = [{ from: 0, to: 24 }];
  return <GanttComponent dataSource={timezoneData}
taskFields={taskFields} editSettings={editSettings} allowSelection={true}
durationUnit='Hour' actionComplete={actionComplete} height = '450px'
includeWeekend={true} dayWorkingTime={dayWorkingTime}
timelineSettings={timelineSettings} >
    <Inject services={[Edit, Selection]} />
  </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
```

```
import { GanttComponent, Inject, Selection, Edit } from '@syncfusion/ej2-react-gantt';
function App() {
  const timezoneData: any = [
    {
      taskID: 1,
      taskName: 'Project Schedule',
      startDate: new Date('02/04/2019 08:00'),
      endDate: new Date('03/10/2019')
    },
    {
      taskID: 2,
      taskName: 'Planning',
      startDate: new Date('02/04/2019 08:00'),
      endDate: new Date('02/10/2019'),
      parentID: 1
    },
    {
      taskID: 3,
      taskName: 'Plan timeline',
      startDate: new Date('02/04/2019 08:00'),
      endDate: new Date('02/10/2019'),
      duration: 6,
      progress: '60',
      parentID: 2
    },
    {
      taskID: 4,
      taskName: 'Plan budget',
      startDate: new Date('02/04/2019 08:00'),
      endDate: new Date('02/10/2019'),
      duration: 6,
      progress: '90',
      parentID: 2
    },
    {
      taskID: 5,
      taskName: 'Allocate resources',
      startDate: new Date('02/04/2019 08:00'),
      endDate: new Date('02/10/2019'),
      duration: 6,
      progress: '75',
      parentID: 2
    },
    {
      taskID: 6,
      taskName: 'Planning complete',
      startDate: new Date('02/06/2019 08:00'),
      endDate: new Date('02/10/2019'),
      duration: 0,
      predecessor: '3FS,4FS,5FS',
      parentID: 2
    },
    {
      taskID: 7,
      taskName: 'Design',
      startDate: new Date('02/13/2019 08:00'),
```

```

        endDate: new Date('02/17/2019 08:00'),
        parentID: 1
    },
    {
        taskID: 8,
        taskName: 'Software Specification',
        startDate: new Date('02/13/2019 08:00'),
        endDate: new Date('02/15/2019'),
        duration: 3,
        progress: '60',
        predecessor: '6FS',
        parentID: 7
    },
    {
        taskID: 9,
        taskName: 'Develop prototype',
        startDate: new Date('02/13/2019 08:00'),
        endDate: new Date('02/15/2019'),
        duration: 3,
        progress: '100',
        predecessor: '6FS',
        parentID: 7
    },
    {
        taskID: 10,
        taskName: 'Get approval from customer',
        startDate: new Date('02/16/2019 08:00'),
        endDate: new Date('02/17/2019 08:00'),
        duration: 2,
        progress: '100',
        predecessor: '9FS',
        parentID: 7
    },
    {
        taskID: 11,
        taskName: 'Design complete',
        startDate: new Date('02/17/2019 08:00'),
        endDate: new Date('02/17/2019 08:00'),
        duration: 0,
        predecessor: '10FS',
        parentID: 7
    }
    ]];
const taskFields: any = {
    id: 'taskID',
    name: 'taskName',
    startDate: 'startDate',
    duration: 'duration',
    progress: 'progress',
    dependency: 'predecessor',
    parentID: 'parentID'
};
const editSettings: any = {
    allowAdding: true,
    allowEditing: true,
    allowDeleting: true,
    allowTaskbarEditing: true,
    showDeleteConfirmDialog: true

```



```

    };
    const timelineSettings: any = {
      timelineUnitSize: 65,
      topTier: {
        unit: 'Day',
        format: 'MMM dd, yyyy'
      },
      bottomTier: {
        unit: 'Hour',
        format: 'hh:mm a'
      }
    };
    function actionComplete(args: any) {
      if(args.action == "TaskbarEditing") {
        console.log(args.data.ganttProperties.endDate);
      }
    }
    let dayWorkingTime: any = [{ from: 0, to: 24 }];
    return <GanttComponent dataSource={timezoneData}
    taskFields={taskFields} editSettings={editSettings} allowSelection={true}
    durationUnit='Hour' actionComplete={actionComplete} height = '450px'
    includeWeekend={true} dayWorkingTime={dayWorkingTime}
    timelineSettings={timelineSettings} >
      <Inject services={[Edit, Selection]} />
    </GanttComponent>
  );
  ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
  rel="stylesheet" type="text/css"/>
  <link
  href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
  rel="stylesheet" />
  <script
  src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
  ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;

```

```
    }  
  </style>  
</head>  
<body>  
  <div id='root'>  
    <div id='loader'>Loading....</div>  
  </div>  
</body>  
</html>
```

Timezone methods

offset

This method is used to calculate the difference between passed UTC date and timezone.

Parameters	Type	Description
------------	------	-------------

----- ----- -----

Date	Date	UTC time as date object.
------	------	--------------------------

Timezone	String	Timezone.
----------	--------	-----------

Returns **number**

```
`ts
```

```
// Assume your local timezone as IST/UTC+05:30
```

```
let timezone: Timezone = new Timezone();
```

```
let date: Date = new Date(2018,11,5,15,25,11);
```

```
let timeZoneOffset: number = timezone.offset(date,"Europe/Paris");
```

```
console.log(timeZoneOffset); //-60
```

```
,
```

convert

This method is used to convert the passed date from one timezone to another timezone.

Parameters	Type	Description
------------	------	-------------

----- ----- -----

Date	Date	UTC time as date object.
------	------	--------------------------

fromOffset	number/string	Timezone from which date need to be converted.
------------	---------------	--

toOffset	number/string	Timezone to which date need to be converted.
----------	---------------	--

Returns **Date**

```
`ts
```

```
// Assume your local timezone as IST/UTC+05:30
```

```
let timezone: Timezone = new Timezone();
```

```
let date: Date = new Date(2018,11,5,15,25,11);
```

```
let convertedDate: Date = timezone.convert(date, "Europe/Paris", "Asia/Tokya");
let convertedDate1: Date = timezone.convert(date, 60, -360);
console.log(convertedDate); //2018-12-05T08:55:11.000Z
console.log(convertedDate1); //2018-12-05T16:55:11.000Z
、
```

remove

This method is used to remove the time difference between passed UTC date and timezone.

| Parameters | Type | Description |

|-----|-----|-----|

| Date | Date | UTC as date object. |

| Timezone | String | Timezone. |

Returns **Date**

```
`ts
```

```
// Assume your local timezone as IST/UTC+05:30
```

```
let timezone: Timezone = new Timezone();
```

```
let date: Date = new Date(2018,11,5,15,25,11);
```

```
let convertedDate: Date = timezone.remove(date, "Europe/Paris");
```

```
console.log(convertedDate); //2018-12-05T14:25:11.000Z
```

```
、
```

How To

Open add edit dialog in React Gantt component

Gantt add and edit dialogs can be opened dynamically by using [openAddDialog](#) and [openEditDialog](#) methods. The following code example shows how to open add and dialog on separate button click actions.

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { GanttComponent, Inject, Edit, Selection } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
class App extends React.Component {
  taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
};
ganttInstance;
```

```

    editOptions = {
        allowEditing: true,
        allowAdding: true
    };
    editHandler() {
        this.ganttInstance.editModule.dialogModule.openEditDialog();
    }
    addHandler() {
        this.ganttInstance.editModule.dialogModule.openAddDialog();
    }
    render() {
        return (<div>
            <ButtonComponent onClick={this.addHandler.bind(this)}>Open Add
Dialog</ButtonComponent>
            <ButtonComponent onClick={this.editHandler.bind(this)}>Open Edit
Dialog</ButtonComponent>
            <GanttComponent dataSource={data} ref={gantt => this.ganttInstance =
gantt} taskFields={this.taskFields} allowSelection={true}
editSettings={this.editOptions} height='450px'>
                <Inject services={[Edit, Selection]}/>
            </GanttComponent></div>);
    }
}
;
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { GanttComponent, Inject, Edit, EditSettingsModel, Selection } from
'@syncfusion/ej2-react-gantt';
import { data } from './datasource';
class App extends React.Component<{}, {}>{
    public taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    public ganttInstance: any;
    public editOptions: EditSettingsModel = {
        allowEditing: true,
        allowAdding: true
    };
    public editHandler() {
        this.ganttInstance.editModule.dialogModule.openEditDialog();
    }
    public addHandler() {
        this.ganttInstance.editModule.dialogModule.openAddDialog();
    }
    render() {
        return (<div>

```

```

        <ButtonComponent onClick= { this.addHandler.bind(this)}>Open Add
        Dialog</ButtonComponent>
        <ButtonComponent onClick= { this.editHandler.bind(this)}>Open Edit
        Dialog</ButtonComponent>
        <GanttComponent dataSource={data} ref={gantt => this.ganttInstance =
        gantt} taskFields={this.taskFields} allowSelection={true}
        editSettings={this.editOptions} height = '450px'>
            <Inject services={[Edit, Selection]} />
        </GanttComponent></div>
    }
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008c00;
            height: 40px;
            left: 45%;
            position: absolute;
            top: 45%;
            width: 30%;
        }
    </style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

NOTE: We should select any one of the row in Gantt to open the edit dialog.

Change schedule dates in React Gantt component

In the Gantt component, you can change the schedule start and end dates by clicking the custom button programmatically using the [updateProjectDates](#) method. You can pass the start and end dates as method arguments to the [updateProjectDates](#) method. You can also pass the Boolean value as an additional parameter, which is used to round-off the schedule start and end dates displayed in Gantt timeline.

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App () {
    let ganttInstance;
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    function clickHandler() {
        ganttInstance.updateProjectDates(new Date('01/10/2019'), new
        Date('06/20/2019'), true);
    }

    return (<div>
        <ButtonComponent onClick= { clickHandler}>Update
        ScheduleDates</ButtonComponent>
        <GanttComponent dataSource={data} taskFields={taskFields}
        height = '450px' ref={gantt => ganttInstance = gantt}>
        </GanttComponent></div>)
};
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.TSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { GanttComponent } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App () {
    let ganttInstance: any;
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
};
```

```

function clickHandler() {
    ganttInstance.updateProjectDates(new Date('01/10/2019'), new
Date('06/20/2019'), true);
}

    return (<div>
        <ButtonComponent onClick= { clickHandler}>Update
ScheduleDates</ButtonComponent>
        <GanttComponent dataSource={data} taskFields={taskFields}
height = '450px' ref={gantt => ganttInstance = gantt}>
        </GanttComponent></div>)

};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008cff;
            height: 40px;
            left: 45%;
            position: absolute;
            top: 45%;
            width: 30%;
        }
    </style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Copy paste records in React Gantt component

You can copy and paste a record in the Gantt chart by using the `addRecord` method and `custom context menu`. It is also possible to copy and paste the parent record with multiple hierarchical child records on the required position.

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit, Selection, ContextMenu } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App () {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        dependency: 'Predecessor',
        child: 'subtasks'
    };
    const editSettings = {
        allowAdding: true,
        allowEditing: true,
        allowDeleting: true
    };
    const contextMenuItems = [{ text: 'Copy', target: '.e-content', id: 'copy' },
    { text: 'Paste', target: '.e-content', id: 'paste' }
    ];

    let copiedRecord;
    let gantt;
    function contextMenuClick(args) {
        if (args.item.id === 'copy') {
            copiedRecord = args.rowData;
            copiedRecord.taskData.TaskID = gantt.currentViewData.length
            + 1;
        }
        if (args.item.id === 'paste') {
            gantt.addRecord(copiedRecord.taskData, 'Below', args.rowData.index);
            if(copiedRecord.hasChildRecords) {
                addChildRecords(copiedRecord, args.rowData.index + 1);
            }
            copiedRecord = undefined;
        }
    };
    function contextMenuOpen(args) {
        if (args.type !== 'Header') {
            if (copiedRecord) {
                args.hideItems.push('Copy');
            } else {
                args.hideItems.push('Paste');
            }
        }
    }
}
```



```

    }
  };
  function addChildRecords(record, index) {
    for(var i=0; i<record.childRecords.length; i++) {
      var childRecord = record.childRecords[i];
      childRecord.taskData.TaskID = gantt.currentViewData.length
+ 1;

      gantt.addRecord(childRecord.taskData, 'Below', index);
      if(childRecord.hasChildRecords) {
        addChildRecords(childRecord, index + (i+1));
      }
    }
  };
  return <GanttComponent dataSource={data} taskFields={taskFields}
editSettings={editSettings} enableContextMenu={true}
contextMenuItems={contextMenuItems} contextMenuClick={contextMenuClick}
contextMenuOpen={contextMenuOpen} ref={gantt => gantt = gantt}
height='450px'>
    <Inject services={[Edit, ContextMenu, Selection]}/>
    </GanttComponent>
  );
  ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit, Selection, ContextMenu } from
'@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App () {
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    dependency: 'Predecessor',
    child: 'subtasks'
  };
  const editSettings = {
    allowAdding: true,
    allowEditing: true,
    allowDeleting: true
  };
  const contextMenuItems = [{ text: 'Copy', target: '.e-content', id:
'copy' },
    { text: 'Paste', target: '.e-content', id: 'paste' }
  ];

  let copiedRecord: any;
  let gantt:any;

```

```

function contextMenuClick(args:any) {
    if (args.item.id === 'copy') {
        copiedRecord = args.rowData;
        copiedRecord.taskData.TaskID = gantt.currentViewData.length + 1;
    }
    if (args.item.id === 'paste') {
        gantt.addRecord(copiedRecord.taskData, 'Below', args.rowData.index);
        if(copiedRecord.hasChildRecords) {
            addChildRecords(copiedRecord, args.rowData.index + 1);
        }
        copiedRecord = undefined;
    }
};
function contextMenuOpen(args:any ) {
    if (args.type !== 'Header') {
        if (copiedRecord) {
            args.hideItems.push('Copy');
        } else {
            args.hideItems.push('Paste');
        }
    }
};
function addChildRecords(record: any, index: any) {
    for(var i=0; i<record.childRecords.length; i++) {
        var childRecord = record.childRecords[i];
        childRecord.taskData.TaskID = gantt.currentViewData.length +
1;

        gantt.addRecord(childRecord.taskData, 'Below', index);
        if(childRecord.hasChildRecords) {
            addChildRecords(childRecord, index + (i+1));
        }
    }
};
return <GanttComponent dataSource={data} taskFields={taskFields}
editSettings={editSettings} enableContextMenu={true}
enableContextMenu={true} contextMenuItems={contextMenuItems}
contextMenuClick={contextMenuClick} contextMenuOpen={contextMenuOpen}
ref={gantt => gantt = gantt} height='450px'>
    <Inject services={[Edit, ContextMenu, Selection]}/>
    </GanttComponent>;
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />

```

```

    <link href="https://cdn.syncfusion.com/ej2/material.css"
    rel="stylesheet" type="text/css"/>
    <link
    href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
    rel="stylesheet" />
    <script
    src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
    ript>
    <script src="systemjs.config.js"></script>
    <style>
        #loader {
            color: #008cff;
            height: 40px;
            left: 45%;
            position: absolute;
            top: 45%;
            width: 30%;
        }
    </style>
</head>
<body>
    <div id='root'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Maintain record index in React Gantt component

Row dropped record's index position can be maintained in the Gantt chart by changing the database table index position using the `rowDrop` event. In this event, the `fromIndex` and `dropIndex` values can be passed to the server side using Ajax request. On the server side, the `insert` and `insertAtTop` methods are used to update the row index position. The following code snippets explain the solution.

`ts

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, RowDD, Edit, Selection } from '@syncfusion/ej2-react-gantt';
import { DataManager, UrlAdaptor } from '@syncfusion/ej2-data';
class App extends React.Component {
    constructor() {
        super(...arguments);
        this.taskFields = {
            id: 'TaskID',
            name: 'TaskName',
            startDate: 'StartDate',
            duration: 'Duration',

```

```
progress: 'Progress',
dependency: 'Predecessor',
child: 'subtasks'
};

public dataSource: DataManager = new DataManager({
url: 'https://localhost:44379/Home/UrlDatasource',
adaptor: new UrlAdaptor,
crossDomain: true,
batchUrl: 'https://localhost:44379/Home/BatchUpdate'
});
}

rowDrop(args) {
let record = this.flatData[args.fromIndex][this.taskFields.id];
let record2 = this.flatData[args.dropIndex][this.taskFields.id];
let data: IGanttData = args.data[0];
let uri = 'https://localhost:44379/Home/RowDropMethod';
let dragdropdata = {
record: data[0].taskData,
position: args.dropIndex,
dragidMapping: record,
dropidMapping: record2
};
let ajax = new Ajax(
{
url: uri,
type: 'POST',
contentType: "application/json",
data: JSON.stringify(dragdropdata),
});
ajax.send();
};

render() {
```

```

return <GanttComponent dataSource={projectNewData} taskFields={this.taskFields}
allowRowDragAndDrop={true} height='450px'>
<Inject services={[RowDD, Edit, Selection]}/>
</GanttComponent>;
}
}
;
ReactDOM.render(<App />, document.getElementById('root'));
`ts
public IActionResult RowDropMethod([FromBody]DragDropData value)
{
var data = new CRUDModel();
copyRecord = true;
if (value.position == "bottomSegment" || value.position == "topSegment")
{
{
var childCount = 0;
int parent1 = (int)value.record.parentID;
childCount += FindChildRecords(parent1);
if (childCount == 1)
{
var i = 0;
for (; i < DataList.Count; i++)
{
if (DataList[i].taskID == parent1)
{
DataList[i].isParent = false;
break;
}
if (DataList[i].taskID == value.record.taskID)
{
DataList[i].parentID = null;

```

```
break;
}
}
}
}

DataList.Remove(DataList.Where(ds => ds.taskID == value.dragidMapping).FirstOrDefault());
var j = 0;
for (; j < DataList.Count; j++)
{
    if (DataList[j].taskID == value.dropidMapping)
    {
        value.record.parentID = DataList[j].parentID;
        break;
    }
}
data.Value = value.record;
if (value.position == "bottomSegment")
{
    this.Insert(data, value.dropidMapping);
}
else if (value.position == "topSegment")
{
    this.InsertAtTop(data, value.dropidMapping);
}
}
else if (value.position == "middleSegment")
{
    DataList.Remove(DataList.Where(ds => ds.taskID == value.dragidMapping).FirstOrDefault());
    value.record.parentID = value.dropidMapping;
    FindDropdata(value.dropidMapping);
    data.Value = value.record;
    this.Insert(data, value.dropidMapping);
}
```

```

copyRecord = false;

return Json(new { updatedRecords = value.record });
}
`

```

Custom field in React Gantt component

Generally in Gantt, Custom fields are displayed in the Custom Tab of the Add/Edit dialogs. However, they can be included in the General Tab of Add/Edit Dialog Box using `actionBegin` and `actionComplete` events. These events are used to append the custom field to the dialog box. The following code snippets demonstrate the solution.

INDEX.JSX

```

import { GanttComponent, Inject, Edit, Selection, ColumnsDirective,
ColumnDirective, AddDialogFieldsDirective, EditDialogFieldsDirective,
EditDialogFieldDirective, AddDialogFieldDirective, Toolbar } from
'@syncfusion/ej2-react-gantt';
import { CheckBox } from "@syncfusion/ej2-buttons";
import { TextBox, NumericTextBox, MaskedTextBox } from "@syncfusion/ej2-
inputs";
import { DatePicker, DateTimePicker } from "@syncfusion/ej2-calendars";
import { DropDownList } from "@syncfusion/ej2-dropdowns";
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { data } from './datasource';
function App () {

    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };

    const editOptions = {
        allowAdding: true,
        allowEditing: true,
        allowDeleting: true,
        mode: "Dialog"
    };

    const toolbarOptions = ['Add', 'Edit', 'Delete', 'Cancel', 'Update',
'ExpandAll', 'CollapseAll', 'Search'];

    let divElement;
    let ganttInstance;
    const inputs = {
        booleanedit: CheckBox,
        dropdownedit: DropDownList,
        datepickeredit: DatePicker,
        datetimepickeredit: DateTimePicker,
        maskededit: MaskedTextBox,
        numericedit: NumericTextBox,
        stringedit: TextBox
    }

```

```

    };
    function actionBegin(args) {
        if (args.requestType === "beforeOpenEditDialog" || args.requestType
=== "beforeOpenAddDialog" ) {
            var column = ganttInstance.columnByField("CustomField");
            divElement = ganttInstance.createElement("div", {
                className: "e-edit-form-column"
            });
            var inputElement;
            inputElement = ganttInstance.createElement("input", {
                attrs: {
                    type: "text",
                    id: ganttInstance.controlId + "" + column.field,
                    name: column.field,
                    title: column.field
                }
            });
            divElement.appendChild(inputElement);
            var input = {
                enabled: true,
                floatLabelType: "Auto",
                placeholder: "CustomField",
                value: args.rowData.CustomField
            };
            var inputObj = new inputs[column.editType](input);
            inputObj.appendTo(inputElement);
        }
    };
    function actionComplete(args) {
        if (args.requestType === "openEditDialog" || args.requestType ===
"openAddDialog") {
            var generalTab = document.getElementById(
                ganttInstance.controlId + "GeneralTabContainer"
            );
            generalTab.appendChild(divElement);
        }
    };
    return <GanttComponent dataSource={data} taskFields={taskFields}
allowSelection={true} editSettings={editOptions}
toolbar={toolbarOptions} actionBegin={actionBegin}
actionComplete={actionComplete} ref={gantt => ganttInstance = gantt}
height='400px'>
        <ColumnsDirective>
            <ColumnDirective field='TaskID'
width='150'></ColumnDirective>
            <ColumnDirective field='TaskName'
width='250'></ColumnDirective>
            <ColumnDirective field='StartDate'
width='250'></ColumnDirective>
            <ColumnDirective field='EndDate'
width='250'></ColumnDirective>
            <ColumnDirective field='Duration'
width='250'></ColumnDirective>
            <ColumnDirective field='Progress'
width='250'></ColumnDirective>
            <ColumnDirective field='CustomField'
width='250'></ColumnDirective>

```



```

        </ColumnsDirective>
        <AddDialogFieldsDirective>
            <AddDialogFieldDirective type='General'
headerText='General'></AddDialogFieldDirective>
            <AddDialogFieldDirective
type='Dependency'></AddDialogFieldDirective>
            <AddDialogFieldDirective
type='Resources'></AddDialogFieldDirective>
            <AddDialogFieldDirective type='Notes'></AddDialogFieldDirective>
        </AddDialogFieldsDirective>
        <EditDialogFieldsDirective>
            <EditDialogFieldDirective type='General'
headerText='General'></EditDialogFieldDirective>
            <EditDialogFieldDirective
type='Dependency'></EditDialogFieldDirective>
            <EditDialogFieldDirective
type='Resources'></EditDialogFieldDirective>
            <EditDialogFieldDirective
type='Notes'></EditDialogFieldDirective>
        </EditDialogFieldsDirective>
        <Inject services={[Edit, Selection, Toolbar]}/>
    </GanttComponent>;
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import { GanttComponent, Inject, Edit, Selection, ColumnsDirective,
ColumnDirective, AddDialogFieldsDirective, EditDialogFieldsDirective,
EditDialogFieldDirective, AddDialogFieldDirective, Toolbar } from
'@syncfusion/ej2-react-gantt';
import { CheckBox } from "@syncfusion/ej2-buttons";
import { TextBox, NumericTextBox, MaskedTextBox } from "@syncfusion/ej2-
inputs";
import { DatePicker, DateTimePicker } from "@syncfusion/ej2-calendars";
import { DropDownList } from "@syncfusion/ej2-dropdowns";
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { data } from './datasource';
function App () {

    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };

    const editOptions = {
        allowAdding: true,
        allowEditing: true,
        allowDeleting: true,
        mode: "Dialog"
    };

```

```

        const toolbarOptions = ['Add', 'Edit', 'Delete', 'Cancel', 'Update',
        'ExpandAll', 'CollapseAll', 'Search'];

        let divElement: any;
        let ganttInstance;
        const inputs = {
            booleanedit: CheckBox,
            dropdownedit: DropDownList,
            datepickeredit: DatePicker,
            datetimestampedit: DateTimePicker,
            maskededit: MaskedTextBox,
            numericedit: NumericTextBox,
            stringedit: TextBox
        };
        function actionBegin(args) {
            if (args.requestType === "beforeOpenEditDialog" || args.requestType
            === "beforeOpenAddDialog") {
                var column = ganttInstance.columnByField["CustomField"];
                divElement = ganttInstance.createElement("div", {
                    className: "e-edit-form-column"
                });
                var inputElement: any;
                inputElement = ganttInstance.createElement("input", {
                    attrs: {
                        type: "text",
                        id: ganttInstance.controlId + "" + column.field,
                        name: column.field,
                        title: column.field
                    }
                });
                divElement.appendChild(inputElement);
                var input = {
                    enabled: true,
                    floatLabelType: "Auto",
                    placeholder: "CustomField",
                    value: args.rowData.CustomField
                };
                var inputObj = new inputs[column.editType](input);
                inputObj.appendTo(inputElement);
            }
        };
        function actionComplete(args) {
            if (args.requestType === "openEditDialog" || args.requestType ===
            "openAddDialog") {
                var generalTab:any = document.getElementById(
                ganttInstance.controlId + "GeneralTabContainer"
                );
                generalTab.appendChild(divElement);
            }
        };
        return <GanttComponent dataSource={data} taskFields={taskFields}
        allowSelection={true} editSettings={editOptions}
        toolbar={toolbarOptions} actionBegin={actionBegin}
        actionComplete={actionComplete} ref={gantt => ganttInstance = gantt}
        height='400px'>
            <ColumnsDirective>

```

```

        <ColumnDirective field='TaskID'
width='150'></ColumnDirective>
        <ColumnDirective field='TaskName'
width='250'></ColumnDirective>
        <ColumnDirective field='StartDate'
width='250'></ColumnDirective>
        <ColumnDirective field='EndDate'
width='250'></ColumnDirective>
        <ColumnDirective field='Duration'
width='250'></ColumnDirective>
        <ColumnDirective field='Progress'
width='250'></ColumnDirective>
        <ColumnDirective field='CustomField'
width='250'></ColumnDirective>
    </ColumnsDirective>
    <AddDialogFieldsDirective>
        <AddDialogFieldDirective type='General'
headerText='General'></AddDialogFieldDirective>
        <AddDialogFieldDirective
type='Dependency'></AddDialogFieldDirective>
        <AddDialogFieldDirective
type='Resources'></AddDialogFieldDirective>
        <AddDialogFieldDirective type='Notes'></AddDialogFieldDirective>
    </AddDialogFieldsDirective>
    <EditDialogFieldsDirective>
        <EditDialogFieldDirective type='General'
headerText='General'></EditDialogFieldDirective>
        <EditDialogFieldDirective
type='Dependency'></EditDialogFieldDirective>
        <EditDialogFieldDirective
type='Resources'></EditDialogFieldDirective>
        <EditDialogFieldDirective
type='Notes'></EditDialogFieldDirective>
    </EditDialogFieldsDirective>
    <Inject services={[Edit, Selection, Toolbar]}/>
</GanttComponent>;
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Gantt</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components"
/>
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />

```

```

<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Maintain zoom to fit in React Gantt component

In the Gantt control, While performing edit actions or dynamically change dataSource, the timeline gets refreshed. When zoomToFit toolbar item is clicked and perform editing actions or dynamically change dataSource, the timeline gets refreshed. So that, the timeline will not fit to the project any more.

Maintain zoomToFit after edit actions

We can maintain zoomToFit after editing actions(cell edit,dialog edit,taskbar edit) by using [fitToProject](#) method in `actionComplete` and `taskbarEdited` event.

INDEX.JSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Toolbar, Edit, Selection } from
'@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App () {
  let ganttInstance;
  const taskFields = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    dependency: 'Predecessor',
    child: 'subtasks'
  };
  const editSettings = {
    allowEditing: true,
    allowTaskbarEditing: true
  };
  const toolbarOptions = ['Edit', 'ZoomToFit'];
  function actionComplete(args) {

```

```

    if ((args.action === "CellEditing" || args.action === "DialogEditing")
    && args.requestType === "save") {
        ganttInstance.dataSource = data;
        ganttInstance.fitToProject();
    }
};
function taskbarEdited(args) {
    if (args) {
        ganttInstance.dataSource = data;
        ganttInstance.fitToProject();
    }
};
    return <GanttComponent dataSource={data} taskFields={taskFields}
    toolbar={toolbarOptions} editSettings={editSettings}
    actionComplete={actionComplete} taskbarEdited={taskbarEdited} height =
    '450px' ref={gantt => ganttInstance = gantt}>
        <Inject services={[Toolbar, Edit, Selection]} />
    </GanttComponent>
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Toolbar, Edit, Selection, ToolbarItem } from
'@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App () {
    let ganttInstance: any;
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        dependency: 'Predecessor',
        child: 'subtasks'
    };
    const editSettings: any = {
        allowEditing: true,
        allowTaskbarEditing: true
    };
    const toolbarOptions: ToolbarItem[] = ['Edit', 'ZoomToFit'];
    function actionComplete(args) {
        if ((args.action === "CellEditing" || args.action === "DialogEditing")
        && args.requestType === "save") {
            ganttInstance.dataSource = data;
            ganttInstance.fitToProject();
        }
    };
    function taskbarEdited(args) {
        if (args) {
            ganttInstance.dataSource = data;
            ganttInstance.fitToProject();
        }
    }
}

```

```

    };

    return <GanttComponent dataSource={data} taskFields={taskFields}
      toolbar={toolbarOptions} editSettings={editSettings}
      actionComplete={actionComplete} taskbarEdited={taskbarEdited} height =
      '450px' ref={gantt => ganttInstance = gantt}>
      <Inject services={[Toolbar, Edit, Selection]} />
    </GanttComponent>
  };
  ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Maintain zoomToFit after change dataSource dynamically

We can maintain `zoomToFit` after change `dataSource` dynamically, by calling `fitToProject` method in `dataBound` event.

INDEX.JSX

```
import * as React from 'react';
```

```

import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Toolbar, ToolbarItem } from
 '@syncfusion/ej2-react-gantt';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { data, changeData } from './datasource';
function App(){
    let ganttInstance;
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        dependency: 'Predecessor',
        child: 'subtasks'
    };
    const toolbarOptions = ['ZoomToFit'];
    function clickHandler() {
        ganttInstance.dataSource = changeData;
    };
    function dataBound(args) {
        ganttInstance.fitToProject();
    };
    return (<div>
        <ButtonComponent onClick= { clickHandler}>Change
Data</ButtonComponent>
        <GanttComponent dataSource={data} taskFields={taskFields}
dataBound={dataBound}
        toolbar={toolbarOptions} height = '450px' ref={gantt =>
ganttInstance = gantt}>
            <Inject services={ [Toolbar]} />
        </GanttComponent></div>)
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Toolbar, ToolbarItem } from
 '@syncfusion/ej2-react-gantt';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { data, changeData } from './datasource';
function App(){
    let ganttInstance: any;
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        dependency: 'Predecessor',
        child: 'subtasks'
    };
    const toolbarOptions: ToolbarItem[] = ['ZoomToFit'];
    function clickHandler() {

```

```

    ganttInstance.dataSource = changeData;
  };
  function dataBound(args) {
    ganttInstance.fitToProject();
  };
  return (<div>
    <ButtonComponent onClick= { clickHandler}>Change
Data</ButtonComponent>
    <GanttComponent dataSource={data} taskFields={taskFields}
dataBound={dataBound}
    toolbar={toolbarOptions} height = '450px' ref={gantt =>
ganttInstance = gantt}>
    <Inject services={[Toolbar]} />
    </GanttComponent></div>)
};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components"
/>
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
  <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
  <script src="systemjs.config.js"></script>
  <style>
    #loader {
      color: #008cff;
      height: 40px;
      left: 45%;
      position: absolute;
      top: 45%;
      width: 30%;
    }
  </style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```


Drag and drop from another in React Gantt component

In Gantt, it is possible to drag a record from another component and drop it in Gantt chart with updating the Gantt record. Here, dragging an item from **TreeView** component to Gantt and that item is updated as a resource for the Gantt record, we can achieve this, by using [nodeDragStop](#) event of **TreeView** control.

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit, Selection, ToolbarItem } from '@syncfusion/ej2-react-gantt';
import { DragAndDropEventArgs } from '@syncfusion/ej2-navigations';
import { TreeViewComponent } from '@syncfusion/ej2-react-navigations';
import { closest, addClass } from '@syncfusion/ej2-base';
import { editingData, editingResources } from './datasource';

function App () {
    let ganttInstance;
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        dependency: 'Predecessor',
        resourceInfo: 'resources',
        child: 'subtasks'
    };
    const resourceFields = {
        id: 'resourceId',
        name: 'resourceName'
    };
    const editSettings = {
        allowEditing: true
    };
    const labelSettings = {
        rightLabel: 'resources'
    };
    const fields = { dataSource: editingResources, id: 'resourceId', text: 'resourceName' };
    const allowDragAndDrop = true;
    function nodeDragStop(args) {
        let chartEle = closest(args.target, '.e-chart-row');
        let gridEle = closest(args.target, '.e-row');
        if(gridEle) {
            var index = ganttInstance.treeGrid.getRows().indexOf(gridEle);
            ganttInstance.selectRow(index);
        }
        if (chartEle) {
            var index = chartEle.ariaRowIndex;
            ganttInstance.selectRow(Number(index));
        }
        let record = args.draggedNodeData;
        let selectedData = ganttInstance.flatData[ganttInstance.selectedRowIndex];
        let selectedDataResource = selectedData.taskData.resources;
```

```

    let resources = [];
    if (selectedDataResource) {
        for (var i = 0; i < selectedDataResource.length; i++) {
            resources.push(selectedDataResource[i].resourceId);
        }
    }
    resources.push(parseInt(record.id));
    if (chartEle || gridEle) {
        var data = {
            TaskID: selectedData.taskData.TaskID,
            resources: resources
        };
        ganttInstance.updateRecordByID(data);
        var elements = document.querySelectorAll('.e-drag-item');
        while (elements.length > 0 && elements[0].parentNode) {
            elements[0].parentNode.removeChild(elements[0]);
        }
    }
};

return <div><GanttComponent dataSource={editingData}
taskFields={taskFields} resources={editingResources}
editSettings={editSettings}
    height='450px' resourceFields={resourceFields}
labelSettings={labelSettings} ref={gantt => ganttInstance = gantt}>
    <Inject services={[ Edit, Selection]} />
    </GanttComponent>
    <TreeViewComponent fields={fields}
allowDragAndDrop={allowDragAndDrop} nodeDragStop={nodeDragStop}/>
    </div>

};
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit, Selection, ToolbarItem } from
'@syncfusion/ej2-react-gantt';
import { DragAndDropEventArgs } from '@syncfusion/ej2-navigations';
import { TreeViewComponent } from '@syncfusion/ej2-react-navigations';
import { closest, addClass } from '@syncfusion/ej2-base';
import { editingData, editingResources } from './datasource';
function App () {
    let ganttInstance: any;
    const taskFields: any = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        dependency: 'Predecessor',
        resourceInfo: 'resources',
        child: 'subtasks'
    };
    const resourceFields = {

```

```

        id: 'resourceId',
        name: 'resourceName'
    };
    const editSettings = {
        allowEditing: true
    };
    const labelSettings = {
        rightLabel: 'resources'
    };
    const fields = { dataSource: editingResources, id: 'resourceId', text:
'resourceName' };
    const allowDragAndDrop = true;
    function nodeDragStop(args: DragAndDropEventArgs): void {
        let chartEle: any = closest(args.target, '.e-chart-row');
        let gridEle: any = closest(args.target, '.e-row');
        if(gridEle){
            var index = ganttInstance.treeGrid.getRows().indexOf(gridEle);
            ganttInstance.selectRow(index);
        }
        if(chartEle){
            var index = chartEle.ariaRowIndex;
            ganttInstance.selectRow(Number(index));
        }
        let record: any = args.draggedNodeData;
        let selectedData =
ganttInstance.flatData[ganttInstance.selectedRowIndex];
        let selectedDataResource = selectedData.taskData.resources;
        let resources = [];
        if (selectedDataResource) {
            for (var i = 0; i < selectedDataResource.length; i++) {
                resources.push(selectedDataResource[i].resourceId);
            }
        }
        resources.push(parseInt(record.id));
        if (chartEle || gridEle) {
            var data = {
                TaskID: selectedData.taskData.TaskID,
                resources: resources
            };
            ganttInstance.updateRecordByID(data);
            var elements = document.querySelectorAll('.e-drag-item');
            while (elements.length > 0 && elements[0].parentNode) {
                elements[0].parentNode.removeChild(elements[0]);
            }
        }
    };
    return <div><GanttComponent dataSource={editingData}
taskFields={taskFields} resources={editingResources}
editSettings={editSettings}
        height='450px' resourceFields={resourceFields}
labelSettings={labelSettings} ref={gantt => ganttInstance = gantt}>
        <Inject services={[ Edit, Selection]} />
    </GanttComponent>
    <TreeViewComponent fields={fields}
allowDragAndDrop={allowDragAndDrop} nodeDragStop={nodeDragStop}/>
    </div>

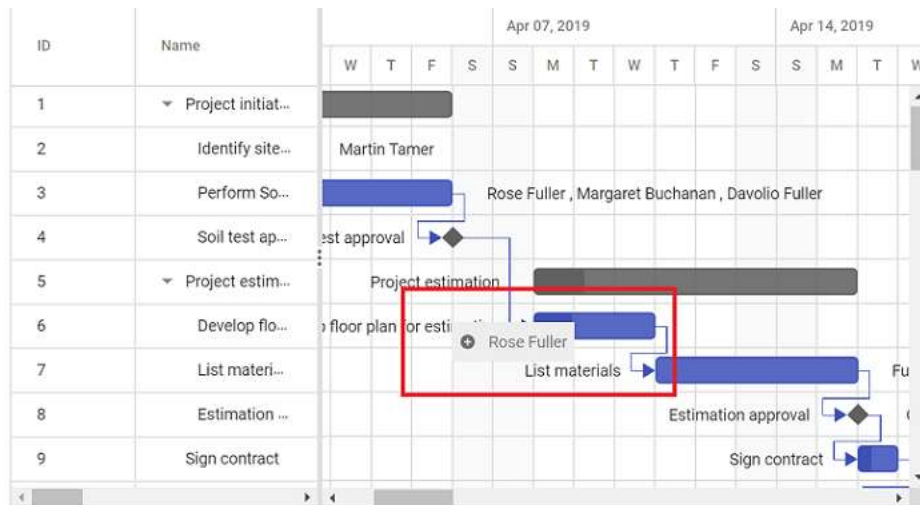
```

```
};  
ReactDOM.render(<App />, document.getElementById('root'));
```

INDEX.HTML

```
<!DOCTYPE html>  
<html lang="en">  
<head>  
  <title>Syncfusion React Gantt</title>  
  <meta charset="utf-8" />  
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />  
  <meta name="description" content="Essential JS 2 for React Components"  
/>  
  <meta name="author" content="Syncfusion" />  
  <link href="https://cdn.syncfusion.com/ej2/material.css"  
rel="stylesheet" type="text/css"/>  
  <link  
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"  
rel="stylesheet" />  
  <script  
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc  
ript>  
  <script src="systemjs.config.js"></script>  
  <style>  
    #loader {  
      color: #008cff;  
      height: 40px;  
      left: 45%;  
      position: absolute;  
      top: 45%;  
      width: 30%;  
    }  
  </style>  
</head>  
<body>  
  <div id='root'>  
    <div id='loader'>Loading....</div>  
  </div>  
</body>  
</html>
```

The following screenshot shows dropping record from another component in to Gantt, and **Rose Fuller** is added as resource for the task **Develop floor plan estimation**.



Restrict collapse chart rows in React Gantt component

Restriction of collapsing the records when clicking on gantt chart rows can be performed by using the [collapsing](#) event.

INDEX.JSX

```
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit, EditSettingsModel, Selection } from '@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App() {
    const taskFields = {
        id: 'TaskID',
        name: 'TaskName',
        startDate: 'StartDate',
        duration: 'Duration',
        progress: 'Progress',
        child: 'subtasks'
    };
    let ganttInstance;
    const editOptions = {
        allowEditing: true,
        allowAdding: true
    };
    let gantt;
    function collapsing(args) {
        if (gantt.ganttChartModule.isExpandCollapseFromChart) {
            args.cancel = true;
        }
    };
};
```

```

    return (<div>
      <GanttComponent dataSource={data} ref={gantt => ganttInstance =
gantt} taskFields={taskFields} collapsing={collapsing} allowSelection={true}
      editSettings={editOptions} height = '450px'>
        <Inject services={[Edit, Selection]} />
      </GanttComponent></div>)
  };
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.TSX

```

import * as React from 'react';
import * as ReactDOM from 'react-dom';
import { GanttComponent, Inject, Edit, EditSettingsModel, Selection } from
'@syncfusion/ej2-react-gantt';
import { data } from './datasource';
function App(){
  const taskFields: any = {
    id: 'TaskID',
    name: 'TaskName',
    startDate: 'StartDate',
    duration: 'Duration',
    progress: 'Progress',
    child: 'subtasks'
  };
  let ganttInstance:any;
  const editOptions: EditSettingsModel = {
    allowEditing: true,
    allowAdding:true
  };
  let gantt;
  function collapsing(args:any) {
    if (gantt.ganttChartModule.isExpandCollapseFromChart) {
      args.cancel = true;
    }
  };

  return (<div>
    <GanttComponent dataSource={data} ref={gantt => ganttInstance =
gantt} taskFields={taskFields} collapsing={collapsing} allowSelection={true}
    editSettings={editOptions} height = '450px'>
      <Inject services={[Edit, Selection]} />
    </GanttComponent></div>)
  };
ReactDOM.render(<App />, document.getElementById('root'));

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Gantt</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />

```

```
<meta name="description" content="Essential JS 2 for React Components"
/>
<meta name="author" content="Syncfusion" />
<link href="https://cdn.syncfusion.com/ej2/material.css"
rel="stylesheet" type="text/css"/>
<link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></sc
ript>
<script src="systemjs.config.js"></script>
<style>
  #loader {
    color: #008cff;
    height: 40px;
    left: 45%;
    position: absolute;
    top: 45%;
    width: 30%;
  }
</style>
</head>
<body>
  <div id='root'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>
```

[Link to the VideoGrid](#)

Getting Started

Getting started

This section explains you the steps required to create a simple Grid and demonstrate the basic usage of the Grid component in React environment.

To get start quickly with React Grid, you can check on this video:

[Setup for Local Development](#)

To set-up a React application, choose any of the following ways. The best and easiest way is to use the [create-react-app](#). It sets up your development environment in JavaScript and improvise your application for production. Refer to the [installation instructions](#) of `create-react-app`.

```
`bash
```

```
npx create-react-app my-app
```

```
cd my-app
```

```
npm start
```

```
`
```

or

```
`bash
yarn create react-app my-app
cd my-app
yarn start
`
```

To set-up a React application in **TypeScript** environment, run the following command.

```
`bash
npx create-react-app my-app --template typescript
cd my-app
npm start
`
```

Besides using the [npx](#) package runner tool, also create an application from the **npm init**. To begin with the **npm init**, upgrade the **npm** version to **npm 6+**.

```
`bash
npm init react-app my-app
cd my-app
npm start
`
```

Adding Syncfusion Grid packages

All the available Essential JS 2 packages are published in [npmjs.com](#) public registry.

To install Grid component, use the following command

```
`
npm install @syncfusion/ej2-react-grids --save
`
```

The `--save` will instruct NPM to include the Grid package inside of the **dependencies** section of the `package.json`.

Adding CSS reference

The following CSS files are available in `../node_modules/@syncfusion` package folder. This can be added as reference in **src/App.css**.

```
`css
@import '../node_modules/@syncfusion/ej2-base/styles/material.css';
@import '../node_modules/@syncfusion/ej2-buttons/styles/material.css';
@import '../node_modules/@syncfusion/ej2-calendars/styles/material.css';
@import '../node_modules/@syncfusion/ej2-dropdowns/styles/material.css';
```



```
@import '../node_modules/@syncfusion/ej2-inputs/styles/material.css';
@import '../node_modules/@syncfusion/ej2-navigations/styles/material.css';
@import '../node_modules/@syncfusion/ej2-popups/styles/material.css';
@import '../node_modules/@syncfusion/ej2-splitbuttons/styles/material.css';
@import '../node_modules/@syncfusion/ej2-notifications/styles/material.css';
@import "../node_modules/@syncfusion/ej2-react-grids/styles/material.css";
`
```

To refer **App.css** in the application then import it in the **src/App.tsx** file.

Adding Grid component

Now, you can start adding React Grid component in the application. For getting started, add the Grid component in **src/App.tsx** file using following code.

Place the following grid code in the **src/App.tsx**.

```
`ts
import { ColumnDirective, ColumnsDirective, GridComponent } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  return <GridComponent dataSource={data}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' width='100' textAlign="Right"/>
      <ColumnDirective field='CustomerID' width='100'/>
      <ColumnDirective field='EmployeeID' width='100' textAlign="Right"/>
      <ColumnDirective field='Freight' width='100' format="C2" textAlign="Right"/>
      <ColumnDirective field='ShipCountry' width='100'/>
    </ColumnsDirective>
  </GridComponent>
};
export default App;
`
```

Module Injection

React Grid component features are segregated into individual feature-wise modules.

In order to use a particular feature, you need to inject its feature service in the **App**.

In the current application, we are going to use paging, sorting, filtering and grouping feature of Grid.

Please find relevant feature service name and description as follows.

- **Page** - Inject this service to use paging feature.
- **Sort** - Inject this service to use sorting feature.
- **Filter** - Inject this service to use filtering feature.
- **Group** - Inject this service to use grouping feature.

These modules should be injected into the grid using the **Inject** directive.

Additional feature modules are available [here](#).

Enable Paging

The paging feature enables users to view the Grid record in a paged view.

It can be enabled by setting [allowPaging](#) property to true.

Inject the **Page** module in **Inject.services** as follows.

If the **Page** service is not injected, the pager will not be rendered in the grid.

Pager can be customized using [pageSettings](#) property.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, Filter, GridComponent, Group,
Inject, Page, Sort } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    const pageSettings = { pageSize: 6 };
    return <GridComponent dataSource={data} allowPaging={true}
pageSettings={pageSettings}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' width='100' textAlign="Right"/>
            <ColumnDirective field='CustomerID' width='100' />
            <ColumnDirective field='EmployeeID' width='100'
textAlign="Right"/>
            <ColumnDirective field='Freight' width='100' format="C2"
textAlign="Right"/>
            <ColumnDirective field='ShipCountry' width='100' />
        </ColumnsDirective>
        <Inject services={[Page, Sort, Filter, Group]} />
    </GridComponent>;
}
;
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, Filter, GridComponent, Group,
Inject, Page, PageSettingsModel, Sort } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    const pageSettings: PageSettingsModel = { pageSize: 6 };
    return <GridComponent dataSource={data} allowPaging={true} pageSettings={
pageSettings }>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' width='100' textAlign="Right"/>
```

```

        <ColumnDirective field='CustomerID' width='100' />
        <ColumnDirective field='EmployeeID' width='100'
textAlign="Right"/>
        <ColumnDirective field='Freight' width='100' format="C2"
textAlign="Right"/>
        <ColumnDirective field='ShipCountry' width='100' />
    </ColumnsDirective>
    <Inject services={[Page, Sort, Filter, Group]} />
</GridComponent>
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {

```

```

    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
        },
        {
            OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
            ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
            ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
            },
            {
                OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
                ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
                ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
                },
                {
                    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
                    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
                    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
                    },
                    {
                        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
                        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
                        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
                        },
                        {
                            OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
                            ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
                            ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
                            },
                            {

```

```

    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),

```

```

        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),

```

```

        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]];

```

Enable Sorting

The sorting feature enables you to order the records.

It can be enabled by setting the [allowSorting](#) property as true.

Inject the **Sort** module in the **Inject.services** as follows.

If the **Sort** module is not injected, you cannot sort when a header is clicked.

Sorting feature can be customized using [sortSettings](#) property.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, Filter, GridComponent, Group }
from '@syncfusion/ej2-react-grids';
import { Inject, Page, Sort } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {

```

```

const pageSettings = { pageSize: 6 };
const sortSettings = { columns: [
  { field: 'EmployeeID', direction: 'Ascending' }
] };
return <GridComponent dataSource={data} allowPaging={true}
pageSettings={pageSettings} allowSorting={true} sortSettings={sortSettings}>
  <ColumnsDirective>
    <ColumnDirective field='OrderID' width='100' textAlign="Right"/>
    <ColumnDirective field='CustomerID' width='100' />
    <ColumnDirective field='EmployeeID' width='100'
textAlign="Right"/>
    <ColumnDirective field='Freight' width='100' format="C2"
textAlign="Right"/>
    <ColumnDirective field='ShipCountry' width='100' />
  </ColumnsDirective>
  <Inject services={[Page, Sort, Filter, Group]} />
</GridComponent>;
}
;
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, Filter, GridComponent, Group }
from '@syncfusion/ej2-react-grids';
import { Inject, Page, PageSettingsModel, Sort, SortSettingsModel } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const pageSettings: PageSettingsModel = { pageSize: 6 }
  const sortSettings: SortSettingsModel = { columns: [
    { field: 'EmployeeID', direction: 'Ascending' }
  ] };
  return <GridComponent dataSource={data} allowPaging={true} pageSettings={
pageSettings }
allowSorting={true} sortSettings={ sortSettings }>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' width='100' textAlign="Right"/>
      <ColumnDirective field='CustomerID' width='100' />
      <ColumnDirective field='EmployeeID' width='100'
textAlign="Right"/>
      <ColumnDirective field='Freight' width='100' format="C2"
textAlign="Right"/>
      <ColumnDirective field='ShipCountry' width='100' />
    </ColumnsDirective>
    <Inject services={[Page, Sort, Filter, Group]} />
  </GridComponent>
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {

```



```

    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {

```

```

    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
},
{
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
},
{
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
},
{
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
},
{
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
},
{
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
},
{
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
},
{

```

```

    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),

```

```

        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),

```

```

        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
  ]];

```

Enable Filtering

It can be enabled by setting the [allowFiltering](#) property as true.

Inject the [Filter](#) module in the **Inject.services** as follows.

If [Filter](#) module is not injected, filter bar will not be rendered in Grid.

Filtering feature can be customized using [filterSettings](#) property.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, Filter, GridComponent } from
'@syncfusion/ej2-react-grids';
import { Group, Inject, Page, Sort } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
    const pageSettings = { pageSize: 6 };
    const sortSettings = { columns: [
        { field: 'EmployeeID', direction: 'Ascending' }
    ] };
    const filterSettings = { columns: [
        { field: 'EmployeeID', operator: 'greaterthan', value: 2 }
    ] };
    return <GridComponent dataSource={data} allowPaging={true}
pageSettings={pageSettings} filterSettings={filterSettings}
allowSorting={true} sortSettings={sortSettings} allowFiltering={true}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' width='100' textAlign="Right"/>
            <ColumnDirective field='CustomerID' width='100' />
            <ColumnDirective field='EmployeeID' width='100'
textAlign="Right"/>
            <ColumnDirective field='Freight' width='100' format="C2"
textAlign="Right"/>
            <ColumnDirective field='ShipCountry' width='100' />

```

```

        </ColumnsDirective>
        <Inject services={[Page, Sort, Filter, Group]}/>
    </GridComponent>;
}
;
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, Filter, FilterSettingsModel,
GridComponent } from '@syncfusion/ej2-react-grids';
import { Group, Inject, Page, PageSettingsModel, Sort, SortSettingsModel }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
    const pageSettings: PageSettingsModel = { pageSize: 6 }
    const sortSettings: SortSettingsModel = { columns: [
        { field: 'EmployeeID', direction: 'Ascending' }
    ] };
    const filterSettings: FilterSettingsModel = { columns: [
        { field: 'EmployeeID', operator: 'greaterthan',
value: 2 }
    ] };
    return <GridComponent dataSource={data} allowPaging={true} pageSettings={
pageSettings }
        filterSettings = {filterSettings}
        allowSorting={true} sortSettings={ sortSettings }
allowFiltering={true}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' width='100' textAlign="Right"/>
            <ColumnDirective field='CustomerID' width='100' />
            <ColumnDirective field='EmployeeID' width='100'
textAlign="Right"/>
            <ColumnDirective field='Freight' width='100' format="C2"
textAlign="Right"/>
            <ColumnDirective field='ShipCountry' width='100' />
        </ColumnsDirective>
        <Inject services={[Page, Sort, Filter, Group]} />
    </GridComponent>
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {

```

```

    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {

```

```

    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
}
];

```


DATASOURCE.TSX

```
export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
```

```

        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),

```

```

        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
  ]];

```

Enable Grouping

The grouping feature enables you to view the grid record in a grouped view.

It can be enabled by setting [allowGrouping](#) property to true.

The [Group](#) module has to be injected as follows.

If [Group](#) module is not injected, the group drop area will not be rendered in Grid.

Grouping feature can be customized using [groupSettings](#) property.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, Filter, GridComponent, Group }
from '@syncfusion/ej2-react-grids';
import { Inject, Page, Sort } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    const pageSettings = { pageSize: 6 };
    const sortSettings = { columns: [
        { field: 'EmployeeID', direction: 'Ascending' }
    ] };
    const filterSettings = { columns: [
        { field: 'EmployeeID', operator: 'greaterthan', value: 2 }
    ] };
    const groupSettings = { columns: ['EmployeeID'] };
    return <GridComponent dataSource={data} allowPaging={true}
    pageSettings={pageSettings} filterSettings={filterSettings}
    allowGrouping={true} groupSettings={groupSettings} allowSorting={true}
    sortSettings={sortSettings} allowFiltering={true} height={180}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' width='100' textAlign="Right"/>
            <ColumnDirective field='CustomerID' width='100' />
            <ColumnDirective field='EmployeeID' width='100'
            textAlign="Right"/>
            <ColumnDirective field='Freight' width='100' format="C2"
            textAlign="Right"/>
            <ColumnDirective field='ShipCountry' width='100' />
        </ColumnsDirective>
        <Inject services={[Page, Sort, Filter, Group]}/>
    </GridComponent>;
}

```

```
;
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, Filter, FilterSettingsModel,
GridComponent, Group, GroupSettingsModel } from '@syncfusion/ej2-react-
grids';
import { Inject, Page, PageSettingsModel, Sort, SortSettingsModel } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  const pageSettings: PageSettingsModel = { pageSize: 6 }
  const sortSettings: SortSettingsModel = { columns: [
    {field: 'EmployeeID', direction: 'Ascending' }
  ] };
  const filterSettings: FilterSettingsModel = { columns: [
    {field: 'EmployeeID', operator: 'greaterthan',
value: 2 }
  ] };
  const groupSettings: GroupSettingsModel = { columns: ['EmployeeID'] };
  return <GridComponent dataSource={data} allowPaging={true} pageSettings={
pageSettings }
    filterSettings={filterSettings} allowGrouping={true}
groupSettings={ groupSettings }
    allowSorting={true} sortSettings={ sortSettings }
allowFiltering={true} height={180}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' width='100' textAlign="Right"/>
      <ColumnDirective field='CustomerID' width='100' />
      <ColumnDirective field='EmployeeID' width='100'
textAlign="Right"/>
      <ColumnDirective field='Freight' width='100' format="C2"
textAlign="Right"/>
      <ColumnDirective field='ShipCountry' width='100' />
    </ColumnsDirective>
    <Inject services={[Page, Sort, Filter, Group]} />
  </GridComponent>
};
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
```

```

        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),

```

```

        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
}
];

```

DATASOURCE.TSX

```
export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
]
```

```

{
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
},
{
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
},
{
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
},
{
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
},
{
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
},
{
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
},
{
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
},
{

```



```

    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
    Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
    ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
    Freight: 48.29, Verified: !0
  }];

```

Run the application

The [create-react-app](#) will pre-configure the project to compile and run the application in browser. Use the following command to run the application.

,

```
npm start
```

,

Output will be appears as follows.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, Filter, GridComponent, Group }
from '@syncfusion/ej2-react-grids';
import { Inject, Page, Sort } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const pageSettings = { pageSize: 6 };
  const sortSettings = { columns: [
    { field: 'EmployeeID', direction: 'Ascending' }
  ] };
  const filterSettings = { columns: [
    { field: 'EmployeeID', operator: 'greaterthan', value: 2 }
  ] };
  const groupSettings = { columns: ['EmployeeID'] };
  return <GridComponent dataSource={data} allowPaging={true}
    pageSettings={pageSettings} filterSettings={filterSettings}
    allowGrouping={true} groupSettings={groupSettings} allowSorting={true}
    sortSettings={sortSettings} allowFiltering={true} height={180}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' width='100' textAlign="Right"/>
      <ColumnDirective field='CustomerID' width='100' />
      <ColumnDirective field='EmployeeID' width='100'
    textAlign="Right"/>
      <ColumnDirective field='Freight' width='100' format="C2"
    textAlign="Right"/>
      <ColumnDirective field='ShipCountry' width='100' />
    </ColumnsDirective>
    <Inject services={[Page, Sort, Filter, Group]}/>
  </GridComponent>;
}
;
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, Filter, FilterSettingsModel,
GridComponent, Group, GroupSettingsModel } from '@syncfusion/ej2-react-
grids';
import { Inject, Page, PageSettingsModel, Sort, SortSettingsModel } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const pageSettings: PageSettingsModel = { pageSize: 6 };
  const sortSettings: SortSettingsModel = { columns: [
    {field: 'EmployeeID', direction: 'Ascending' }
  ] };
  const filterSettings: FilterSettingsModel = { columns: [
    {field: 'EmployeeID', operator: 'greaterthan',
value: 2 }
  ] };
  const groupSettings: GroupSettingsModel = { columns: ['EmployeeID'] };
  return <GridComponent dataSource={data} allowPaging={true} pageSettings={
pageSettings }
    filterSettings = {filterSettings} allowGrouping={true}
groupSettings={ groupSettings }
    allowSorting={true} sortSettings={ sortSettings }
allowFiltering={true} height={180}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' width='100' textAlign="Right"/>
      <ColumnDirective field='CustomerID' width='100' />
      <ColumnDirective field='EmployeeID' width='100'
textAlign="Right"/>
      <ColumnDirective field='Freight' width='100' format="C2"
textAlign="Right"/>
      <ColumnDirective field='ShipCountry' width='100' />
    </ColumnsDirective>
    <Inject services={[Page, Sort, Filter, Group]} />
  </GridComponent>
};
export default App;

```

You can refer to our [React Grid](#) feature tour page for its groundbreaking feature representations. You can also explore our [React Grid Component example](#) that shows how to render the Grid in React.

See also

- [Top 5 Features of React Data Grid](#)
- [How to render React Grid with bootstrap theme](#)

Creating a Next.js Application Using Syncfusion React Components

This section provides a step-by-step guide for setting up a Next.js application and integrating the Syncfusion React Grid component.

What is Next.js?

[Next.js](#) is a React framework that makes it easy to build fast, SEO-friendly, and user-friendly web applications. It provides features such as server-side rendering, automatic code splitting, routing, and API routes, making it an excellent choice for building modern web applications.

Prerequisites

Before getting started with the Next.js application, ensure the following prerequisites are met:

- [Node.js 16.8](#) or later.
- The application is compatible with macOS, Windows, and Linux operating systems.

Create a Next.js application

To create a new Next.js application, use one of the commands that are specific to either NPM or Yarn.

NPM

```
npx create-next-app@latest
```

YARN

```
yarn create next-app
```

Using one of the above commands will lead you to set up additional configurations for the project as below:

1. Define the project name: Users can specify the name of the project directly. Let's specify the name of the project as `ej2-nextjs-grid`.

CMD

```
√ What is your project named? » ej2-nextjs-grid
```

2. Select the required packages.

CMD

```
√ What is your project named? ... ej2-nextjs-grid
√ Would you like to use TypeScript? ... No / `Yes`
√ Would you like to use ESLint? ... No / `Yes`
√ Would you like to use Tailwind CSS? ... `No` / Yes
√ Would you like to use `src/` directory? ... No / `Yes`
√ Would you like to use App Router? (recommended) ... No / `Yes`
√ Would you like to customize the default import alias? ... `No` / Yes
Creating a new Next.js app in D:\ej2-nextjs-grid.
```

3. Once complete the above mentioned steps to create `ej2-nextjs-grid`, navigate to the directory using the below command:

CMD

```
cd ej2-nextjs-grid
```

The application is ready to run with default settings. Now, let's add Syncfusion components to the project.

Install Syncfusion React packages

Syncfusion React component packages are available at [npmjs.com](https://www.npmjs.com). To use Syncfusion React components in the project, install the corresponding npm package.

Here, the [React Grid component](#) is used as an example. To install the React Grid component in the project, use the following command:

NPM

```
npm install @syncfusion/ej2-react-grids --save
```

YARN

```
yarn add @syncfusion/ej2-react-grids
```

Import Syncfusion CSS styles

Syncfusion React components come with [built-in themes](#), which are available in the installed packages. It's easy to adapt the Syncfusion React components to match the style of your application by referring to one of the built-in themes.

Import the **Material** theme into the **src/app/globals.css** file and removed the existing styles in that file, as shown below:

GLOBALS.CSS

```
@import '../..//node_modules/@syncfusion/ej2-base/styles/material.css';
@import '../..//node_modules/@syncfusion/ej2-buttons/styles/material.css';
@import '../..//node_modules/@syncfusion/ej2-calendars/styles/material.css';
@import '../..//node_modules/@syncfusion/ej2-dropdowns/styles/material.css';
@import '../..//node_modules/@syncfusion/ej2-inputs/styles/material.css';
@import '../..//node_modules/@syncfusion/ej2-navigations/styles/material.css';
@import '../..//node_modules/@syncfusion/ej2-popups/styles/material.css';
@import '../..//node_modules/@syncfusion/ej2-splitbuttons/styles/material.css';
@import "../..//node_modules/@syncfusion/ej2-react-grids/styles/material.css";
```

To know more about built-in themes and CSS reference for individual components, refer to the [themes](#) section.

Add Syncfusion React component

Follow the below steps to add the React Grid component to the Next.js project:

1. Before adding the Grid component to your markup, create a **datasource.tsx** file within the **src/app/** folder and add the Grid component data.

DATASOURCE.TSX

```
export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims', ShipAddress: '59
    rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France', Freight:
    32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
```

```

ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress: 'Luisenstr.
48',
ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany', Freight:
11.61, Verified: !1
},
{
OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua do
Paço, 67',
ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
},
{
OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2, rue du
Commerce',
ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France', Freight:
41.34, Verified: !0
},
{
OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress: 'Boulevard
Tirou, 255',
ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium', Freight:
51.3, Verified: !0
},
{
OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua do
Paço, 67',
ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
},
{
OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress: 'Hauptstr. 31',
ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
},
{
OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress: 'Starenweg
5',
ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
},
{
OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress: 'Rua do
Mercado, 12',

```

```

ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
},
{
OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry: 'Venezuela',
Freight: 81.91, Verified: !0
},
{
OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse 6',
ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria', Freight:
140.51, Verified: !0
},
{
OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.', ShipAddress:
'Sierras de Granada 9993',
ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico', Freight:
3.25, Verified: !1
},
{
OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany', Freight:
55.09, Verified: !0
},
{
OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua da
Panificadora, 12',
ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
},
{
OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque', ShipAddress:
'2817 Milton Dr.',
ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA', Freight:
48.29, Verified: !0
}
];

```

2. Then, import and define the Grid component with the [dataSource](#) property and column definitions in the `src/app/page.tsx` file, as shown below:

PAGE.TSX

```
'use client'
import {
  ColumnDirective, ColumnsDirective, GridComponent,
  Inject, Page, Sort, Filter, Group
} from '@syncfusion/ej2-react-grids';
import { data } from "../datasource";
export default function Home() {
  const pageSettings: object = { pageSize: 6 };
  const filterSettings: object = { type: 'Excel' };
  return (
    <>
    <h2>Syncfusion React Grid Component</h2>
    <GridComponent
      dataSource={data}
      allowGrouping={true}
      allowSorting={true}
      allowFiltering={true}
      allowPaging={true}
      pageSettings={pageSettings}
      filterSettings={filterSettings}
      height={180}
    >
    <ColumnsDirective>
      <ColumnDirective field="OrderID" width="100" textAlign="Right" />
      <ColumnDirective field="CustomerID" width="100" />
      <ColumnDirective field="EmployeeID" width="100" textAlign="Right" />
      <ColumnDirective
        field="Freight"
        width="100"
        format="C2"
        textAlign="Right"
      />
      <ColumnDirective field="ShipCountry" width="100" />
    </ColumnsDirective>
    <Inject services={[Page, Sort, Filter, Group]} />
    </GridComponent>
    </>
  )
}
```

Run the application

To run the application, use the following command:

NPM

```
npm run dev
```

YARN

```
yarn run dev
```

To learn more about the functionality of the Grid component, refer to the [documentation](#).

[View the NEXT.js Grid sample in the GitHub repository.](#)

Getting Started with the React Grid Component in the Preact Framework

This article provides a step-by-step guide for setting up a [Preact](#) project and integrating the Syncfusion React Grid component.

Preact is a fast and lightweight JavaScript library for building user interfaces. It's often used as an alternative to larger frameworks like React. The key difference is that Preact is designed to be smaller in size and faster in performance, making it a good choice for projects where file size and load times are critical factors.

Prerequisites

[System requirements for Syncfusion React UI components](#)

[Set up the Preact project](#)

To create a new **Preact** project, use one of the commands that are specific to either NPM or Yarn.

```
`bash
```

```
npm init preact
```

```
,
```

or

```
`bash
```

```
yarn init preact
```

```
,
```

Using one of the above commands will lead you to set up additional configurations for the project, as below:

1\ Define the project name: We can specify the name of the project directly. Let's specify the name of the project as **my-project** for this article.

```
`bash
```

```
T Preact - Fast 3kB alternative to React with the same modern API
```

```
|
```

- Project directory:

```
| my-project
```

```
—
```

```
,
```

2\ Choose **JavaScript** as the framework variant to build this Preact project using JavaScript and React.

```
`bash
```

```
T Preact - Fast 3kB alternative to React with the same modern API
```

```
|
```

- Project language:


```
| > JavaScript
```

```
| TypeScript
```

```
—
```

```
`
```

3\ Then configure the project as below for this article.

```
`bash
```

```
T Preact - Fast 3kB alternative to React with the same modern API
```

```
|
```

- Use router?

```
| Yes / > No
```

```
—
```

```
|
```

- Prerender app (SSG)?

```
| Yes / > No
```

```
—
```

```
|
```

- Use ESLint?

```
| Yes / > No
```

```
—
```

```
`
```

5\ Upon completing the aforementioned steps to create `my-project`, run the following command to jump into the project directory:

```
`bash
```

```
cd my-project
```

```
`
```

Now that `my-project` is ready to run with default settings, let's add Syncfusion components to the project.

Add the Syncfusion React packages

Syncfusion React component packages are available at [npmjs.com](https://www.npmjs.com). To use Syncfusion React components in the project, install the corresponding npm package.

This article uses the [React Grid component](#) as an example. To use the React Grid component in the project, the `@syncfusion/ej2-react-grids` package needs to be installed using the following command:

```
`bash
npm install @syncfusion/ej2-react-grids --save
`
```

or

```
`bash
yarn add @syncfusion/ej2-react-grids
`
```

Import Syncfusion CSS styles

You can import themes for the Syncfusion React component in various ways, such as using CSS or SASS styles from npm packages, CDN, CRG and [Theme Studio](#). Refer to [themes topic](#) to know more about built-in themes and different ways to refer to theme's in a React project.

In this article, the **Material 3** theme is applied using CSS styles, which are available in installed packages. The necessary **Material 3** CSS styles for the Grid component and its dependents were imported into the **src/style.css** file.

~/SRC/STYLE.CSS

```
@import "../node_modules/@syncfusion/ej2-base/styles/material3.css";
@import "../node_modules/@syncfusion/ej2-buttons/styles/material3.css";
@import "../node_modules/@syncfusion/ej2-calendars/styles/material3.css";
@import "../node_modules/@syncfusion/ej2-dropdowns/styles/material3.css";
@import "../node_modules/@syncfusion/ej2-inputs/styles/material3.css";
@import "../node_modules/@syncfusion/ej2-navigations/styles/material3.css";
@import "../node_modules/@syncfusion/ej2-popups/styles/material3.css";
@import "../node_modules/@syncfusion/ej2-splitbuttons/styles/material3.css";
@import "../node_modules/@syncfusion/ej2-react-grids/styles/material3.css";
```

The order of importing CSS styles should be in line with its dependency graph.

Add the Syncfusion React component

Follow the below steps to add the React Grid component to the Vite project:

1\ Before adding the Grid component to your markup, import the Grid component in the **src/index.jsx** file.

~/SRC/INDEX.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
'@syncfusion/ej2-react-grids';
```

2\ Then, define the Grid component with the [dataSource](#) property and column definitions. Declare the values for the **dataSource** property.

~/SRC/INDEX.JSX

```
import { render } from 'preact';
import { ColumnDirective, ColumnsDirective, GridComponent } from
'@syncfusion/ej2-react-grids';
import './style.css';
export function App() {
```

```
const data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, ShipCountry: 'France',
    Freight: 32.38
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, ShipCountry: 'Germany',
    Freight: 11.61
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, ShipCountry: 'Brazil',
    Freight: 65.83
  }
];
return (
  <GridComponent dataSource={data}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' width='100' textAlign="Right"/>
      <ColumnDirective field='CustomerID' width='100' />
      <ColumnDirective field='EmployeeID' width='100' textAlign="Right"/>
      <ColumnDirective field='Freight' width='100' format="C2" textAlign="Right"/>
      <ColumnDirective field='ShipCountry' width='100' />
    </ColumnsDirective>
  </GridComponent>
);
}
render(<App />, document.getElementById('app'));
```

Run the project

To run the project, use the following command:

```
`bash
```

```
npm run dev
```

```
,
```

or

```
`bash
```

```
yarn run dev
```

```
,
```

The output will appear as follows:

OrderID	CustomerID	EmployeeID	Freight	ShipCountry
10248	VINET	5	\$32.38	France
10249	TOMSP	6	\$11.61	Germany
10250	HANAR	4	\$65.83	Brazil

See also

[Getting Started with the Syncfusion React UI Component](#)

Module in React Grid component

The following modules should be injected to extend grid's functionality.

Module	Description
-----	-----
Page	Inject this module to use paging feature.
Sort	Inject this module to use sorting feature.
Filter	Inject this module to use filtering feature.
Group	Inject this module to use grouping feature.
Edit	Inject this module to use editing feature.
Aggregate	Inject this module to use aggregate feature.
ColumnChooser	Inject this module to use column chooser feature.
ColumnMenu	Inject this module to use column menu feature.
CommandColumn	Inject this module to use command column feature.
ContextMenu	Inject this module to use context menu feature.
DetailRow	Inject this module to use detail template feature.
ForeignKey	Inject this module to use foreign key feature.
Freeze	Inject this module to use frozen rows and columns feature.
Resize	Inject this module to use resize feature.
Reorder	Inject this module to use reorder feature.
RowDD	Inject this module to use row drag and drop feature.
Search	Inject this module to use search feature and this is a default injected module.
Selection	Inject this module to use selection feature and this is a default injected module.
Scroll	Inject this module to use scrolling feature and this is a default injected module.
Print	Inject this module to use to use print feature and this is a default injected module.
Toolbar	Inject this module to use toolbar feature.
VirtualScroll	Inject this module to use virtual scroll feature.
ExcelExport	Inject this module to use excel export feature.
PdfExport	Inject this module to use PDF export feature.

These modules should be injected into the grid using the `Inject` directive.

Data binding in React Grid component

Data binding is a fundamental technique that empowers the Grid component to integrate data into its interface, enabling the creation of dynamic and interactive grid views. This feature is particularly valuable when working with large datasets or when data needs to be fetched remotely.

The Syncfusion Grid utilizes the [Link to the Video](#), which supports both local binding with JavaScript object arrays and remote binding with RESTful JSON data services. The key property, [dataSource](#), can be assigned to a DataManager instance or a collection of JavaScript object arrays.

It supports two kinds of data binding methods:

- Local data
- Remote data

To learn about how to bind local or remote data to React Grid, you can check on this video:

Loading indicator

The Syncfusion React Grid offers a loading animation feature, which makes it easy to identify when data is being loaded or refreshed. This feature provides a clear understanding of the grid's current state and actions, such as sorting, filtering, grouping, and more.

To achieve this, you can utilize the [loadingIndicator.indicatorType](#) property of the grid, which supports two types of indicators:

- Spinner (default indicator)
- Shimmer

The following example demonstrates how to set the `loadingIndicator.indicatorType` property based on changing the dropdown value using the [change](#) event of the DropDownList component. The [refreshColumns](#) method is used to apply the changes and display the updated loading indicator type.

APP.JSX

```
import { DataManager, UrlAdaptor } from '@syncfusion/ej2-data';
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Page,
Sort, Filter, PageSettingsModel } from '@syncfusion/ej2-react-grids';
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import * as React from 'react';

function App() {
  let grid;
  let dropDown;
  const data = new DataManager({
    url:
'https://ej2services.syncfusion.com/js/development/api/UrlDataSource',
    adaptor: new UrlAdaptor
  });
  const pageOptions = { pageSize: 5, pageCount: 5 };
  const loadingIndicator = { indicatorType: 'Spinner' };
  const ddlData = [
    { id: 'Spinner', value: 'Spinner' },
    { id: 'Shimmer', value: 'Shimmer' }
  ]
  const fields = { text: 'value', value: 'id' };
  const valueChange = () => {
    if (dropDown.value === 'Shimmer') {
      grid.loadingIndicator.indicatorType = 'Shimmer';
      grid.refreshColumns();
    } else {
      grid.loadingIndicator.indicatorType = 'Spinner';
    }
  }
}
```

```

        grid.refreshColumns();
    }
}
return (<div>
    <label style={{ padding: "10px 10px 26px 0" }}> Change the loading
    indicator type: </label>
    <DropDownListComponent ref={d => dropDown = d} index={0} width={120}
    dataSource={ddlData} fields={fields}
    change={valueChange}></DropDownListComponent>
    <GridComponent ref={g => grid = g} dataSource={data} allowPaging={true}
    pageSettings={pageOptions} height={315} allowFiltering={true}
    allowSorting={true} loadingIndicator={loadingIndicator}>
        <ColumnsDirective>
            <ColumnDirective field='EmployeeID' headerText='Employee ID'
            width='120' textAlign="Right" />
            <ColumnDirective field='Employees' headerText='Employees' width='150'
            />
            <ColumnDirective field='Designation' headerText='Designation'
            width='150' />
            <ColumnDirective field='CurrentSalary' headerText='Current Salary'
            width='150' />
        </ColumnsDirective>
        <Inject services={[Page, Sort, Filter]} />
    </GridComponent></div>
);
export default App;

```

APP.TSX

```

import { DataManager, UrlAdaptor } from '@syncfusion/ej2-data';
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Page,
Sort, Filter, PageSettingsModel } from '@syncfusion/ej2-react-grids';
import { DropDownListComponent, ChangeEventArgs } from '@syncfusion/ej2-
react-dropdowns';
import * as React from 'react';
function App() {
    let grid: GridComponent | null;
    let dropDown: DropDownListComponent | null;
    const data:DataManager = new DataManager({
        url:
        'https://ej2services.syncfusion.com/js/development/api/UrlDataSource',
        adaptor: new UrlAdaptor
    });
    const pageOptions: PageSettingsModel = { pageSize: 5, pageCount: 5 };
    const loadingIndicator = { indicatorType: 'Spinner' };
    const ddlData: Object[] = [
        { id: 'Spinner', value: 'Spinner' },
        { id: 'Shimmer', value: 'Shimmer' }
    ]
    const fields: object = { text: 'value', value: 'id' };
    const valueChange = (args: ChangeEventArgs) => {
        if ((dropDown as DropDownListComponent).value === 'Shimmer') {
            (grid as GridComponent).loadingIndicator.indicatorType = 'Shimmer';
            (grid as GridComponent).refreshColumns();
        } else {
            (grid as GridComponent).loadingIndicator.indicatorType = 'Spinner';
        }
    }
}

```

```

        (grid as GridComponent).refreshColumns();
    }
}
return (<div>
    <label style={{ padding: "10px 10px 26px 0" }}> Change the loading
    indicator type: </label>
    <DropDownListComponent ref={d => dropDown = d} index={0} width={120}
    dataSource={ddlData} fields={fields}
    change={valueChange}></DropDownListComponent>
    <GridComponent ref={g => grid = g} dataSource={data} allowPaging={true}
    pageSettings={pageOptions} height={315} allowFiltering={true}
    allowSorting={true} loadingIndicator={loadingIndicator}>
        <ColumnsDirective>
            <ColumnDirective field='EmployeeID' headerText='Employee ID'
            width='120' textAlign="Right" />
            <ColumnDirective field='Employees' headerText='Employees' width='150'
            />
            <ColumnDirective field='Designation' headerText='Designation'
            width='150' />
            <ColumnDirective field='CurrentSalary' headerText='Current Salary'
            width='150' />
        </ColumnsDirective>
        <Inject services={[Page, Sort, Filter]} />
    </GridComponent></div>)
};
export default App;

```

Refresh the datasource using property

Refreshing the data source in a Syncfusion Grid involves updating the data that the grid displays dynamically. This operation is essential when you need to reflect changes in the underlying data without reloading the entire page or component.

To achieve this, you can make use of the [datasource](#) property in conjunction with the [setProperties](#) method. This ensures that the grid reflects the changes in the data source without requiring a complete page or component reload.

For example, if you add or delete data source records, follow these steps:

Step 1: Add/delete the datasource record by using the following code.

```

`typescript
grid.dataSource.unshift(data); // Add a new record.
grid.dataSource.splice(selectedRow, 1); // Delete a record.
`

```

Step 2: Refresh the datasource after changes by invoking the `setProperties` method.

```

`typescript
(grid as GridComponent).setProperties({ dataSource: (grid as GridComponent).dataSource as object[] });
`

```

The following example demonstrates adding a new record to the data source through an external button:

APP.JSX

```

import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, Grid, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    let grid;
    let newRecords = [];
    // Generate a random OrderId
    const generateOrderId = () => {
        return Math.floor(10000 + Math.random() * 90000);
    }
    // Generate a random CustomerId
    const generateCustomerId = () => {
        const characters = 'ABCDEFGHIJKLMNOPQRSTUVWXYZ';
        let result = '';
        for (let i = 0; i < 5; i++) {
            result += characters.charAt(Math.floor(Math.random() *
characters.length));
        }
        return result;
    }
    // Generate a random ShipCity
    const generateShipCity = () => {
        const cities = ['London', 'Paris', 'New York', 'Tokyo', 'Berlin'];
        return cities[Math.floor(Math.random() * cities.length)];
    }
    // Generate a random Freight value
    const generateFreight = () => {
        return Math.random() * 100;
    }
    // Generate a random ShipName
    const generateShipName = () => {
        const names = ['Que Delícia', 'Bueno Foods', 'Island Trading',
'Laughing Bacchus Winecellars'];
        return names[Math.floor(Math.random() * names.length)];
    }
    const changeDatasource = () => {
        for (let i = 0; i < 5; i++) {
            newRecords = {
                OrderID: generateOrderId(),
                CustomerID: generateCustomerId(),
                ShipCity: generateShipCity(),
                Freight: generateFreight(),
                ShipName: generateShipName()
            };
            (grid.dataSource).unshift(newRecords);
            grid.setProperties({ dataSource: grid.dataSource });
        }
    }
    return <div>
        <ButtonComponent onClick={changeDatasource}>Change
Datasource</ButtonComponent>
        <GridComponent dataSource={data} height={280} ref={g => grid = g}>
            <ColumnsDirective>

```



```

        <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
        <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
        <ColumnDirective field='Freight' headerText='Freight'
width='150' format='C2' />
        <ColumnDirective field='ShipName' headerText='Ship Name'
width='150' />
    </ColumnsDirective>
</GridComponent>
</div>
};
export default App;

```

APP.TSX

```

import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, Grid, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
    let grid: GridComponent | null;
    let newRecords: Object = [];
    // Generate a random OrderId
    const generateOrderId = () => {
        return Math.floor(10000 + Math.random() * 90000);
    }
    // Generate a random CustomerId
    const generateCustomerId = () => {
        const characters = 'ABCDEFGHIJKLMNOPQRSTUVWXYZ';
        let result = '';
        for (let i = 0; i < 5; i++) {
            result += characters.charAt(Math.floor(Math.random() *
characters.length));
        }
        return result;
    }
    // Generate a random ShipCity
    const generateShipCity = () => {
        const cities = ['London', 'Paris', 'New York', 'Tokyo', 'Berlin'];
        return cities[Math.floor(Math.random() * cities.length)];
    }
    // Generate a random Freight value
    const generateFreight = () => {
        return Math.random() * 100;
    }
    // Generate a random ShipName
    const generateShipName = () => {
        const names = ['Que Delícia', 'Bueno Foods', 'Island Trading',
'Laughing Bacchus Winecellars'];
        return names[Math.floor(Math.random() * names.length)];
    }
    const changeDatasource = () => {

```

```

    for (let i = 0; i < 5; i++) {
        newRecords = {
            OrderID: generateOrderId(),
            CustomerID: generateCustomerId(),
            ShipCity: generateShipCity(),
            Freight: generateFreight(),
            ShipName: generateShipName()
        };
        ((grid as GridComponent).dataSource as
object[]).unshift(newRecords);
        (grid as GridComponent).setProperties({ dataSource: (grid as
GridComponent).dataSource as object[] });
    }
    return <div>
        <ButtonComponent onClick={changeDatasource}>Change
Datasource</ButtonComponent>
        <GridComponent dataSource={data} height={280} ref={g => grid = g}>
            <ColumnsDirective>
                <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign="Right" />
                <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
                <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
                <ColumnDirective field='Freight' headerText='Freight'
width='150' format='C2' />
                <ColumnDirective field='ShipName' headerText='Ship Name'
width='150' />
            </ColumnsDirective>
        </GridComponent>
    </div>
    };
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', Role: 'Admin', EmployeeID: 5,
        OrderDate: new Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', Mask: '1111', ShipPostalCode: '51100', ShipCountry:
        'France', Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', Role: 'Employee', EmployeeID: 6,
        OrderDate: new Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', Mask: '2222', ShipPostalCode: '44087', ShipCountry:
        'Germany', Freight: 11.61, Verified: !1
    },
    {

```

```

    OrderID: 10250, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 4,
    OrderDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', Mask: '3333', ShipPostalCode: '05454-876',
    ShipCountry: 'Brazil', Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', Role: 'Manager', EmployeeID: 3,
    OrderDate: new Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', Mask: '4444', ShipPostalCode: '69004', ShipCountry:
    'France', Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', Role: 'Manager', EmployeeID: 4,
    OrderDate: new Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', Mask: '5555', ShipPostalCode: 'B-6000',
    ShipCountry: 'Belgium', Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 3,
    OrderDate: new Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', Mask: '6666', ShipPostalCode: '05454-876',
    ShipCountry: 'Brazil', Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', Role: 'Employee', EmployeeID: 5,
    OrderDate: new Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', Mask: '7777', ShipPostalCode: '3012', ShipCountry:
    'Switzerland', Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', Role: 'Admin', EmployeeID: 9,
    OrderDate: new Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
    ShipRegion: 'CJ', Mask: '8888', ShipPostalCode: '1204', ShipCountry:
    'Switzerland', Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', Role: 'Employee', EmployeeID: 3,
    OrderDate: new Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', Mask: '9999', ShipPostalCode: '08737-363',
    ShipCountry: 'Brazil', Freight: 13.97, Verified: !1
  },
  {

```

```

    OrderID: 10257, CustomerID: 'HILAA', Role: 'Admin', EmployeeID: 4,
    OrderDate: new Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
    'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', Mask: '1234', ShipPostalCode: '5022',
    ShipCountry: 'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', Role: 'Manager', EmployeeID: 1,
    OrderDate: new Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
    6',
    ShipRegion: 'CJ', Mask: '2345', ShipPostalCode: '8010', ShipCountry:
    'Austria', Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', Role: 'Admin', EmployeeID: 4,
    OrderDate: new Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
    ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', Mask: '3456', ShipPostalCode: '05022', ShipCountry:
    'Mexico', Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', Role: 'Admin', EmployeeID: 4,
    OrderDate: new Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
    'Mehrheimerstr. 369',
    ShipRegion: 'CJ', Mask: '4567', ShipPostalCode: '50739', ShipCountry:
    'Germany', Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', Role: 'Manager', EmployeeID: 4,
    OrderDate: new Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua da Panificadora, 12',
    ShipRegion: 'RJ', Mask: '5678', ShipPostalCode: '02389-673',
    ShipCountry: 'Brazil', Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', Role: 'Employee', EmployeeID: 8,
    OrderDate: new Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
    ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', Mask: '6789', ShipPostalCode: '87110', ShipCountry:
    'USA', Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', Role: 'Admin', EmployeeID: 5,
    OrderDate: new Date(8364186e5),

```

```

    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', Mask: '1111', ShipPostalCode: '51100', ShipCountry:
    'France', Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', Role: 'Employee', EmployeeID: 6,
    OrderDate: new Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', Mask: '2222', ShipPostalCode: '44087', ShipCountry:
    'Germany', Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 4,
    OrderDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', Mask: '3333', ShipPostalCode: '05454-876',
    ShipCountry: 'Brazil', Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', Role: 'Manager', EmployeeID: 3,
    OrderDate: new Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', Mask: '4444', ShipPostalCode: '69004', ShipCountry:
    'France', Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', Role: 'Manager', EmployeeID: 4,
    OrderDate: new Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', Mask: '5555', ShipPostalCode: 'B-6000',
    ShipCountry: 'Belgium', Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 3,
    OrderDate: new Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', Mask: '6666', ShipPostalCode: '05454-876',
    ShipCountry: 'Brazil', Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', Role: 'Employee', EmployeeID: 5,
    OrderDate: new Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', Mask: '7777', ShipPostalCode: '3012', ShipCountry:
    'Switzerland', Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', Role: 'Admin', EmployeeID: 9,
    OrderDate: new Date(8371098e5),

```

```

        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', Mask: '8888', ShipPostalCode: '1204', ShipCountry:
'Switzerland', Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', Role: 'Employee', EmployeeID: 3,
OrderDate: new Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', Mask: '9999', ShipPostalCode: '08737-363',
ShipCountry: 'Brazil', Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', Role: 'Admin', EmployeeID: 4,
OrderDate: new Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', Mask: '1234', ShipPostalCode: '5022',
ShipCountry: 'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', Role: 'Manager', EmployeeID: 1,
OrderDate: new Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', Mask: '2345', ShipPostalCode: '8010', ShipCountry:
'Austria', Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', Role: 'Admin', EmployeeID: 4,
OrderDate: new Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', Mask: '3456', ShipPostalCode: '05022', ShipCountry:
'Mexico', Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', Role: 'Admin', EmployeeID: 4,
OrderDate: new Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', Mask: '4567', ShipPostalCode: '50739', ShipCountry:
'Germany', Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', Role: 'Manager', EmployeeID: 4,
OrderDate: new Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', Mask: '5678', ShipPostalCode: '02389-673',
ShipCountry: 'Brazil', Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', Role: 'Employee', EmployeeID: 8,
OrderDate: new Date(8379738e5),

```

```
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',  
    ShipAddress: '2817 Milton Dr.',  
    ShipRegion: 'NM', Mask: '6789', ShipPostalCode: '87110', ShipCountry:  
    'USA', Freight: 48.29, Verified: !0  
  }];
```

Dynamically change the datasource or columns or both

The Grid component in Syncfusion allows dynamic modification of the data source, columns, or both . This feature is particularly valuable when you need to refresh the grid's content and structure without requiring a complete page reload.

To achieve dynamic changes, you can utilize the [changeDataSource](#) method. This method enables you to update the data source, columns, or both, based on your application's requirements. However, it is important to note that during the changing process for the data source and columns, the grid's existing actions such as sorting, filtering, grouping, aggregation, and searching will be reset. The `changeDataSource` method has two optional arguments: the first argument represents the data source, and the second argument represents the columns. The various uses of the `changeDataSource` method are explained in the following topic.

1. Change both data source and columns:

To modify both the existing columns and the data source, you need to pass the both arguments to the `changeDataSource` method. The following example demonstrates how to change both the data source and columns.

You can assign a JavaScript object array to the [dataSource](#) property to bind local data to the grid. The code below provides an example of how to create a data source for the grid.

```
`typescript  
export let data: Object[] = [  
  {  
    OrderID: 10248, CustomerID: 'VINET', Freight: 32.38,  
    ShipCity: 'Reims'  
  },  
  {  
    OrderID: 10249, CustomerID: 'TOMSP', Freight: 11.61,  
    ShipCity: 'Münster'  
  },  
  {  
    OrderID: 10250, CustomerID: 'HANAR', Freight: 61.34,  
    ShipCity: 'Rio de Janeiro'  
  }  
];  
`
```

The following code demonstrates how to create the [columns](#) for the grid, which are based on the provided grid data source.

```
`typescript
const newColumn: ColumnModel[] = [
  { field: 'OrderID', headerText: 'Order ID', textAlign: 'Right', width: 125 },
  { field: 'CustomerID', headerText: 'Customer ID', width: 125 },
];
`
```

The following code demonstrates updating the data source and columns defined above using the `changeDataSource` method.

```
`typescript
gridInstance.changeDataSource(data, newColumn);
`
```

2. Modify only the existing columns:

To modify the existing columns in a grid, you can either add or remove columns or change the entire set of columns using the `changeDataSource` method. To use this method, you should set the first parameter to null and provide the new columns as the second parameter. However, please note that if a column field is not specified in the data source, its corresponding column values will be empty. The following example illustrates how to modify existing columns.

The following code demonstrates how to add new columns with existing grid columns ('newColumn') by using `changeDataSource` method.

```
`typescript
const newColumn1: ColumnModel[] = [
  { field: 'Freight', headerText: 'Freight', textAlign: 'Right', width: 125 },
  { field: 'ShipCity', headerText: 'ShipCity', width: 125 },
];

let column: any = newColumn.push(...newColumn1);
gridInstance.changeDataSource(null, column);
`
```

3. Modify only the data source:

You can change the entire data source in the grid using the `changeDataSource` method. To use this method, you should provide the data source as the first argument, and the second argument which is optional can be used to specify new columns for the grid. If you are not specifying the columns, the grid will generate the columns automatically based on the data source. The following example demonstrates how to modify the data source.

You can assign a JavaScript object array to the `dataSource` property to bind local data to the grid. The code below provides an example of how to create a new data source for the grid.


```
`typescript
export let employeeData: Object[] = [
{
  FirstName: 'Nancy', City: 'Seattle', Region: 'WA',
  Country: 'USA'
},
{
  FirstName: 'Andrew', City: 'London', Region: null,
  Country: 'UK',
},
{
  FirstName: 'Janet', City: 'Kirkland', Region: 'WA',
  Country: 'USA'
}];
`
```

The following code demonstrates, how to use the `changeDataSource` method to bind the new **employeeData** to the grid.

```
`typescript
gridInstance.changeDataSource(employeeData);
`
```

APP.JSX

```
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, GridComponent, PageSettingsModel } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  let grid;
  let count = 0;
  const pageSettings = { pageSize: 5, pageCount: 3 };
  const newColumn = [
    { field: 'OrderID', headerText: 'Order ID', textAlign: 'Right', width: 125 },
    { field: 'CustomerID', headerText: 'Customer Name', width: 125 },
    { field: 'OrderDate', headerText: 'Order Date', width: 130, format: 'yMd', textAlign: 'Right' },
    { field: 'Freight', headerText: 'Freight', width: 120, textAlign: 'Right' },
  ];
  const onClick = () => {
    count = count + 100;
    grid.changeDataSource(data.slice(0, count + 100), newColumn);
  };
}
```

```

    }
    return <div>
      <ButtonComponent onClick={onClick}>Click Button</ButtonComponent>
      <GridComponent dataSource={data} height={315} ref={g => grid = g}
allowPaging={true} pageSettings={pageSettings}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign="Right" />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
          <ColumnDirective field='Freight' headerText='Freight'
width='150' format='C2' />
        </ColumnsDirective>
      </GridComponent>
    </div>
  };
export default App;

```

APP.TSX

```

import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, GridComponent, PageSettingsModel
} from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid: GridComponent | null;
  let count: number = 0;
  const pageSettings: PageSettingsModel = { pageSize: 5, pageCount: 3 };
  const newColumn = [
    { field: 'OrderID', headerText: 'Order ID', textAlign: 'Right',
width: 125 },
    { field: 'CustomerID', headerText: 'Customer Name', width: 125 },
    { field: 'OrderDate', headerText: 'Order Date', width: 130, format:
'yMd' },
    { field: 'Freight', headerText: 'Freight', width: 120, format:'C2' },
  ];
  const onClick = () => {
    count = count + 100;
    (grid as GridComponent).changeDataSource(data.slice(0, count + 100),
newColumn as Object[]);
  }
  return <div>
    <ButtonComponent onClick={onClick}>Click Button</ButtonComponent>
    <GridComponent dataSource={data} height={315} ref={g => grid = g}
allowPaging={true} pageSettings={pageSettings}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
        <ColumnDirective field='Freight' headerText='Freight'
width='150' format='C2' />
      </ColumnsDirective>
    </GridComponent>
  </div>

```

```
};  
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', Role: 'Admin', EmployeeID: 5,
    OrderDate: new Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', Mask: '1111', ShipPostalCode: '51100', ShipCountry:
    'France', Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', Role: 'Employee', EmployeeID: 6,
    OrderDate: new Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', Mask: '2222', ShipPostalCode: '44087', ShipCountry:
    'Germany', Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 4,
    OrderDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', Mask: '3333', ShipPostalCode: '05454-876',
    ShipCountry: 'Brazil', Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', Role: 'Manager', EmployeeID: 3,
    OrderDate: new Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', Mask: '4444', ShipPostalCode: '69004', ShipCountry:
    'France', Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', Role: 'Manager', EmployeeID: 4,
    OrderDate: new Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', Mask: '5555', ShipPostalCode: 'B-6000',
    ShipCountry: 'Belgium', Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 3,
    OrderDate: new Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', Mask: '6666', ShipPostalCode: '05454-876',
    ShipCountry: 'Brazil', Freight: 58.17, Verified: !0
  },
  {

```

```

    OrderID: 10254, CustomerID: 'CHOPS', Role: 'Employee', EmployeeID: 5,
    OrderDate: new Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', Mask: '7777', ShipPostalCode: '3012', ShipCountry:
    'Switzerland', Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', Role: 'Admin', EmployeeID: 9,
    OrderDate: new Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
    ShipRegion: 'CJ', Mask: '8888', ShipPostalCode: '1204', ShipCountry:
    'Switzerland', Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', Role: 'Employee', EmployeeID: 3,
    OrderDate: new Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', Mask: '9999', ShipPostalCode: '08737-363',
    ShipCountry: 'Brazil', Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', Role: 'Admin', EmployeeID: 4,
    OrderDate: new Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
    'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', Mask: '1234', ShipPostalCode: '5022',
    ShipCountry: 'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', Role: 'Manager', EmployeeID: 1,
    OrderDate: new Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
    6',
    ShipRegion: 'CJ', Mask: '2345', ShipPostalCode: '8010', ShipCountry:
    'Austria', Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', Role: 'Admin', EmployeeID: 4,
    OrderDate: new Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
    ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', Mask: '3456', ShipPostalCode: '05022', ShipCountry:
    'Mexico', Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', Role: 'Admin', EmployeeID: 4,
    OrderDate: new Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
    'Mehrheimerstr. 369',
    ShipRegion: 'CJ', Mask: '4567', ShipPostalCode: '50739', ShipCountry:
    'Germany', Freight: 55.09, Verified: !0
  },
  {

```

```

    OrderID: 10261, CustomerID: 'QUEDE', Role: 'Manager', EmployeeID: 4,
    OrderDate: new Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua da Panificadora, 12',
    ShipRegion: 'RJ', Mask: '5678', ShipPostalCode: '02389-673',
    ShipCountry: 'Brazil', Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', Role: 'Employee', EmployeeID: 8,
    OrderDate: new Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
    ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', Mask: '6789', ShipPostalCode: '87110', ShipCountry:
    'USA', Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', Role: 'Admin', EmployeeID: 5,
    OrderDate: new Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', Mask: '1111', ShipPostalCode: '51100', ShipCountry:
    'France', Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', Role: 'Employee', EmployeeID: 6,
    OrderDate: new Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', Mask: '2222', ShipPostalCode: '44087', ShipCountry:
    'Germany', Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 4,
    OrderDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', Mask: '3333', ShipPostalCode: '05454-876',
    ShipCountry: 'Brazil', Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', Role: 'Manager', EmployeeID: 3,
    OrderDate: new Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', Mask: '4444', ShipPostalCode: '69004', ShipCountry:
    'France', Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', Role: 'Manager', EmployeeID: 4,
    OrderDate: new Date(8368506e5),

```

```

        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', Mask: '5555', ShipPostalCode: 'B-6000',
        ShipCountry: 'Belgium', Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 3,
        OrderDate: new Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', Mask: '6666', ShipPostalCode: '05454-876',
        ShipCountry: 'Brazil', Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', Role: 'Employee', EmployeeID: 5,
        OrderDate: new Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', Mask: '7777', ShipPostalCode: '3012', ShipCountry:
        'Switzerland', Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', Role: 'Admin', EmployeeID: 9,
        OrderDate: new Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', Mask: '8888', ShipPostalCode: '1204', ShipCountry:
        'Switzerland', Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', Role: 'Employee', EmployeeID: 3,
        OrderDate: new Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', Mask: '9999', ShipPostalCode: '08737-363',
        ShipCountry: 'Brazil', Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', Role: 'Admin', EmployeeID: 4,
        OrderDate: new Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', Mask: '1234', ShipPostalCode: '5022',
        ShipCountry: 'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', Role: 'Manager', EmployeeID: 1,
        OrderDate: new Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', Mask: '2345', ShipPostalCode: '8010', ShipCountry:
        'Austria', Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', Role: 'Admin', EmployeeID: 4,
        OrderDate: new Date(8376282e5),

```

```

        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', Mask: '3456', ShipPostalCode: '05022', ShipCountry:
        'Mexico', Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', Role: 'Admin', EmployeeID: 4,
        OrderDate: new Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', Mask: '4567', ShipPostalCode: '50739', ShipCountry:
        'Germany', Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', Role: 'Manager', EmployeeID: 4,
        OrderDate: new Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', Mask: '5678', ShipPostalCode: '02389-673',
        ShipCountry: 'Brazil', Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', Role: 'Employee', EmployeeID: 8,
        OrderDate: new Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', Mask: '6789', ShipPostalCode: '87110', ShipCountry:
        'USA', Freight: 48.29, Verified: !0
    }
    ]];

```

* The Grid state persistence feature does not support the `changeDataSource` method.

* In this document, the above sample uses the local data for `changeDataSource` method. For those using a remote data source, refer to the [FlexibleData](#) resource.

Adaptive in React Grid component

The Grid user interface (UI) was redesigned to provide an optimal viewing experience and improve usability on small screens. This interface will render the filter, sort, column chooser, column menu (supports only when the `rowRenderingMode` as Horizontal) and edit dialogs adaptively and have an option to render the grid row elements in the vertical direction.

Render adaptive dialogs

The Syncfusion React Grid offers a valuable feature for rendering adaptive dialogs, specifically designed to enhance the user experience on smaller screens. This feature proves especially useful for optimizing the interface on devices with limited screen real estate. The functionality is achieved by enabling the [enableAdaptiveUI](#) property, allowing the grid to render filter, sort, and edit dialogs in full-screen mode.

The following sample demonstrates how to enable and utilize adaptive dialogs in the Syncfusion React Grid:

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject } from
 '@syncfusion/ej2-react-grids';

```

```

import { Filter, Sort, Edit, Toolbar, Page } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    const editSettings = { allowEditing: true, allowAdding: true,
allowDeleting: true, mode: 'Dialog' };
    const toolbarOptions = ['Add', 'Edit', 'Delete', 'Update', 'Cancel',
'Search'];
    const validationRule = { required: true };
    const orderidRules = { required: true, number: true };
    const filterOptions = { type: 'Excel' };
    let grid;
    const load = () => {
        grid = document.getElementById('adaptivebrowser').ej2_instances[0];
        grid.adaptiveDlgTarget = document.getElementsByClassName('e-mobile-
content')[0];
    };
    let menuFilter = { type: 'Menu' };
    let checkboxFilter = { type: 'CheckBox' };
    return (<div className="e-adaptive-demo e-bigger">
        <div className="e-mobile-layout">
            <div className="e-mobile-content">
                <GridComponent id="adaptivebrowser" dataSource={data}
height='100%' ref={g => grid = g} enableAdaptiveUI={true}
allowFiltering={true} allowSorting={true} allowPaging={true}
filterSettings={filterOptions} toolbar={toolbarOptions}
editSettings={editSettings} load={load}>
                    <ColumnsDirective>
                        <ColumnDirective field='SNO' headerText='S NO'
width='150' isPrimaryKey={true}
validationRules={orderidRules}></ColumnDirective>
                        <ColumnDirective field='Model' headerText='Model
Name' width='200' editType='dropdownedit' validationRules={validationRule}/>
                        <ColumnDirective field='Developer'
headerText='Developer' width='200' filter={menuFilter}
validationRules={validationRule}></ColumnDirective>
                        <ColumnDirective field='ReleaseDate'
headerText='Released Date' editType='datepickeredit' type='date'
format='yMMM' width='200'></ColumnDirective>
                        <ColumnDirective field='AndroidVersion'
headerText='Android Version' width='200' filter={checkboxFilter}
validationRules={validationRule}></ColumnDirective>
                    </ColumnsDirective>
                    <Inject services={[Filter, Sort, Edit, Toolbar,
Page]}/>
                </GridComponent>
            </div>
        </div>
        <br></br>
        <div className="datalink">Source:
            <a
href="https://en.wikipedia.org/wiki/List_of_Android_smartphones"
target="_blank">Wikipedia: List of Android smartphones</a>
        </div>
    </div>);
}

```



```
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Inject,
EditSettingsModel, ToolbarItems, FilterSettingsModel } from '@syncfusion/ej2-
react-grids';
import { Filter, Sort, Edit, Toolbar, Page } from '@syncfusion/ej2-react-
grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const editSettings: EditSettingsModel = { allowEditing: true, allowAdding:
true, allowDeleting: true, mode: 'Dialog' };
  const toolbarOptions: ToolbarItems[] = ['Add', 'Edit', 'Delete', 'Update',
'Cancel', 'Search'];
  const validationRule: Object = { required: true };
  const orderidRules: Object = { required: true, number: true };
  const filterOptions: FilterSettingsModel = { type: 'Excel' };
  let grid: GridComponent;
  const load = (): void => {
    grid = (document.getElementById('adaptivebrowser') as
HTMLFormElement).ej2_instances[0];
    grid.adaptiveDlgTarget = document.getElementsByClassName('e-mobile-
content')[0] as HTMLElement;
  }
  let menuFilter = { type: 'Menu' };
  let checkboxFilter = { type: 'CheckBox' };
  return (<div className="e-adaptive-demo e-bigger">
    <div className="e-mobile-layout">
      <div className="e-mobile-content">
        <GridComponent id="adaptivebrowser" dataSource={data}
height='100%' ref={g => grid = g} enableAdaptiveUI={true}
allowFiltering={true} allowSorting={true} allowPaging={true}
filterSettings={filterOptions} toolbar={toolbarOptions}
editSettings={editSettings} load={load}>
          <ColumnsDirective>
            <ColumnDirective field='SNO' headerText='S NO'
width='150' isPrimaryKey={true}
validationRules={orderidRules}></ColumnDirective>
            <ColumnDirective field='Model' headerText='Model
Name' width='200' editType='dropdownedit' validationRules={validationRule} />
            <ColumnDirective field='Developer'
headerText='Developer' width='200' filter={menuFilter}
validationRules={validationRule}></ColumnDirective>
            <ColumnDirective field='ReleaseDate'
headerText='Released Date' editType='datepickeredit' type='date'
format='yMMM' width='200'></ColumnDirective>
            <ColumnDirective field='AndroidVersion'
headerText='Android Version' width='200' filter={checkboxFilter}
validationRules={validationRule}></ColumnDirective>
          </ColumnsDirective>
          <Inject services={[Filter, Sort, Edit, Toolbar, Page]}
/>
        </GridComponent>
      </div>
    </div>
  </div>
```

```

        </div>
        <br></br>
        <div className="datalink">Source:
          <a
href="https://en.wikipedia.org/wiki/List_of_Android_smartphones"
          target="_blank">Wikipedia: List of Android
smartphones</a>
        </div>
      </div>
    )
  }
export default App;

```

DATASOURCE.JSX

```

export let data = [
  { "Model": "Samsung Galaxy", "Developer": "Samsung Electronics",
"ReleaseDate": new Date("2009-03-31T18:30:00.000Z"), "AndroidVersion":
"Android 1.5 \"Cupcake\"", "SNO": 1 },
  { "Model": "Samsung Galaxy A01", "Developer": "Samsung Electronics",
"ReleaseDate": new Date("2019-12-31T18:30:00.000Z"), "AndroidVersion":
"Android 10", "SNO": 2 },
  { "Model": "Samsung Galaxy A01 Core", "Developer": "Samsung Electronics",
"ReleaseDate": new Date("2020-07-31T18:30:00.000Z"), "AndroidVersion":
"Android 10", "SNO": 3 },
  { "Model": "Samsung Galaxy A02", "Developer": "Samsung Electronics",
"ReleaseDate": new Date("2020-12-31T18:30:00.000Z"), "AndroidVersion":
"Android 10", "SNO": 4 },
  { "Model": "Samsung Galaxy A2 Core", "Developer": "Samsung Electronics",
"ReleaseDate": new Date("2019-03-31T18:30:00.000Z"), "AndroidVersion":
"Android 8.0 \"Oreo\"", "SNO": 5 },
  { "Model": "Samsung Galaxy A02s/M02s", "Developer": "Samsung
Electronics", "ReleaseDate": new Date("2020-12-31T18:30:00.000Z"),
"AndroidVersion": "Android 10", "SNO": 6 },
  { "Model": "Samsung Galaxy A3 (2016)/A5 (2016)/A7 (2016)", "Developer":
"Samsung Electronics", "ReleaseDate": new Date("2015-11-30T18:30:00.000Z"),
"AndroidVersion": "Android 5.0 \"Lollipop\"", "SNO": 7 },
  { "Model": "Samsung Galaxy A3 (2017)/A5 (2017)/A7 (2017)", "Developer":
"Samsung Electronics", "ReleaseDate": new Date("2016-12-31T18:30:00.000Z"),
"AndroidVersion": "Android 6.0 \"Marshmallow\"", "SNO": 8 },
  { "Model": "Samsung Galaxy A3/Duos", "Developer": "Samsung Electronics",
"ReleaseDate": new Date("2014-11-30T18:30:00.000Z"), "AndroidVersion":
"Android 4.4 \"KitKat\"", "SNO": 9 },
  { "Model": "Samsung Galaxy A5", "Developer": "Samsung Electronics",
"ReleaseDate": new Date("2014-11-30T18:30:00.000Z"), "AndroidVersion":
"Android 4.4 \"KitKat\"", "SNO": 10 },
  { "Model": "Samsung Galaxy A5 Duos", "Developer": "Samsung Electronics",
"ReleaseDate": new Date("2014-10-31T18:30:00.000Z"), "AndroidVersion":
"Android 4.4 \"KitKat\"", "SNO": 11 },
  { "Model": "Samsung Galaxy A6/+", "Developer": "Samsung Electronics",
"ReleaseDate": new Date("2018-04-30T18:30:00.000Z"), "AndroidVersion":
"Android 8.0 \"Oreo\"", "SNO": 12 },
  { "Model": "Samsung Galaxy A6s", "Developer": "Samsung Electronics",
"ReleaseDate": new Date("2018-10-31T18:30:00.000Z"), "AndroidVersion":
"Android 8.0 \"Oreo\"", "SNO": 13 },

```

```

    { "Model": "Samsung Galaxy A7 (2018)", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2018-09-30T18:30:00.000Z"), "AndroidVersion": "Android 8.0 \"Oreo\"", "SNO": 14 },
    { "Model": "Samsung Galaxy A7/Duos", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2015-01-31T18:30:00.000Z"), "AndroidVersion": "Android 4.4 \"KitKat\"", "SNO": 15 },
    { "Model": "Samsung Galaxy A8 (2016)", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2016-09-30T18:30:00.000Z"), "AndroidVersion": "Android 6.0 \"Marshmallow\"", "SNO": 16 },
    { "Model": "Samsung Galaxy A8 (2018)/+", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2017-12-31T18:30:00.000Z"), "AndroidVersion": "Android 7.0 \"Nougat\"", "SNO": 17 },
    { "Model": "Samsung Galaxy A8 Star", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2018-05-31T18:30:00.000Z"), "AndroidVersion": "Android 8.0 \"Oreo\"", "SNO": 18 },
    { "Model": "Samsung Galaxy A8/Duos", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2015-07-31T18:30:00.000Z"), "AndroidVersion": "Android 5.0 \"Lollipop\"", "SNO": 19 },
    { "Model": "Samsung Galaxy A8s", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2018-11-30T18:30:00.000Z"), "AndroidVersion": "Android 9.0 \"Pie\"", "SNO": 20 },
    { "Model": "Samsung Galaxy A9 (2016)", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2015-12-31T18:30:00.000Z"), "AndroidVersion": "Android 5.0 \"Lollipop\"", "SNO": 21 },
    { "Model": "Samsung Galaxy A9 (2018)", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2018-10-31T18:30:00.000Z"), "AndroidVersion": "Android 8.0 \"Oreo\"", "SNO": 22 },
    { "Model": "Samsung Galaxy A9 Pro (2016)", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2016-04-30T18:30:00.000Z"), "AndroidVersion": "Android 6.0 \"Marshmallow\"", "SNO": 23 },
    { "Model": "Samsung Galaxy A10", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2019-02-28T18:30:00.000Z"), "AndroidVersion": "Android 9.0 \"Pie\"", "SNO": 24 },
    { "Model": "Samsung Galaxy A10e", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2019-07-31T18:30:00.000Z"), "AndroidVersion": "Android 9.0 \"Pie\"", "SNO": 25 },
    { "Model": "Samsung Galaxy A10s", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2019-07-31T18:30:00.000Z"), "AndroidVersion": "Android 9.0 \"Pie\"", "SNO": 26 },
    { "Model": "Samsung Galaxy A11", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2020-04-30T18:30:00.000Z"), "AndroidVersion": "Android 10", "SNO": 27 },
    { "Model": "Samsung Galaxy A12", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2020-11-30T18:30:00.000Z"), "AndroidVersion": "Android 10", "SNO": 28 },
    { "Model": "Samsung Galaxy A20/A40", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2019-03-31T18:30:00.000Z"), "AndroidVersion": "Android 9.0 \"Pie\"", "SNO": 29 },
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DATASOURCE.TSX

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Date("2019-04-30T18:30:00.000Z"), "AndroidVersion": "Android 9.0 \"Pie\"",
"SNO": 1126 },
{ "Model": "Redmi K20/Pro", "Developer": "Xiaomi", "ReleaseDate": new
Date("2019-05-31T18:30:00.000Z"), "AndroidVersion": "Android 9.0 \"Pie\"",
"SNO": 1127 },
{ "Model": "Redmi Note 8/Pro", "Developer": "Xiaomi", "ReleaseDate": new
Date("2019-08-31T18:30:00.000Z"), "AndroidVersion": "Android 9.0 \"Pie\"",
"SNO": 1128 },
{ "Model": "Redmi 8A", "Developer": "Xiaomi", "ReleaseDate": new
Date("2019-08-31T18:30:00.000Z"), "AndroidVersion": "Android 9.0 \"Pie\"",
"SNO": 1129 },
{ "Model": "Redmi 8", "Developer": "Xiaomi", "ReleaseDate": new
Date("2019-09-30T18:30:00.000Z"), "AndroidVersion": "Android 9.0 \"Pie\"",
"SNO": 1130 },
{ "Model": "Redmi Note 8T", "Developer": "Xiaomi", "ReleaseDate": new
Date("2019-10-31T18:30:00.000Z"), "AndroidVersion": "Android 9.0 \"Pie\"",
"SNO": 1131 },
{ "Model": "Redmi K30/5G", "Developer": "Xiaomi", "ReleaseDate": new
Date("2019-11-30T18:30:00.000Z"), "AndroidVersion": "Android 10", "SNO": 1132
},
{ "Model": "Redmi 8A Dual", "Developer": "Xiaomi", "ReleaseDate": new
Date("2020-01-31T18:30:00.000Z"), "AndroidVersion": "Android 9.0 \"Pie\"",
"SNO": 1133 },
{ "Model": "Redmi Note 9 Pro (India)/Pro Max/9S", "Developer": "Xiaomi",
"ReleaseDate": new Date("2020-02-29T18:30:00.000Z"), "AndroidVersion":
"Android 10", "SNO": 1134 },
{ "Model": "Redmi K30 Pro/Pro Zoom", "Developer": "Xiaomi",
"ReleaseDate": new Date("2020-02-29T18:30:00.000Z"), "AndroidVersion":
"Android 10", "SNO": 1135 },
{ "Model": "Redmi Note 9/Pro (Global)", "Developer": "Xiaomi",
"ReleaseDate": new Date("2020-04-30T18:30:00.000Z"), "AndroidVersion":
"Android 10", "SNO": 1136 },
{ "Model": "Redmi 10X/Pro", "Developer": "Xiaomi", "ReleaseDate": new
Date("2020-05-31T18:30:00.000Z"), "AndroidVersion": "Android 10", "SNO": 1137
},
{ "Model": "Redmi 9", "Developer": "Xiaomi", "ReleaseDate": new
Date("2020-05-31T18:30:00.000Z"), "AndroidVersion": "Android 10", "SNO": 1138
},
{ "Model": "Redmi 9A", "Developer": "Xiaomi", "ReleaseDate": new
Date("2020-06-30T18:30:00.000Z"), "AndroidVersion": "Android 10", "SNO": 1139
},
{ "Model": "Redmi 9C", "Developer": "Xiaomi", "ReleaseDate": new
Date("2020-07-31T18:30:00.000Z"), "AndroidVersion": "Android 10", "SNO": 1140
},
{ "Model": "Redmi 9 Prime", "Developer": "Xiaomi", "ReleaseDate": new
Date("2020-07-31T18:30:00.000Z"), "AndroidVersion": "Android 10", "SNO": 1141
},
{ "Model": "Redmi K30 Ultra", "Developer": "Xiaomi", "ReleaseDate": new
Date("2020-07-31T18:30:00.000Z"), "AndroidVersion": "Android 10", "SNO": 1142
},
```

```

    { "Model": "Redmi K30S", "Developer": "Xiaomi", "ReleaseDate": new
Date("2020-10-31T18:30:00.000Z"), "AndroidVersion": "Android 10", "SNO": 1143
},
    { "Model": "Redmi Note 9 4G/5G/Pro 5G", "Developer": "Xiaomi",
"ReleaseDate": new Date("2020-10-31T18:30:00.000Z"), "AndroidVersion":
"Android 10", "SNO": 1144 },
    { "Model": "Redmi 9 Power", "Developer": "Xiaomi", "ReleaseDate": new
Date("2020-11-30T18:30:00.000Z"), "AndroidVersion": "Android 10", "SNO": 1145
},
    { "Model": "Redmi 9T/Note 9T", "Developer": "Xiaomi", "ReleaseDate": new
Date("2020-12-31T18:30:00.000Z"), "AndroidVersion": "Android 10", "SNO": 1146
},
    { "Model": "Redmi K40/Pro/Pro+", "Developer": "Xiaomi", "ReleaseDate":
new Date("2021-02-28T18:30:00.000Z"), "AndroidVersion": "Android 11", "SNO":
1147 },
    { "Model": "Redmi Note 10/Pro/Pro Max", "Developer": "Xiaomi",
"ReleaseDate": new Date("2021-02-28T18:30:00.000Z"), "AndroidVersion":
"Android 11", "SNO": 1148 },
    { "Model": "Redmi Note 10S/5G", "Developer": "Xiaomi", "ReleaseDate": new
Date("2021-03-31T18:30:00.000Z"), "AndroidVersion": "Android 11", "SNO": 1149
}
];

```

Vertical row rendering

The Syncfusion React Grid introduces the feature of vertical row rendering, allowing you to display row elements in a vertical order. This is particularly useful for scenarios where a vertical presentation enhances data visibility. This is achieved by setting the [rowRenderingMode](#) property to the value **Vertical**.

The default row rendering mode is **Horizontal**.

The following sample demonstrates how to dynamically change the row rendering mode between **Vertical** and **Horizontal** based on a DropDownList selection:

APP.JSX

```

import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, } from
 '@syncfusion/ej2-react-grids';
import { AggregateColumnsDirective, AggregateColumnDirective,
AggregateDirective, AggregatesDirective } from '@syncfusion/ej2-react-grids';
import { Filter, Sort, Edit, Toolbar, Aggregate, Page } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    const editSettings = { allowEditing: true, allowAdding: true,
allowDeleting: true, mode: 'Dialog' };
    const toolbarOptions = ['Add', 'Edit', 'Delete', 'Update', 'Cancel',
'Search'];
    const validationRule = { required: true };
    const orderidRules = { required: true, number: true };
    const filterOptions = { type: 'Excel' };
    const renderingMode = 'Vertical';
    const dropDownData = [
        { text: 'Vertical', value: 'Vertical' },
        { text: 'Horizontal', value: 'Horizontal' },
    ],

```

```

];
let grid;
const created = () => {
  grid.adaptiveDlgTarget = document.getElementsByClassName('e-mobile-
content')[0];
}
const changeAlignment = (args) => {
  grid.rowRenderingMode = args.value
}
const footerSum = (props) => {
  return (<span>Total Models: {props.Count}</span>);
};
let menuFilter = { type: 'Menu' };
let checkboxFilter = { type: 'CheckBox' };
return (<div>
  <div>
    <label style={{ padding: "30px 17px 0 0" }}> Select row rendering mode
:</label>
    <DropDownListComponent index={0} width={150} dataSource={dropDownData}
change={changeAlignment}></DropDownListComponent>
  </div>
  <div className="e-adaptive-demo e-bigger">
    <div className="e-mobile-layout">
      <div className="e-mobile-content">
        <GridComponent id="adaptivebrowser" dataSource={data} height='100%'
ref={g => grid = g} enableAdaptiveUI={true} rowRenderingMode={renderingMode}
allowFiltering={true} allowSorting={true} allowPaging={true}
filterSettings={filterOptions} toolbar={toolbarOptions}
editSettings={editSettings} created={created}>
          <ColumnsDirective>
            <ColumnDirective field='SNO' headerText='S NO' width='150'
isPrimaryKey={true} validationRules={orderidRules}></ColumnDirective>
            <ColumnDirective field='Model' headerText='Model Name'
width='200' editType='dropdownedit' validationRules={validationRule} />
            <ColumnDirective field='Developer' headerText='Developer'
width='200' filter={menuFilter}
validationRules={validationRule}></ColumnDirective>
            <ColumnDirective field='ReleaseDate' headerText='Released Date'
editType='datepickeredit' type='date' format='yMMM'
width='200'></ColumnDirective>
            <ColumnDirective field='AndroidVersion' headerText='Android
Version' width='200' filter={checkboxFilter}
validationRules={validationRule}></ColumnDirective>
          </ColumnsDirective>
          <Inject services={[Filter, Sort, Edit, Toolbar, Aggregate, Page]}
/>
          <AggregatesDirective>
            <AggregateDirective>
              <AggregateColumnsDirective>
                <AggregateColumnDirective field='Model' type='Count'
footerTemplate={footerSum}> </AggregateColumnDirective>
              </AggregateColumnsDirective>
            </AggregateDirective>
          </AggregatesDirective>
        </GridComponent>
      </div>
    </div>
  </div>

```

```

        <br></br>
        <div className="datalink">Source:
          <a href="https://en.wikipedia.org/wiki/List_of_Android_smartphones"
            target="_blank">Wikipedia: List of Android smartphones</a>
        </div>
      </div></div>
    )
  }
}
export default App;

```

APP.TSX

```

import { DropDownListComponent, ChangeEventArgs } from '@syncfusion/ej2-react-dropdowns';
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, FilterSettingsModel, EditSettingsModel, ToolbarItems, RowRenderingDirection } from '@syncfusion/ej2-react-grids';
import { AggregateColumnsDirective, AggregateColumnDirective, AggregateDirective, AggregatesDirective } from '@syncfusion/ej2-react-grids';
import { Filter, Sort, Edit, Toolbar, Aggregate, Page } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  const editSettings: EditSettingsModel = { allowEditing: true, allowAdding: true, allowDeleting: true, mode: 'Dialog' };
  const toolbarOptions: ToolbarItems[] = ['Add', 'Edit', 'Delete', 'Update', 'Cancel', 'Search'];
  const validationRule: Object = { required: true };
  const orderidRules: Object = { required: true, number: true };
  const filterOptions: FilterSettingsModel = { type: 'Excel' };
  const renderingMode: string = 'Vertical';
  const dropDownData: Object[] = [
    { text: 'Vertical', value: 'Vertical' },
    { text: 'Horizontal', value: 'Horizontal' },
  ];
  let grid: GridComponent | null;
  const created = (): void => {
    (grid as GridComponent).adaptiveDlgTarget = document.getElementsByClassName('e-mobile-content')[0] as HTMLElement;
  }
  const changeAlignment = (args: ChangeEventArgs) => {
    (grid as GridComponent).rowRenderingMode = (args.value as RowRenderingDirection)
  }
  const footerSum = (props) => {
    return (<span>Total Models: {props.Count}</span>);
  };
  let menuFilter = { type: 'Menu' };
  let checkboxFilter = { type: 'CheckBox' };
  return (<div>
    <div>
      <label style={{ padding: "30px 17px 0 0" }}> Select row rendering mode :</label>
      <DropDownListComponent index={0} width={150} dataSource={dropDownData} change={changeAlignment}></DropDownListComponent>
    </div>
  </div>

```

```

    </div>
    <div className="e-adaptive-demo e-bigger">
      <div className="e-mobile-layout">
        <div className="e-mobile-content">
          <GridComponent id="adaptivebrowser" dataSource={data} height='100%'
            ref={g => grid = g} enableAdaptiveUI={true} rowRenderingMode={renderingMode}
            allowFiltering={true} allowSorting={true} allowPaging={true}
            filterSettings={filterOptions} toolbar={toolbarOptions}
            editSettings={editSettings} created={created}>
            <ColumnsDirective>
              <ColumnDirective field='SNO' headerText='S NO' width='150'
                isPrimaryKey={true} validationRules={orderidRules}></ColumnDirective>
              <ColumnDirective field='Model' headerText='Model Name'
                width='200' editType='dropdownedit' validationRules={validationRule} />
              <ColumnDirective field='Developer' headerText='Developer'
                width='200' filter={menuFilter}
                validationRules={validationRule}></ColumnDirective>
              <ColumnDirective field='ReleaseDate' headerText='Released Date'
                editType='datepickeredit' type='date' format='yMMM'
                width='200'></ColumnDirective>
              <ColumnDirective field='AndroidVersion' headerText='Android
                Version' width='200' filter={checkboxFilter}
                validationRules={validationRule}></ColumnDirective>
            </ColumnsDirective>
            <Inject services={[Filter, Sort, Edit, Toolbar, Aggregate, Page]}
          />

          <AggregatesDirective>
            <AggregateDirective>
              <AggregateColumnsDirective>
                <AggregateColumnDirective field='Model' type='Count'
                  footerTemplate={footerSum}> </AggregateColumnDirective>
              </AggregateColumnsDirective>
            </AggregateDirective>
          </AggregatesDirective>
        </GridComponent>
      </div>
    </div>
    <br></br>
    <div className="datalink">Source:
      <a href="https://en.wikipedia.org/wiki/List_of_Android_smartphones"
        target="_blank">Wikipedia: List of Android smartphones</a>
    </div>
  </div></div>
)
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
  { "Model": "Samsung Galaxy", "Developer": "Samsung Electronics",
    "ReleaseDate": new Date("2009-03-31T18:30:00.000Z"), "AndroidVersion":
    "Android 1.5 \"Cupcake\"", "SNO": 1 },
  { "Model": "Samsung Galaxy A01", "Developer": "Samsung Electronics",
    "ReleaseDate": new Date("2019-12-31T18:30:00.000Z"), "AndroidVersion":
    "Android 10", "SNO": 2 },

```

```

    { "Model": "Samsung Galaxy A01 Core", "Developer": "Samsung Electronics",
      "ReleaseDate": new Date("2020-07-31T18:30:00.000Z"), "AndroidVersion":
      "Android 10", "SNO": 3 },
    { "Model": "Samsung Galaxy A02", "Developer": "Samsung Electronics",
      "ReleaseDate": new Date("2020-12-31T18:30:00.000Z"), "AndroidVersion":
      "Android 10", "SNO": 4 },
    { "Model": "Samsung Galaxy A2 Core", "Developer": "Samsung Electronics",
      "ReleaseDate": new Date("2019-03-31T18:30:00.000Z"), "AndroidVersion":
      "Android 8.0 \"Oreo\"", "SNO": 5 },
    { "Model": "Samsung Galaxy A02s/M02s", "Developer": "Samsung
      Electronics", "ReleaseDate": new Date("2020-12-31T18:30:00.000Z"),
      "AndroidVersion": "Android 10", "SNO": 6 },
    { "Model": "Samsung Galaxy A3 (2016)/A5 (2016)/A7 (2016)", "Developer":
      "Samsung Electronics", "ReleaseDate": new Date("2015-11-30T18:30:00.000Z"),
      "AndroidVersion": "Android 5.0 \"Lollipop\"", "SNO": 7 },
    { "Model": "Samsung Galaxy A3 (2017)/A5 (2017)/A7 (2017)", "Developer":
      "Samsung Electronics", "ReleaseDate": new Date("2016-12-31T18:30:00.000Z"),
      "AndroidVersion": "Android 6.0 \"Marshmallow\"", "SNO": 8 },
    { "Model": "Samsung Galaxy A3/Duos", "Developer": "Samsung Electronics",
      "ReleaseDate": new Date("2014-11-30T18:30:00.000Z"), "AndroidVersion":
      "Android 4.4 \"KitKat\"", "SNO": 9 },
    { "Model": "Samsung Galaxy A5", "Developer": "Samsung Electronics",
      "ReleaseDate": new Date("2014-11-30T18:30:00.000Z"), "AndroidVersion":
      "Android 4.4 \"KitKat\"", "SNO": 10 },
    { "Model": "Samsung Galaxy A5 Duos", "Developer": "Samsung Electronics",
      "ReleaseDate": new Date("2014-10-31T18:30:00.000Z"), "AndroidVersion":
      "Android 4.4 \"KitKat\"", "SNO": 11 },
    { "Model": "Samsung Galaxy A6/+", "Developer": "Samsung Electronics",
      "ReleaseDate": new Date("2018-04-30T18:30:00.000Z"), "AndroidVersion":
      "Android 8.0 \"Oreo\"", "SNO": 12 },
    { "Model": "Samsung Galaxy A6s", "Developer": "Samsung Electronics",
      "ReleaseDate": new Date("2018-10-31T18:30:00.000Z"), "AndroidVersion":
      "Android 8.0 \"Oreo\"", "SNO": 13 },
    { "Model": "Samsung Galaxy A7 (2018)", "Developer": "Samsung
      Electronics", "ReleaseDate": new Date("2018-09-30T18:30:00.000Z"),
      "AndroidVersion": "Android 8.0 \"Oreo\"", "SNO": 14 },
    { "Model": "Samsung Galaxy A7/Duos", "Developer": "Samsung Electronics",
      "ReleaseDate": new Date("2015-01-31T18:30:00.000Z"), "AndroidVersion":
      "Android 4.4 \"KitKat\"", "SNO": 15 },
    { "Model": "Samsung Galaxy A8 (2016)", "Developer": "Samsung
      Electronics", "ReleaseDate": new Date("2016-09-30T18:30:00.000Z"),
      "AndroidVersion": "Android 6.0 \"Marshmallow\"", "SNO": 16 },
    { "Model": "Samsung Galaxy A8 (2018)/+", "Developer": "Samsung
      Electronics", "ReleaseDate": new Date("2017-12-31T18:30:00.000Z"),
      "AndroidVersion": "Android 7.0 \"Nougat\"", "SNO": 17 },
    { "Model": "Samsung Galaxy A8 Star", "Developer": "Samsung Electronics",
      "ReleaseDate": new Date("2018-05-31T18:30:00.000Z"), "AndroidVersion":
      "Android 8.0 \"Oreo\"", "SNO": 18 },
    { "Model": "Samsung Galaxy A8/Duos", "Developer": "Samsung Electronics",
      "ReleaseDate": new Date("2015-07-31T18:30:00.000Z"), "AndroidVersion":
      "Android 5.0 \"Lollipop\"", "SNO": 19 },
    { "Model": "Samsung Galaxy A8s", "Developer": "Samsung Electronics",
      "ReleaseDate": new Date("2018-11-30T18:30:00.000Z"), "AndroidVersion":
      "Android 9.0 \"Pie\"", "SNO": 20 },
    { "Model": "Samsung Galaxy A9 (2016)", "Developer": "Samsung
      Electronics", "ReleaseDate": new Date("2015-12-31T18:30:00.000Z"),
      "AndroidVersion": "Android 5.0 \"Lollipop\"", "SNO": 21 },

```

```

    { "Model": "Samsung Galaxy A9 (2018)", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2018-10-31T18:30:00.000Z"), "AndroidVersion": "Android 8.0 \"Oreo\"", "SNO": 22 },
    { "Model": "Samsung Galaxy A9 Pro (2016)", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2016-04-30T18:30:00.000Z"), "AndroidVersion": "Android 6.0 \"Marshmallow\"", "SNO": 23 },
    { "Model": "Samsung Galaxy A10", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2019-02-28T18:30:00.000Z"), "AndroidVersion": "Android 9.0 \"Pie\"", "SNO": 24 },
    { "Model": "Samsung Galaxy A10e", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2019-07-31T18:30:00.000Z"), "AndroidVersion": "Android 9.0 \"Pie\"", "SNO": 25 },
    { "Model": "Samsung Galaxy A10s", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2019-07-31T18:30:00.000Z"), "AndroidVersion": "Android 9.0 \"Pie\"", "SNO": 26 },
    { "Model": "Samsung Galaxy A11", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2020-04-30T18:30:00.000Z"), "AndroidVersion": "Android 10", "SNO": 27 },
    { "Model": "Samsung Galaxy A12", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2020-11-30T18:30:00.000Z"), "AndroidVersion": "Android 10", "SNO": 28 },
    { "Model": "Samsung Galaxy A20/A40", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2019-03-31T18:30:00.000Z"), "AndroidVersion": "Android 9.0 \"Pie\"", "SNO": 29 },
    { "Model": "Samsung Galaxy A20e", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2019-04-30T18:30:00.000Z"), "AndroidVersion": "Android 9.0 \"Pie\"", "SNO": 30 },
    { "Model": "Samsung Galaxy A20s", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2019-09-30T18:30:00.000Z"), "AndroidVersion": "Android 9.0 \"Pie\"", "SNO": 31 },
    { "Model": "Samsung Galaxy A21", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2020-05-31T18:30:00.000Z"), "AndroidVersion": "Android 10", "SNO": 32 },
    { "Model": "Samsung Galaxy A21s", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2020-06-30T18:30:00.000Z"), "AndroidVersion": "Android 10", "SNO": 33 },
    { "Model": "Samsung Galaxy A30", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2019-02-28T18:30:00.000Z"), "AndroidVersion": "Android 9.0 \"Pie\"", "SNO": 34 },
    { "Model": "Samsung Galaxy A30s/A50s", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2019-08-31T18:30:00.000Z"), "AndroidVersion": "Android 9.0 \"Pie\"", "SNO": 35 },
    { "Model": "Samsung Galaxy A31", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2020-03-31T18:30:00.000Z"), "AndroidVersion": "Android 10", "SNO": 36 },
    { "Model": "Samsung Galaxy A32", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2021-02-28T18:30:00.000Z"), "AndroidVersion": "Android 11", "SNO": 37 },
    { "Model": "Samsung Galaxy A32 5G", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2020-12-31T18:30:00.000Z"), "AndroidVersion": "Android 11", "SNO": 38 },
    { "Model": "Samsung Galaxy A41", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2020-04-30T18:30:00.000Z"), "AndroidVersion": "Android 10", "SNO": 39 },
    { "Model": "Samsung Galaxy A42 5G", "Developer": "Samsung Electronics", "ReleaseDate": new Date("2020-08-31T18:30:00.000Z"), "AndroidVersion": "Android 10", "SNO": 40 },

```



```

    { "Model": "Samsung Galaxy A50", "Developer": "Samsung Electronics",
      "ReleaseDate": new Date("2019-02-28T18:30:00.000Z"), "AndroidVersion":
      "Android 9.0 \"Pie\"", "SNO": 41 },
    { "Model": "Samsung Galaxy A51 5G UW", "Developer": "Samsung
      Electronics", "ReleaseDate": new Date("2020-07-31T18:30:00.000Z"),
      "AndroidVersion": "Android 10", "SNO": 42 },
    { "Model": "Samsung Galaxy A51 5G/A71 5G", "Developer": "Samsung
      Electronics", "ReleaseDate": new Date("2020-05-31T18:30:00.000Z"),
      "AndroidVersion": "Android 10", "SNO": 43 },
    { "Model": "Samsung Galaxy A51/A71", "Developer": "Samsung Electronics",
      "ReleaseDate": new Date("2019-11-30T18:30:00.000Z"), "AndroidVersion":
      "Android 10", "SNO": 44 },
    { "Model": "Samsung Galaxy A60", "Developer": "Samsung Electronics",
      "ReleaseDate": new Date("2019-05-31T18:30:00.000Z"), "AndroidVersion":
      "Android 9.0 \"Pie\"", "SNO": 45 },
    { "Model": "Samsung Galaxy A70", "Developer": "Samsung Electronics",
      "ReleaseDate": new Date("2019-04-30T18:30:00.000Z"), "AndroidVersion":
      "Android 9.0 \"Pie\"", "SNO": 46 },
    { "Model": "Samsung Galaxy A70s", "Developer": "Samsung Electronics",
      "ReleaseDate": new Date("2019-08-31T18:30:00.000Z"), "AndroidVersion":
      "Android 9.0 \"Pie\"", "SNO": 47 },
    { "Model": "Samsung Galaxy A71 5G UW", "Developer": "Samsung
      Electronics", "ReleaseDate": new Date("2020-05-31T18:30:00.000Z"),
      "AndroidVersion": "Android 10", "SNO": 48 },
    { "Model": "Samsung Galaxy A80", "Developer": "Samsung Electronics",
      "ReleaseDate": new Date("2019-04-30T18:30:00.000Z"), "AndroidVersion":
      "Android 9.0 \"Pie\"", "SNO": 49 },
    { "Model": "Samsung Galaxy A90 5G", "Developer": "Samsung Electronics",
      "ReleaseDate": new Date("2019-08-31T18:30:00.000Z"), "AndroidVersion":
      "Android 9.0 \"Pie\"", "SNO": 50 },
    { "Model": "Samsung Galaxy Alpha", "Developer": "Samsung Electronics",
      "ReleaseDate": new Date("2014-08-31T18:30:00.000Z"), "AndroidVersion":
      "Android 4.4 \"KitKat\"", "SNO": 51 },
    { "Model": "Samsung Galaxy C5", "Developer": "Samsung Electronics",
      "ReleaseDate": new Date("2017-09-30T18:30:00.000Z"), "AndroidVersion":
      "Android 7.1.2 \"Nougat\"", "SNO": 52 },
    { "Model": "Samsung Galaxy C7", "Developer": "Samsung Electronics",
      "ReleaseDate": new Date("2016-05-31T18:30:00.000Z"), "AndroidVersion":
      "Android 6.0 \"Marshmallow\"", "SNO": 53 },
    { "Model": "Samsung Galaxy C8", "Developer": "Samsung Electronics",
      "ReleaseDate": new Date("2017-08-31T18:30:00.000Z"), "AndroidVersion":
      "Android 7.1.1 \"Nougat\"", "SNO": 54 },
    { "Model": "Samsung Galaxy C9 Pro", "Developer": "Samsung Electronics",
      "ReleaseDate": new Date("2016-10-31T18:30:00.000Z"), "AndroidVersion":
      "Android 6.0.1 \"Marshmallow\"", "SNO": 55 },
    { "Model": "Samsung Galaxy F41", "Developer": "Samsung Electronics",
      "ReleaseDate": new Date("2020-09-30T18:30:00.000Z"), "AndroidVersion":
      "Android 10", "SNO": 56 },
    { "Model": "Samsung Galaxy F62", "Developer": "Samsung Electronics",
      "ReleaseDate": new Date("2021-01-31T18:30:00.000Z"), "AndroidVersion":
      "Android 11", "SNO": 57 },
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DATASOURCE.TSX

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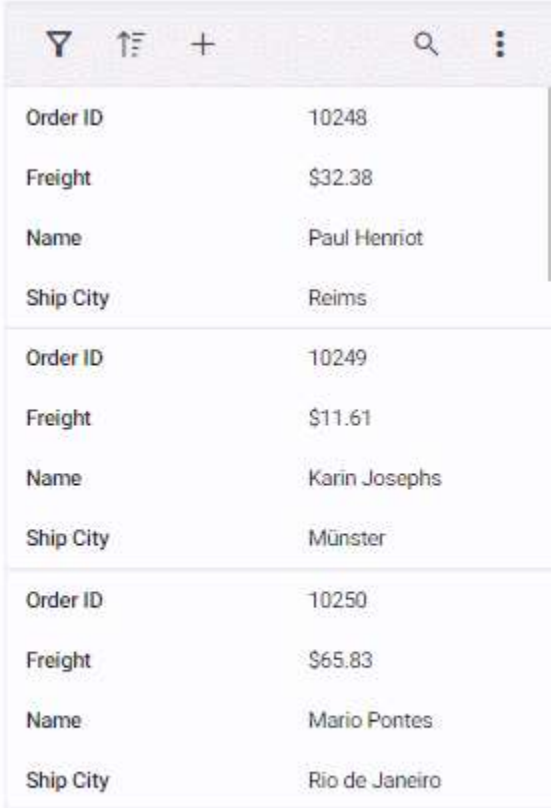
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* [enableAdaptiveUI](#) property must be enabled for vertical row rendering.

Supported features by vertical row rendering

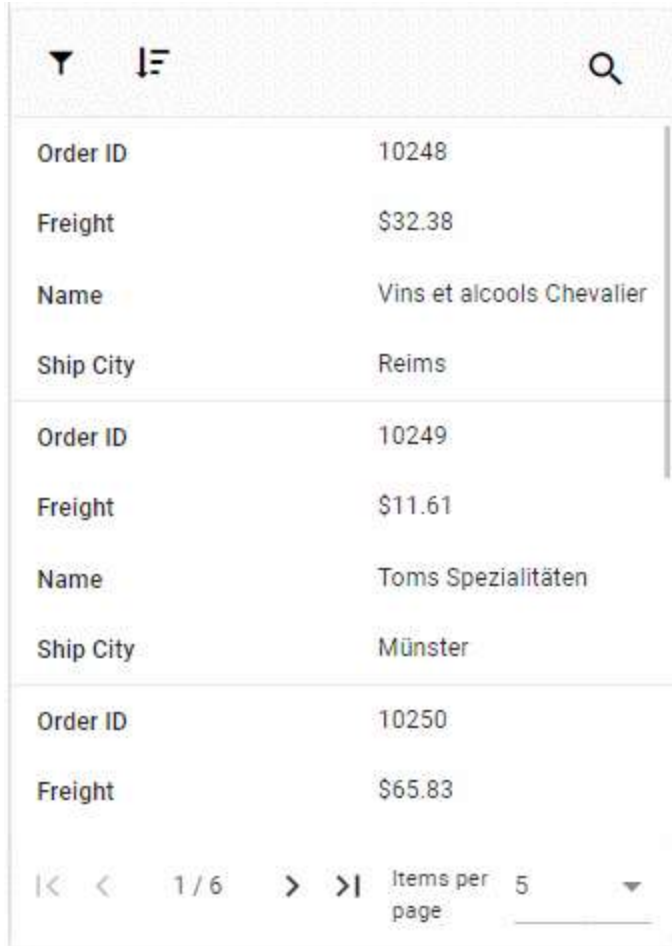
The following features are only supported in vertical row rendering:

- Paging, including Page size dropdown
- Sorting
- Filtering
- Selection
- Dialog Editing
- Aggregate
- Infinite scroll
- Toolbar - Options like **Add**, **Filter**, **Sort**, **Edit**, **Delete**, **Search**, and **Toolbar template** are available when their respective features are enabled. The toolbar dynamically includes a three-dotted icon, containing additional features like **ColumnChooser**, **Print**, **PdfExport**, **ExcelExport**, or **CsvExport**, once these features are enabled. Please refer to the following snapshot.



Order ID	10248
Freight	\$32.38
Name	Paul Henriot
Ship City	Reims
Order ID	10249
Freight	\$11.61
Name	Karin Josephs
Ship City	Münster
Order ID	10250
Freight	\$65.83
Name	Mario Pontes
Ship City	Rio de Janeiro

A snapshot of the adaptive grid displaying enabled paging along with a pager dropdown.



Order ID	10248
Freight	\$32.38
Name	Vins et alcools Chevalier
Ship City	Reims
Order ID	10249
Freight	\$11.61
Name	Toms Spezialitäten
Ship City	Münster
Order ID	10250
Freight	\$65.83

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The Column Menu feature, which includes grouping, sorting, autofit, filter, and column chooser, is exclusively supported for the Grid in **Horizontal** [rowRenderingMode](#).

Performance tips for React DataGrid Component

This article is a comprehensive guide on improving the loading performance of the React DataGrid, especially when dealing with large datasets along with large number of columns. It provides valuable insights into the steps that need to be followed to bind a large data source without experiencing any performance degradations. By offering detailed explanations and actionable tips, this resource aims to empower readers with the knowledge and best practices necessary to optimize the performance of the React DataGrid during data binding, ensuring a smooth and efficient user experience.

How to improve loading performance by binding large dataset

As you all know, a grid is made up of rows and columns. For instance, when you bind 10 rows and 10 columns, it means 100 elements will be rendered in the DOM (Document Object Model). So, it is recommended to render only a limited number of rows and columns to guarantee the best loading performance for the component.

Optimizing performance with paging

To boost the performance efficiency of your application, especially when dealing with large datasets, it is advised to implement paging. [Paging](#) allows you to display grid data in segmented pages, facilitating easier navigation through substantial datasets. This feature proves particularly beneficial in enhancing

the overall performance of your application. For more information on implementing paging, you can refer to the [documentation](#) section dedicated to this feature.

Optimizing performance with row virtualization or infinite scrolling

To enhance your application's efficiency, especially when dealing with substantial datasets, it is recommended to either using [virtualization](#) or [infinite scrolling](#). Implementing these techniques can significantly reduce the load on your application and elevate its overall performance.

1. **Virtualization:** The Virtual scrolling feature in the React Data Grid enables the efficient handling and display of large volumes of data without compromising performance. This approach optimizes the rendering process by loading only the visible rows within the Grid viewport, rather than rendering the entire dataset simultaneously. For more information on implementing row virtualization , you can refer to the [documentation](#) section dedicated to this feature.
2. **Infinite scrolling:** The Infinite Scrolling feature in the React Data Grid is a powerful tool for seamlessly handling extensive data sets without compromising grid performance. It operates on a "load-on-demand" concept, ensuring that data is fetched only when needed. In the default infinite scrolling mode, a new block of data is loaded each time the scrollbar reaches the end of the vertical scroller. For more information on implementing infinite scrolling , you can refer to the [documentation](#) section dedicated to this feature.

Optimizing performance with column virtualization in large no of columns

[Column virtualization](#) feature in the React Data Grid that allows you to optimize the rendering of columns by displaying only the columns that are currently within the viewport. It allows horizontal scrolling to view additional columns. This feature is particularly useful when dealing with grids that have a large number of columns, as it helps to improve the performance and reduce the initial loading time.

It is possible to enable both row and column virtualization. This feature allows for efficient handling of large datasets by dynamically loading only the visible rows and columns, optimizing performance and enhancing the overall responsiveness of the grid. For more information on implementing column virtualization , you can refer to the [documentation](#) section dedicated to this feature.

How to overcome browser height limitation in virtual scrolling

[Documentation link](#)

Optimizing react component rendering by mitigating unnecessary re-renders during state updates

In React, when employing `useState` to update the state of a component while executing actions in a Grid, the default behavior is to trigger a re-render of the component. This behavior, while standard in React, can pose challenges, particularly when essential Grid actions such as selection are affected by the re-render.

To tackle this and maintain the integrity of Grid actions despite state updates, it is advisable to leverage the `useMemo` hook provided by React. This strategic use of `useMemo` prevents unnecessary re-renders of the component, ensuring that crucial aspects like grid selection remain unaffected.

By incorporating `useMemo`, developers can optimize the rendering process, enhancing the performance of React components. For a more detailed understanding and practical implementation, refer to the [documentation](#) link.

[How to improve loading performance by binding large data by showing custom text or element](#)
When integrating image or template elements into a column, it's recommended to utilize the [Column Template](#) feature rather than customizing the data through [rowDataBound](#) or [queryCellInfo](#) events. These events are triggered for each row and cell rendering, introducing delays in the component's rendering process. Moreover, rendering custom elements using these events may result in the persistence of rendered elements, potentially causing longer rendering times over time. By opting for the column template feature, you can efficiently meet this requirement without experiencing rendering delays and ensure a more streamlined rendering process.

[How to improve loading performance by referring individual script and CSS](#)

To improve the performance of Syncfusion Grid component during the initial render as well as certain actions, suggested you to download the specific component scripts using CRG (Custom Resource Generator) to speed up the project. By default, the ej2.min.js script file contains all the Syncfusion component scripts. So, it will take some time to load the scripts to the project. Using [CRG](#), you can select the components which you want to use, and the modules for those components, then you can download the scripts and CSS for the selected components and use them as per your need.

[CRG website link](#)

So to improve the performance of grid during the initial rendering, suggested you to refer individual script and CSS.

[How to update cell values without frequent server calls](#)

Efficiently update cell values without the need for frequent server calls, especially beneficial for live update scenarios. Even when the data is initially bound from the server, performing edit operations can be done without triggering a database refresh. Utilize the [setCellValue](#) method to update the DataGrid without affecting the database and only refresh the UI.

[How to optimize server-side data operations with adaptors](#)

The React DataGrid provides support for various adaptors (OData, ODataV4, WebAPI, URL, etc.) to facilitate server-side data operations and CRUD functionalities. By leveraging these adaptors along with the [DataManager](#) component, you can seamlessly bind remote data sources to the grid and execute actions. During data operations like filtering, sorting, and paging, the corresponding action queries are generated as per the adaptor's requirements. It is crucial to handle these actions on the application end and return the processed data back to the grid. Refer to the documentation for comprehensive details. It's worth noting that for efficient data processing, the suggested order for returning processed data to the grid is as follows

- Filtering
- Sorting
- Aggregates
- Paging
- Grouping

[How to avoid MaxJsonLength error while passing large amount of records](#)

The React Grid component is client-server based. So, we send the data as JSON object between client and server. The reported issue occurs due to the serialization of the large-sized JSON object. We need to increase the maximum length for serializing the large-sized JSON object. You have to alter the [MaxJsonLength](#) property on your web.config file or in the place of deserialization.

Solution: 1

```
`csharp
<configuration>
<system.web.extensions>
<scripting>
<webServices>
<jsonSerialization maxJsonLength="50000000"/>
</webServices>
</scripting>
</system.web.extensions>
</configuration>
`
```

Solution : 2

```
`csharp
var serializer = new JavaScriptSerializer { MaxJsonLength = Int32.MaxValue };
`
```

Microsoft excel limitation while exporting millions of records to excel file format

By default, Microsoft Excel supports only 1,048,576 records in an excel sheet. Hence it is not possible to export millions of records to excel. You can refer the [documentation](#) link for more details on Microsoft excel specifications and limits. So suggest to export the data in CSV (Comma-Separated Values) or other formats that can handle large datasets more efficiently than Excel.

Columns in React Grid Component

In Syncfusion React Grid, Columns are fundamental elements that play a pivotal role in rendering column values in the required format within your application. The [field](#) property of the [ColumnDirective](#) is necessary to map the data source values in Grid columns. To rendering the columns, you need to import the **ColumnDirective**, **ColumnsDirective** and **GridComponent** in the grid.

```
`ts
import { ColumnDirective, ColumnsDirective, GridComponent } from '@syncfusion/ej2-react-grids';
`
```

Column types

The Syncfusion Grid component allows you to specify the type of data that a column binds using the [type](#) property. The type property is used to determine the appropriate [format](#), such as [number](#) or [date](#), for displaying the column data.

Grid supports the following column types:

- **string:** Represents a column that binds to string data. This is the default type if the type property is not defined.

- **number:** Represents a column that binds to numeric data. It supports formatting options for displaying numbers.
- **boolean:** Represents a column that binds to boolean data. It displays checkboxes for boolean values.
- **date:** Represents a column that binds to date data. It supports formatting options for displaying dates.
- **datetime:** Represents a column that binds to date and time data. It supports formatting options for displaying date and time values.
- **checkbox:** Represents a column that displays checkboxes.

Here is an example of how to specify column types in a grid using the types mentioned above.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  return <GridComponent dataSource={data}>
    <ColumnsDirective>
      <ColumnDirective type='checkbox' width='90' />
      <ColumnDirective field='OrderID' headerText='Order ID'
width='100' textAlign="Right" type='number' />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' type='string' />
      <ColumnDirective field='Freight' headerText='Freight' width='100'
format="C2" textAlign="Right" type='number' />
      <ColumnDirective field='OrderDate' headerText='Order Date'
width='100' format="yMd" textAlign="Right" type='date' />
      <ColumnDirective field='ShippedDate' headerText='Shipped Date'
width='100' format="dd/MM/yyyy hh:mm" textAlign="Right" type='dateTime' />
      <ColumnDirective field='Verified' headerText='Verified'
width='100' type='boolean' displayAsCheckBox={true} />
    </ColumnsDirective>
  </GridComponent>
};
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  return <GridComponent dataSource={data}>
    <ColumnsDirective>
      <ColumnDirective type='checkbox' width='90' />
      <ColumnDirective field='OrderID' headerText='Order ID'
width='100' textAlign="Right" type='number' />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' type='string' />
      <ColumnDirective field='Freight' headerText='Freight' width='100'
format="C2" textAlign="Right" type='number' />
```

```

        <ColumnDirective field='OrderDate' headerText='Order Date'
width='100' format='yMd' textAlign='Right' type='date' />
        <ColumnDirective field='ShippedDate' headerText='Shipped Date'
width='100' format='dd/MM/yyyy hh:mm' textAlign='Right' type='dateTime' />
        <ColumnDirective field='Verified' headerText='Verified'
width='100' type='boolean' displayAsCheckBox={true} />
    </ColumnsDirective>
</GridComponent>
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5), ShippedDate: new Date(8367642e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6), ShippedDate: new Date(8367642e5),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5), ShippedDate: new Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VINET', EmployeeID: 3, OrderDate: new
Date(8367642e5), ShippedDate: new Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5), ShippedDate: new Date(8367642e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {

```

```

    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6), ShippedDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'VINET', EmployeeID: 9, OrderDate: new
Date(8371098e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(837369e6), ShippedDate: new Date(8367642e5),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'VINET', EmployeeID: 4, OrderDate: new
Date(8374554e5), ShippedDate: new Date(8367642e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'VINET', EmployeeID: 1, OrderDate: new
Date(8375418e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {

```

```

    OrderID: 10260, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8377146e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
    'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
    Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8377146e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
    Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'VINET', EmployeeID: 8, OrderDate: new
    Date(8379738e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
    ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
    Freight: 48.29, Verified: !0
  }
]
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6), ShippedDate: new Date(8367642e5),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VINET', EmployeeID: 3, OrderDate: new
    Date(8367642e5), ShippedDate: new Date(8367642e5),

```



```

        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5), ShippedDate: new Date(8367642e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6), ShippedDate: new Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5), ShippedDate: new Date(8367642e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'VINET', EmployeeID: 9, OrderDate: new
Date(8371098e5), ShippedDate: new Date(8367642e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(837369e6), ShippedDate: new Date(8367642e5),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'VINET', EmployeeID: 4, OrderDate: new
Date(8374554e5), ShippedDate: new Date(8367642e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'VINET', EmployeeID: 1, OrderDate: new
Date(8375418e5), ShippedDate: new Date(8367642e5),

```

```

        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5), ShippedDate: new Date(8367642e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8377146e5), ShippedDate: new Date(8367642e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8377146e5), ShippedDate: new Date(8367642e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'VINET', EmployeeID: 8, OrderDate: new
        Date(8379738e5), ShippedDate: new Date(8367642e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
];

```

* If the [type](#) is not defined, then it will be determined from the first record of the [dataSource](#).

* In case if the first record of the [dataSource](#) is null/blank value for a column then it is necessary to define the [type](#) for that column.

Difference between boolean type and checkbox type column

1. Use the **boolean** column type when you want to bind boolean values from your datasource and/or edit boolean property values from your type.
2. Use the **checkbox** column type when you want to enable selection/deselection of the whole row.
3. When the grid column **type** is a **checkbox**, the selection type of the grid **selectionSettings** will be multiple. This is the default behavior.
4. If you have more than one column with the column type as a **checkbox**, the grid will automatically enable the other column's checkbox when selecting one column checkbox.

To learn more about how to render boolean values as checkboxes in a Syncfusion GridColumn, please refer to the [Render Boolean Values as Checkbox](#) section.

Column width

To adjust the column width in a Grid, you can use the [width](#) property within the [columns](#) property of the Grid configuration. This property enables you to define the column width in pixels or as a percentage. You can set the width to a specific value, like 100 for 100 pixels, or as a percentage value, such as 25% for 25% of the available width.

1. Grid column width is calculated based on the sum of column widths. For example, a grid container with 4 columns and a width of 800 pixels will have columns with a default width of 200 pixels each.
2. If you specify widths for some columns but not others, the Grid will distribute the available width equally among the columns without explicit widths. For example, if you have 3 columns with widths of 100px, 200px, and no width specified for the third column, the third column will occupy the remaining width after accounting for the first two columns.
3. Columns with percentage widths are responsive and adjust their width based on the size of the grid container. For example, a column with a width of 50% will occupy 50% of the grid width and will adjust proportionally when the grid container is resized to a smaller size.
4. When you manually resize columns in Syncfusion Grid, a minimum width is set to ensure that the content within the cells remains readable. By default, the minimum width is set to 10 pixels if not explicitly specified for a column.
5. If the total width of all columns exceeds the width of the grid container, a horizontal scrollbar will automatically appear to allow horizontal scrolling within the grid.
6. When the columns are hidden using the column chooser, the width of the hidden columns is removed from the total grid width, and the remaining columns will be resized to fill the available space.
7. If the parent element has a fixed width, the grid component will inherit that width and occupy the available space. However, if the parent element does not have a fixed width, the grid component will adjust its width dynamically based on the available space.

Supported types for column width

Syncfusion Grid supports the following three types of column width:

1. Auto

The column width is automatically calculated based on the content within the column cells. If the content exceeds the width of the ColumnDirective, it will be truncated with an ellipsis (...) at the end. You can set the width for `ColumnDirective` as auto in your Grid configuration as shown below:

```
`ts
```

```
<ColumnDirective field="OrderID" headerText="Order ID" width="auto" textAlign="Right" />
```

```
`
```

2. Percentage

The column width is specified as a percentage value relative to the width of the grid container. For example, a column width of 25% will occupy 25% of the total grid width. You can set the width for `ColumnDirective` as percentage in your Grid configuration as shown below:

```
`ts
```

```
<ColumnDirective field="OrderID" headerText="Order ID" width="25%" textAlign="Right" />
```

```
,
```

3. Pixel

The column width is specified as an absolute pixel value. For example, a column width of 100px will have a fixed width of 100 pixels regardless of the grid container size. You can set the width for `ColumnDirective` as pixel in your Grid configuration as shown below:

```
`ts
```

```
<ColumnDirective field="OrderID" headerText="Order ID" width="100" textAlign="Right" />
```

```
,
```

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  return <GridComponent dataSource={data} width='auto'>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID'
width='auto' textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='120' />
      <ColumnDirective field='Freight' headerText='Freight' width='100'
format="C2" textAlign="Right" />
      <ColumnDirective field='OrderDate' headerText='Order Date'
width='40%' format="yMd" textAlign="Right" />
    </ColumnsDirective>
  </GridComponent>
};
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  return <GridComponent dataSource={data} width='auto'>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID'
width='auto' textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='120' />
      <ColumnDirective field='Freight' headerText='Freight' width='100'
format="C2" textAlign="Right" />
      <ColumnDirective field='OrderDate' headerText='Order Date'
width='40%' format="yMd" textAlign="Right" />
    </ColumnsDirective>
  </GridComponent>
};
export default App;
```

```
</GridComponent>
};
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6), ShippedDate: new Date(8367642e5),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VINET', EmployeeID: 3, OrderDate: new
    Date(8367642e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6), ShippedDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
```

```

    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'VINET', EmployeeID: 9, OrderDate: new
    Date(8371098e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(837369e6), ShippedDate: new Date(8367642e5),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'VINET', EmployeeID: 4, OrderDate: new
    Date(8374554e5), ShippedDate: new Date(8367642e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
    'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
    'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'VINET', EmployeeID: 1, OrderDate: new
    Date(8375418e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
    6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
    Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
    Date(8376282e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
    ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
    Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8377146e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
    'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
    Freight: 55.09, Verified: !0
  },
  {

```

```

    OrderID: 10261, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8377146e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'VINET', EmployeeID: 8, OrderDate: new
Date(8379738e5), ShippedDate: new Date(8367642e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5), ShippedDate: new Date(8367642e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6), ShippedDate: new Date(8367642e5),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5), ShippedDate: new Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VINET', EmployeeID: 3, OrderDate: new
Date(8367642e5), ShippedDate: new Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5), ShippedDate: new Date(8367642e5),

```

```

    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6), ShippedDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'VINET', EmployeeID: 9, OrderDate: new
    Date(8371098e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(837369e6), ShippedDate: new Date(8367642e5),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'VINET', EmployeeID: 4, OrderDate: new
    Date(8374554e5), ShippedDate: new Date(8367642e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
    'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
    'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'VINET', EmployeeID: 1, OrderDate: new
    Date(8375418e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
    6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
    Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
    Date(8376282e5), ShippedDate: new Date(8367642e5),

```



```

        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8377146e5), ShippedDate: new Date(8367642e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8377146e5), ShippedDate: new Date(8367642e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'VINET', EmployeeID: 8, OrderDate: new
        Date(8379738e5), ShippedDate: new Date(8367642e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
];

```

Column formatting

Column formatting is a powerful feature in Syncfusion Grid that allows you to customize the display of data in grid columns. You can apply different formatting options to columns based on your requirements, such as displaying numbers with specific formats, formatting dates according to a specific locale, and using templates to format column values.

You can use the [format](#) property to specify the format for column values.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
'@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    return <GridComponent dataSource={data} height={315}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' width='100' textAlign="Right"/>
            <ColumnDirective field='CustomerID' width='100' />
            <ColumnDirective field='Freight' width='100' format="C2"
            textAlign="Right"/>
            <ColumnDirective field='OrderDate' width='140' format="yMd"
            textAlign="Right"/>
        </ColumnsDirective>
    </GridComponent>;
}

```

```
}  
;  
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from  
'@syncfusion/ej2-react-grids';  
import * as React from 'react';  
import { data } from './datasource';  
function App() {  
    return <GridComponent dataSource={data} height={315}>  
        <ColumnsDirective>  
            <ColumnDirective field='OrderID' width='100' textAlign="Right" />  
            <ColumnDirective field='CustomerID' width='100' />  
            <ColumnDirective field='Freight' width='100' format="C2"  
textAlign="Right" />  
            <ColumnDirective field='OrderDate' width='140' format="yMd"  
textAlign="Right" />  
        </ColumnsDirective>  
    </GridComponent>  
};  
export default App;
```

DATASOURCE.JSX

```
export let data = [  
    {  
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new  
Date(8364186e5),  
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',  
ShipAddress: '59 rue de l Abbaye',  
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',  
Freight: 32.38, Verified: !0  
    },  
    {  
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new  
Date(836505e6),  
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:  
'Luisenstr. 48',  
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',  
Freight: 11.61, Verified: !1  
    },  
    {  
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new  
Date(8367642e5),  
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:  
'Rua do Paço, 67',  
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',  
Freight: 65.83, Verified: !0  
    },  
    {  
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new  
Date(8367642e5),  
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,  
rue du Commerce',
```

```

        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]
  ];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },

```

```

    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
  ]
}

```

```

    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

* The grid uses the [Internalization](#) library to format values based on the specified format and culture.

* By default, the [number](#) and [date](#) values are formatted in en-US locale. You can localize the currency and date in different locale as explained [here](#).

* The available format codes may vary depending on the data type of the column.

* You can also customize the formatting further by providing a custom function to the `format` property, instead of a format string.

* Make sure that the format string is valid and compatible with the data type of the column, to avoid unexpected results.

Number formatting

Number formatting allows you to customize the display of numeric values in grid columns. You can use standard numeric format strings or custom numeric format strings to specify the desired format. The `format` property can be used to specify the number format for numeric columns. For example, you can use the following format strings to format numbers:

Format | Description | Remarks

{ type:'date', format:'dd/MM/yyyy' } | 04/07/1996

{ type:'date', format:'dd.MM.yyyy' } | 04.07.1996

{ type:'date', skeleton:'short' } | 7/4/96

{ type: 'dateTime', format: 'dd/MM/yyyy hh:mm a' } | 04/07/1996 12:00 AM

{ type: 'dateTime', format: 'MM/dd/yyyy hh:mm:ss a' } | 07/04/1996 12:00:00 AM

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const formatOption = { type: 'date', format: 'dd/MM/yyyy' };
  const shipFormat = { type: 'dateTime', format: 'dd/MM/yyyy hh:mm a' };
  return <GridComponent dataSource={data} height={315}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' width='100' textAlign="Right"/>
      <ColumnDirective field='Freight' width='100' format="C2"
textAlign="Right"/>
      <ColumnDirective field='OrderDate' width='140' textAlign="Right"
format={formatOption}/>
      <ColumnDirective field='OrderDate' headerText='Ship Date' width='180'
textAlign="Right" format={shipFormat}/>
    </ColumnsDirective>
  </GridComponent>;
}
;
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const formatOption: object = { type: 'date', format: 'dd/MM/yyyy' };
  const shipFormat: object = { type: 'dateTime', format: 'dd/MM/yyyy hh:mm a'
};
};
```

```

return <GridComponent dataSource={data} height={315}>
  <ColumnsDirective>
    <ColumnDirective field='OrderID' width='100' textAlign="Right" />
    <ColumnDirective field='Freight' width='100' format="C2"
textAlign="Right" />
    <ColumnDirective field='OrderDate' width='140' textAlign="Right"
format={formatOption} />
    <ColumnDirective field='OrderDate' headerText='Ship Date' width='180'
textAlign="Right" format={shipFormat} />
  </ColumnsDirective>
</GridComponent>
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  }
]

```



```

    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
  ],

```

```

    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
  ]
};

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),

```

```

        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),

```

```

        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]
};

```

Format the date column based on localization

You can also format the date column based on the localization settings of the user's browser. You can use the [format](#) property of the Grid columns along with the [locale](#) property to specify the desired date format based on the locale.

In this example, the format property specifies the date format as "yyyy-MMM-dd", and the locale property specifies the locale as "es-AR" for Spanish (Argentina).

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
'@syncfusion/ej2-react-grids';
import * as React from 'react';
import { loadCldr, setCulture, setCurrencyCode } from '@syncfusion/ej2-base';
import { data } from './datasource';
import * as cagregorian from './ca-gregorian.json';
import * as currencies from './currencies.json';
import * as numbers from './numbers.json';

```

```
import * as timeZoneNames from './timeZoneNames.json';
function App() {
  var formatOption= { type: 'date', format: 'yyyy-MMM-dd' };
  var locale = 'es-AR';
  setCulture('es-AR');
  setCurrencyCode('ARS');
  loadClldr(
    cagregorian,
    currencies,
    numbers,
    timeZoneNames
  );
  return <GridComponent dataSource={data} height={315} locale={locale}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' width='100' textAlign="Right" />
      <ColumnDirective field='Freight' width='100' format="C2"
textAlign="Right" />
      <ColumnDirective field='OrderDate' width='140' textAlign="Right"
format={formatOption} />
    </ColumnsDirective>
  </GridComponent>
}
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
'@syncfusion/ej2-react-grids';
import * as React from 'react';
import { loadClldr, setCulture, setCurrencyCode } from '@syncfusion/ej2-base';
import { data } from './datasource';
import * as cagregorian from './ca-gregorian.json';
import * as currencies from './currencies.json';
import * as numbers from './numbers.json';
import * as timeZoneNames from './timeZoneNames.json';
function App() {
  const formatOption: object = { type: 'date', format: 'yyyy-MMM-dd' };
  const locale: any = 'es-AR';
  setCulture('es-AR');
  setCurrencyCode('ARS');
  loadClldr(
    cagregorian,
    currencies,
    numbers,
    timeZoneNames
  );
  return <GridComponent dataSource={data} height={315} locale={locale}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' width='100' textAlign="Right" />
      <ColumnDirective field='Freight' width='100' format="C2"
textAlign="Right" />
      <ColumnDirective field='OrderDate' width='140' textAlign="Right"
format={formatOption} />
    </ColumnsDirective>
  </GridComponent>
}
```

```
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6), ShippedDate: new Date(8367642e5),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VINET', EmployeeID: 3, OrderDate: new
    Date(8367642e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6), ShippedDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5), ShippedDate: new Date(8367642e5),
```

```

        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'VINET', EmployeeID: 9, OrderDate: new
Date(8371098e5), ShippedDate: new Date(8367642e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(837369e6), ShippedDate: new Date(8367642e5),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'VINET', EmployeeID: 4, OrderDate: new
Date(8374554e5), ShippedDate: new Date(8367642e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'VINET', EmployeeID: 1, OrderDate: new
Date(8375418e5), ShippedDate: new Date(8367642e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5), ShippedDate: new Date(8367642e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8377146e5), ShippedDate: new Date(8367642e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8377146e5), ShippedDate: new Date(8367642e5),

```

```

      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'VINET', EmployeeID: 8, OrderDate: new
      Date(8379738e5), ShippedDate: new Date(8367642e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }
  ]];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6), ShippedDate: new Date(8367642e5),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VINET', EmployeeID: 3, OrderDate: new
    Date(8367642e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  }
];

```



```

    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6), ShippedDate: new Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5), ShippedDate: new Date(8367642e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'VINET', EmployeeID: 9, OrderDate: new
Date(8371098e5), ShippedDate: new Date(8367642e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(837369e6), ShippedDate: new Date(8367642e5),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'VINET', EmployeeID: 4, OrderDate: new
Date(8374554e5), ShippedDate: new Date(8367642e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'VINET', EmployeeID: 1, OrderDate: new
Date(8375418e5), ShippedDate: new Date(8367642e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5), ShippedDate: new Date(8367642e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
  },

```

```

{
  OrderID: 10260, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8377146e5), ShippedDate: new Date(8367642e5),
  ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
  ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
},
{
  OrderID: 10261, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8377146e5), ShippedDate: new Date(8367642e5),
  ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
  ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
},
{
  OrderID: 10262, CustomerID: 'VINET', EmployeeID: 8, OrderDate: new
Date(8379738e5), ShippedDate: new Date(8367642e5),
  ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
  ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
}
];

```

Format template column value

Template columns in Grid provide a way to customize the appearance of column values using HTML templates. In addition to HTML markup, you can also use number formatting to format the value displayed in a template column. To format values in a column template, you can use React pipes and the [format](#) property. In this example, we are using the date pipe to format the OrderDate value as a date in the format 'dd/MMM/yyyy'.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
'@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const dateTemplate = ((props: any) => {
    const date: Date = new Date(props.OrderDate);
    const day = date.getDate();
    const month = date.toLocaleDateString('default', { month: 'short' });
    const year = date.getFullYear();
    return `${day}/${month}/${year}`;
  })
  return (
    <div>
      <GridComponent dataSource={data} height={315} >
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' />
          <ColumnDirective field='Freight' headerText='Freight'
format='C2' />
          <ColumnDirective field='OrderDate' headerText='Order
Date' template={dateTemplate} />
        </ColumnsDirective>
      </GridComponent>
    </div>
  );
}

```

```

        <ColumnDirective field='ShipCountry' headerText='Ship
Country' />
      </ColumnsDirective>
    </GridComponent>
  </div>
)
}
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const dateTemplate = ((props: any) => {
    const date: Date = new Date(props.OrderDate);
    const day = date.getDate();
    const month = date.toLocaleDateString('default', { month: 'short' });
    const year = date.getFullYear();
    return `${day}/${month}/${year}`;
  })
  return (
    <div>
      <GridComponent dataSource={data} height={315} >
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' />
          <ColumnDirective field='Freight' headerText='Freight'
format='C2' />
          <ColumnDirective field='OrderDate' headerText='Order
Date' template={dateTemplate} />
          <ColumnDirective field='ShipCountry' headerText='Ship
Country' />
        </ColumnsDirective>
      </GridComponent>
    </div>
  )
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6), ShippedDate: new Date(8367642e5),

```

```

        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5), ShippedDate: new Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VINET', EmployeeID: 3, OrderDate: new
        Date(8367642e5), ShippedDate: new Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5), ShippedDate: new Date(8367642e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6), ShippedDate: new Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5), ShippedDate: new Date(8367642e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'VINET', EmployeeID: 9, OrderDate: new
        Date(8371098e5), ShippedDate: new Date(8367642e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(837369e6), ShippedDate: new Date(8367642e5),

```

```

        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'VINET', EmployeeID: 4, OrderDate: new
        Date(8374554e5), ShippedDate: new Date(8367642e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'VINET', EmployeeID: 1, OrderDate: new
        Date(8375418e5), ShippedDate: new Date(8367642e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5), ShippedDate: new Date(8367642e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8377146e5), ShippedDate: new Date(8367642e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8377146e5), ShippedDate: new Date(8367642e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'VINET', EmployeeID: 8, OrderDate: new
        Date(8379738e5), ShippedDate: new Date(8367642e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]];

```

DATASOURCE.TSX

```
export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6), ShippedDate: new Date(8367642e5),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VINET', EmployeeID: 3, OrderDate: new
    Date(8367642e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6), ShippedDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
]
```

```

{
  OrderID: 10255, CustomerID: 'VINET', EmployeeID: 9, OrderDate: new
Date(8371098e5), ShippedDate: new Date(8367642e5),
  ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
  ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
},
{
  OrderID: 10256, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(837369e6), ShippedDate: new Date(8367642e5),
  ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
  ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
},
{
  OrderID: 10257, CustomerID: 'VINET', EmployeeID: 4, OrderDate: new
Date(8374554e5), ShippedDate: new Date(8367642e5),
  ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
  ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
},
{
  OrderID: 10258, CustomerID: 'VINET', EmployeeID: 1, OrderDate: new
Date(8375418e5), ShippedDate: new Date(8367642e5),
  ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
  ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
},
{
  OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5), ShippedDate: new Date(8367642e5),
  ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
  ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
},
{
  OrderID: 10260, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8377146e5), ShippedDate: new Date(8367642e5),
  ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
  ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
},
{
  OrderID: 10261, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8377146e5), ShippedDate: new Date(8367642e5),
  ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
  ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
},
{

```

```

    OrderID: 10262, CustomerID: 'VINET', EmployeeID: 8, OrderDate: new
    Date(8379738e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
    ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
    Freight: 48.29, Verified: !0
  }];

```

You can use other React pipes, such as **currency**, **decimal**, **percent**, etc., to format other types of values in the column template based on your requirements.

Custom formatting

Syncfusion Grid allows you to customize the formatting of data in the grid columns. You can apply custom formats to numeric or date columns to display data in a specific way according to the requirements. To apply custom formatting to grid columns in Syncfusion Grid, you can use the [format](#) property. Here's an example of how you can use custom formatting for numeric and date columns:

In the below example, the **numberFormatOptions** object is used as the **format** property for the **'Freight'** column to apply a custom numeric format with four decimal places. Similarly, the **dateFormatOptions** object is used as the **format** property for the **'OrderDate'** column to apply a custom date format displaying the date in the format of day-of-the-week, month abbreviation, day, and 2-digit year (e.g. Sun, May 8, '23).

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  var numberFormatOptions = {
    // Custom format for numeric columns
    format: '##.0000'
  }
  var dateFormatOptions = {
    // Custom format for date columns
    type: 'Date',
    format: "EEE, MMM d, 'yy",
  }
  return <GridComponent dataSource={data} height={315}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID'
width='100' textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' textAlign="Right" />
      <ColumnDirective field='Freight' headerText='Freight' width='100'
format={numberFormatOptions} textAlign="Right" />
      <ColumnDirective field='OrderDate' headerText='Order Date'
width='140' textAlign="Right" format={dateFormatOptions} />
    </ColumnsDirective>
  </GridComponent>
}
export default App;

```


APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const numberFormatOptions: Object = {
    // Custom format for numeric columns
    format: '##.0000'
  }
  const dateFormatOptions: Object = {
    // Custom format for date columns
    type: 'Date',
    format: "EEE, MMM d, 'yy",
  }
  return <GridComponent dataSource={data} height={315}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID'
width='100' textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' textAlign="Right" />
      <ColumnDirective field='Freight' headerText='Freight' width='100'
format={numberFormatOptions} textAlign="Right" />
      <ColumnDirective field='OrderDate' headerText='Order Date'
width='140' textAlign="Right" format={dateFormatOptions} />
    </ColumnsDirective>
  </GridComponent>
}
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6), ShippedDate: new Date(8367642e5),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
```

```

    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VINET', EmployeeID: 3, OrderDate: new
    Date(8367642e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6), ShippedDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'VINET', EmployeeID: 9, OrderDate: new
    Date(8371098e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(837369e6), ShippedDate: new Date(8367642e5),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'VINET', EmployeeID: 4, OrderDate: new
    Date(8374554e5), ShippedDate: new Date(8367642e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
    'Carrera 22 con Ave. Carlos Soublette #8-35',

```

```

      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
      'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'VINET', EmployeeID: 1, OrderDate: new
      Date(8375418e5), ShippedDate: new Date(8367642e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
      Date(8376282e5), ShippedDate: new Date(8367642e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
      Date(8377146e5), ShippedDate: new Date(8367642e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
      'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
      Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
      Date(8377146e5), ShippedDate: new Date(8367642e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'VINET', EmployeeID: 8, OrderDate: new
      Date(8379738e5), ShippedDate: new Date(8367642e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }
  ]];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {

```

```

    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6), ShippedDate: new Date(8367642e5),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VINET', EmployeeID: 3, OrderDate: new
    Date(8367642e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6), ShippedDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'VINET', EmployeeID: 9, OrderDate: new
    Date(8371098e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
  },
  {

```

```

    OrderID: 10256, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(837369e6), ShippedDate: new Date(8367642e5),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'VINET', EmployeeID: 4, OrderDate: new
Date(8374554e5), ShippedDate: new Date(8367642e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'VINET', EmployeeID: 1, OrderDate: new
Date(8375418e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8377146e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8377146e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'VINET', EmployeeID: 8, OrderDate: new
Date(8379738e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
  ]
];

```

To learn more about custom formatting, you can refer to [Custom Date formatting](#) and [Custom Number formatting](#).

Align the text of content

You can align the text in the content of a Grid column using the `textAlign` property. This property allows you to specify the alignment of the text within the cells of a particular column in the Grid. By default, the text is aligned to the left, but you can change the alignment by setting the value of the `textAlign` property to one of the following options:

- **Left:** Aligns the text to the left (default).
- **Center:** Aligns the text to the center.
- **Right:** Aligns the text to the right.
- **Justify:** Align the text to the justify.

Here is an example of using the `textAlign` property to align the text of a Grid column:

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  const alignmentData = [
    { text: 'Left', value: 'Left' },
    { text: 'Right', value: 'Right' },
    { text: 'Center', value: 'Center' },
    { text: 'Justify', value: 'Justify' }
  ];
  const changeAlignment = (args) => {
    grid.columns.forEach((col) => {
      col.textAlign = args.value;
    });
    grid.refreshColumns();
  }
  return (
    <div>
      <label style={{ padding: '30px 17px 0 0' }}>Align the text for columns
      :</label>
      <DropDownListComponent dataSource={alignmentData} index={0} width="100"
      change={changeAlignment}></DropDownListComponent>
      <div style={{ padding: '40px 0 0 0' }}>
        <GridComponent dataSource={data} height={315} ref={g => grid = g}>
          <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID'
width='100' />
            <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
            <ColumnDirective field='Freight' headerText='Freight' width='100'
/>
            <ColumnDirective field='OrderDate' headerText='Order Date'
width='140' />
          </ColumnsDirective>
        </GridComponent>
      </div>
    </div>
  );
}
```

```

        </GridComponent></div></div>)
    }
    export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, Grid, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import * as React from 'react';
import { data } from './datasource';
function App() {
    let grid: Grid | null;
    const alignmentData: any = [
        { text: 'Left', value: 'Left' },
        { text: 'Right', value: 'Right' },
        { text: 'Center', value: 'Center' },
        { text: 'Justify', value: 'Justify' },
    ];
    const changeAlignment = ((args: any) => {
        (grid as any).columns.forEach((col: any) => {
            col.textAlign = (args as any).value;
        });
        (grid as any).refreshColumns();
    });
    return (
        <div>
            <label style={{ padding: '30px 17px 0 0' }}>Align the text for columns
            :</label>
            <DropDownListComponent dataSource={alignmentData} index={0} width="100"
            change={changeAlignment}></DropDownListComponent>
            <div style={{ padding: '40px 0 0 0' }}>
                <GridComponent dataSource={data} height={315} ref={g => grid = g}>
                    <ColumnsDirective>
                        <ColumnDirective field='OrderID' headerText='Order ID'
                        width='100' />
                        <ColumnDirective field='CustomerID' headerText='Customer ID'
                        width='100' />
                        <ColumnDirective field='Freight' headerText='Freight' width='100'
                        />
                        <ColumnDirective field='OrderDate' headerText='Order Date'
                        width='140' />
                    </ColumnsDirective>
                </GridComponent></div></div>
            )
    }
    export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
        Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
    }
]

```

```

        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
      },
      {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
      },
      {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',

```



```

        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',

```

```
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',  
        Freight: 48.29, Verified: !0  
    }  
];
```

DATASOURCE.TSX

```
export let data: Object[] = [  
    {  
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new  
Date(8364186e5),  
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',  
        ShipAddress: '59 rue de l Abbaye',  
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',  
        Freight: 32.38, Verified: !0  
    },  
    {  
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new  
Date(836505e6),  
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:  
'Luisenstr. 48',  
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',  
        Freight: 11.61, Verified: !1  
    },  
    {  
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new  
Date(8367642e5),  
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:  
'Rua do Paço, 67',  
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',  
        Freight: 65.83, Verified: !0  
    },  
    {  
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new  
Date(8367642e5),  
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,  
rue du Commerce',  
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',  
        Freight: 41.34, Verified: !0  
    },  
    {  
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new  
Date(8368506e5),  
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:  
'Boulevard Tirou, 255',  
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',  
        Freight: 51.3, Verified: !0  
    },  
    {  
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new  
Date(836937e6),  
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:  
'Rua do Paço, 67',  
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',  
        Freight: 58.17, Verified: !0  
    },  
];
```

```

    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {

```

```

    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

The `textAlign` property only changes the alignment content not the column header. If you want to align both the column header and content, you can use the `headerTextAlign` property.

Render boolean value as checkbox

The Grid component allows you to render boolean values as checkboxes in columns. This can be achieved by using the `displayAsCheckBox` property, which is available in the `ColumnDirective`. This property is useful when you have a boolean column in your Grid and you want to display the values as checkboxes instead of the default text representation of `true` or `false`.

To enable the rendering of boolean values as checkboxes, you need to set the `displayAsCheckBox` property of the `ColumnDirective` to `true`.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
'@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  return <GridComponent dataSource={data} height={315}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right"/>
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='120'/>
      <ColumnDirective field='Freight' headerText='Freight' width='120'
format="C2" textAlign="Right"/>
      <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150'/>
      <ColumnDirective field='Verified' headerText='Verified'
displayAsCheckBox={true} width='150'/>
    </ColumnsDirective>
  </GridComponent>;
}
;
export default App;

```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  return <GridComponent dataSource={data} height={315}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='120' />
      <ColumnDirective field='Freight' headerText='Freight' width='120'
format="C2" textAlign="Right" />
      <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' />
      <ColumnDirective field='Verified' headerText='Verified'
displayAsCheckBox={true} width='150' />
    </ColumnsDirective>
  </GridComponent>
};
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  }
];
```

```

    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
  ],

```

```

    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
  ]
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),

```

```

    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
    Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
    Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
    Date(8374554e5),

```



```

        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]];

```

* The `displayAsCheckBox` property is only applicable to boolean values in Grid columns.

* When `displayAsCheckBox` is set to `true`, the boolean values will be rendered as checkboxes in the Grid column, with checked state indicating `true` and unchecked state indicating `false`.

How to prevent checkbox in the blank row

To prevent the checkbox in the blank row of the Grid, even if the `displayAsCheckBox` property is set to `true` for that column, you can use the `rowDataBound` event and check for empty or null values in the

row data. If all the values in the row are empty or null, you can set the inner HTML of the corresponding cell to an empty string to hide the checkbox.

Here is an example of how you can prevent a checkbox from being displayed in a blank row in a Grid:

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  const rowDataBound = (args) => {
    let count = 0;
    let keys = Object.keys(args.data);
    for (let i = 0; i < keys.length; i++) {
      if (
        args.data[keys[i]] == null ||
        args.data[keys[i]] == '' ||
        args.data[keys[i]] == undefined
      ) {
        count++;
      }
    }
    if (count == keys.length) {
      for (let i = 0; i < gridInstance.columns.length; i++) {
        if (gridInstance.columns[i].displayAsCheckBox) {
          args.row.children[i].innerHTML = '';
        }
      }
    }
  };
  return <GridComponent ref={ (grid) => (gridInstance = grid)}
    dataSource={data} height={315} rowDataBound={rowDataBound}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' type="number" textAlign="Right"
        headerTextAlign="Right" width='120' />
      <ColumnDirective field='CustomerID' type="string" textAlign="Left"
        headerTextAlign="Left" width='90' />
      <ColumnDirective field='Freight' headerText="Freight" width="80"
        textAlign="Right" />
      <ColumnDirective field="Verified" headerText="Verified" width="100"
        displayAsCheckBox="true" />
    </ColumnsDirective>
  </GridComponent>;
}
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  let gridInstance: GridComponent;
  const rowDataBound = (args) => {
```

```

let count = 0;
let keys = Object.keys(args.data);
for (let i = 0; i < keys.length; i++) {
  if (
    args.data[keys[i]] == null ||
    args.data[keys[i]] == '' ||
    args.data[keys[i]] == undefined
  ) {
    count++;
  }
}
if (count == keys.length) {
  for (let i = 0; i < gridInstance.columns.length; i++) {
    if (gridInstance.columns[i].displayAsCheckBox) {
      args.row.children[i].innerHTML = '';
    }
  }
}
};
return <GridComponent id='grid' ref={g => gridInstance = g}
dataSource={data} height={315} rowDataBound={rowDataBound}>
  <ColumnsDirective>
    <ColumnDirective field='OrderID' type="number" textAlign="Right"
headerTextAlign="Right" width='120' />
    <ColumnDirective field='CustomerID' type="string" textAlign="Left"
headerTextAlign="Left" width='90' />
    <ColumnDirective field='Freight' headerText="Freight" width="80"
textAlign="Right" />
    <ColumnDirective field="Verified" headerText="Verified" width="100"
displayAsCheckBox="true" />
  </ColumnsDirective>
</GridComponent>
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {

```

```

    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 2, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: null, CustomerID: null, EmployeeID: null, OrderDate: null,
        ShipName: null, ShipCity: null, ShipAddress: null,
        ShipRegion: null, ShipPostalCode: null, ShipCountry: null, Freight:
null, Verified: null
    },
    {
        OrderID: null, CustomerID: null, EmployeeID: null, OrderDate: null,
        ShipName: null, ShipCity: null, ShipAddress: null,
        ShipRegion: null, ShipPostalCode: null, ShipCountry: null, Freight:
null, Verified: null
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      }
    ]
  ];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 2, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: null, CustomerID: null, EmployeeID: null, OrderDate: null,
    ShipName: null, ShipCity: null, ShipAddress: null,
    ShipRegion: null, ShipPostalCode: null, ShipCountry: null, Freight:
    null, Verified: null
  },
  {
    OrderID: null, CustomerID: null, EmployeeID: null, OrderDate: null,

```

```

        ShipName: null, ShipCity: null, ShipAddress: null,
        ShipRegion: null, ShipPostalCode: null, ShipCountry: null, Freight:
null, Verified: null
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',

```

```

    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
    'Venezuela', Freight: 81.91, Verified: !0
  }];

```

AutoFit columns

The Grid has a feature that allows to automatically adjust column widths based on the maximum content width of each column when you double-click on the resizer symbol located in a specific column header. This feature ensures that all data in the grid rows is displayed without wrapping. To use this feature, you need to inject the **Resize** module and enable the resizer symbol in the column header by setting the [allowResizing](#) property to true in the grid.

Resizing a column to fit its content using autoFit method

The [autoFitColumns](#) method resizes the column to fit the widest cell's content without wrapping. You can autofit specific columns at initial rendering by invoking the `autoFitColumns` method in [dataBound](#) event.

To use `autoFitColumns` method, you need to inject **Resize** module in the grid.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Resize }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  const dataBound = () => {
    if (grid) {
      grid.autoFitColumns(['ShipName', 'ShipAddress']);
    }
  };
  return <GridComponent dataSource={data} height={315}
  dataBound={dataBound} ref={g => grid = g}>
    <Inject services={[Resize]}/>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID'
width='150'/>
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150'/>
      <ColumnDirective field='ShipName' headerText='Ship Name'
width='150'/>
      <ColumnDirective field='ShipAddress' headerText='Ship Address'
width='150' format="yMd"/>
      <ColumnDirective field='ShipCity' headerText='Ship City'
width='150'/>
    </ColumnsDirective>
  </GridComponent>;
}
;
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, Grid, GridComponent, Inject,
Resize } from '@syncfusion/ej2-react-grids';

```

```

import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid: Grid | null;
  const dataBound = () => {
    if (grid) {
      grid.autoFitColumns(['ShipName', 'ShipAddress']);
    }
  }
  return <GridComponent dataSource={data} height={315}
    dataBound={dataBound} ref={g => grid = g} >
    <Inject services={[Resize]} />
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID'
width='150' />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
      <ColumnDirective field='ShipName' headerText='Ship Name'
width='150' />
      <ColumnDirective field='ShipAddress' headerText='Ship Address'
width='150' format="yMd" />
      <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
    </ColumnsDirective>
  </GridComponent>
</>
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {

```



```

    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {

```

```

    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),

```

```

        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),

```

```

        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]];

```

You can autofit all the columns by invoking the `autoFitColumns` method without specifying column names.

AutoFit columns with empty space

The Autofit feature is utilized to display columns in a grid based on the defined width specified in the columns declaration. If the total width of the columns is less than the width of the grid, this means that white space will be displayed in the grid instead of the columns auto-adjusting to fill the entire grid width.

You can enable this feature by setting the `autoFit` property set to true. This feature ensures that the column width is rendered only as defined in the Grid column definition.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Resize }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    return <GridComponent dataSource={data} height={400} width={850}
allowResizing={true} autoFit={true}>
        <Inject services={[Resize]} />
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID'
minWidth='100' width='150' maxWidth='200'
textAlign='Right'></ColumnDirective>
            <ColumnDirective field='CustomerID' headerText='Customer ID'
minWidth='8' width='150'></ColumnDirective>
            <ColumnDirective field='Freight' headerText='Freight'
minWidth='8' width='120' format='C2' textAlign='Right' />
            <ColumnDirective field='ShipCity' headerText='Ship City'
allowResizing={false} width='150' textAlign='Right' />
            <ColumnDirective field='ShipCountry' headerText='Ship Country'
minWidth='8' width='150'></ColumnDirective>
        </ColumnsDirective>
    </GridComponent>;
};
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Resize }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    return <GridComponent dataSource={data} height={400}
width={850} allowResizing={true} autoFit={true} >
        <Inject services={[Resize]} />
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID'
minWidth='100' width='150' maxWidth='200'
textAlign='Right'></ColumnDirective>
            <ColumnDirective field='CustomerID' headerText='Customer ID'
minWidth='8' width='150'></ColumnDirective>
        </ColumnsDirective>
    </GridComponent>;
};
```

```

        <ColumnDirective field='Freight' headerText='Freight'
minWidth='8' width='120' format='C2' textAlign='Right' />
        <ColumnDirective field='ShipCity' headerText='Ship City'
allowResizing={false} width='150' textAlign='Right' />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
minWidth='8' width='150'></ColumnDirective>
    </ColumnsDirective>
</GridComponent>
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {

```

```

    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {

```

```

    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),

```



```

        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),

```

```

        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]];

```

If any one of the ColumnDirective width is undefined, then the particular column will automatically adjust to fill the entire width of the grid table, even if you have enabled the `autoFit` property of grid.

AutoFit columns when changing column visibility using column chooser

In Syncfusion Grid, you can auto-fit columns when the column visibility is changed using the column chooser. This can be achieved by calling the [autoFitColumns](#) method in the [actionComplete](#) event. By using the `requestType` property in the event arguments, you can differentiate between different actions, and then call the `autoFitColumns` method when the request type is `columnState`.

Here's an example code snippet in React that demonstrates how to auto fit columns when changing column visibility using column chooser:

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Toolbar, Inject,
ColumnChooser, Resize } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';

```

```

function App() {
  let grid;
  const toolbarOptions = ['ColumnChooser'];
  const actionComplete = ((args) => {
    if (args.requestType === 'columnstate') {
      grid.autoFitColumns();
    }
  })
  return (
    <div>
      <GridComponent dataSource={data} height={315} ref={g => grid = g}
allowResizing={true} toolbar={toolbarOptions} showColumnChooser={true}
actionComplete={actionComplete}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' />
          <ColumnDirective field='CustomerID' headerText='Customer
ID' />
          <ColumnDirective field='Freight' headerText='Freight' />
          <ColumnDirective field='OrderDate' headerText='Order
Date' format='yMd' />
        </ColumnsDirective>
        <Inject services={[Toolbar, ColumnChooser, Resize]} />
      </GridComponent></div>
    )
  }
}
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, Grid, GridComponent,
ActionEventArgs, Toolbar, Inject, ColumnChooser, Resize } from
'@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid: Grid | null;
  const toolbarOptions: any = ['ColumnChooser'];
  const actionComplete = ((args: ActionEventArgs) => {
    if ((args as any).requestType === 'columnstate') {
      (grid as any).autoFitColumns();
    }
  })
  return (
    <div>
      <GridComponent dataSource={data} height={315} ref={g => grid = g}
allowResizing={true} toolbar={toolbarOptions} showColumnChooser={true}
actionComplete={actionComplete}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' />
          <ColumnDirective field='CustomerID' headerText='Customer
ID' />
          <ColumnDirective field='Freight' headerText='Freight' />
          <ColumnDirective field='OrderDate' headerText='Order
Date' format='yMd' />
        </ColumnsDirective>
        <Inject services={[Toolbar, ColumnChooser, Resize]} />
      </GridComponent>
    </div>
  )
}

```

```

        </GridComponent></div>
    )
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },

```

```

    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {

```

```

    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),

```

```

        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),

```

```

      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
      'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
      Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }
  ]];

```

AutoFit columns with specific rows

To adjust the column widths of a specific range of rows based on their content, you can use the [autoFitColumns](#) method by simply passing the second and third parameters (optional) as the start and end index for the column you want to fit. You can autofit specific columns at initial rendering by invoking the `autoFitColumns` method in [dataBound](#) event.

This feature will calculate the appropriate width based on the maximum content width of the specified range of rows or the header text width. Subsequently, the maximum width of the content of the specified rows or header text will be applied to the entire column of the grid.

Here is an example of how to autofit columns with specific rows. The first parameter is an array containing the specific column field names, such as **Inventor**, **Number of INPADOC patents** and **Main fields of invention** is passed to apply the autofit functionality to these columns. After, the second parameter are start index is set to **1** and third parameter are end index is set to **3**. When specifying these start and end index, the autofit operation is applied only to the range of rows from 1 to 3 for column width adjustment.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Resize }
  from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { inventoryData } from './datasource';
function App() {
  let grid;

```



```

const dataBound = (() => {
  grid.autoFitColumns(['Inventor', 'Number of INPADOC patents',
'Mainfieldsofinvention'], 1, 3);
})
return (
  <div>
    <GridComponent dataSource={inventoryData} height={315} ref={g =>
grid = g} allowResizing={true} dataBound={dataBound}>
      <ColumnsDirective>
        <ColumnDirective field='Inventor' headerText='Inventor'
width='120' clipMode= 'EllipsisWithTooltip' textAlign='Right' />
        <ColumnDirective field='NumberofPatentFamilies'
headerText='Number of Patent Families' width='150' />
        <ColumnDirective field='Country' headerText='Country'
width='130' />
        <ColumnDirective field='Number of INPADOC patents'
headerText='Number of INPADOC patents'width='150' />
        <ColumnDirective field='Active' headerText='Active'
width='250' />
        <ColumnDirective field='Mainfieldsofinvention'
headerText='Main fields of invention' width='120' />
      </ColumnsDirective>
      <Inject services={[Resize]} />
    </GridComponent></div>
  )
}
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Resize }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { inventoryData } from './datasource';
function App() {
  let grid: GridComponent | null;
  const dataBound = (() => {
    grid.autoFitColumns(['Inventor', 'Number of INPADOC patents',
'Mainfieldsofinvention'], 1, 3);
  })
  return (
    <div>
      <GridComponent dataSource={inventoryData} height={315} ref={g =>
grid = g} allowResizing={true} dataBound={dataBound}>
        <ColumnsDirective>
          <ColumnDirective field='Inventor' headerText='Inventor'
width='120' clipMode= 'EllipsisWithTooltip' textAlign='Right' />
          <ColumnDirective field='NumberofPatentFamilies'
headerText='Number of Patent Families' width='150' />
          <ColumnDirective field='Country' headerText='Country'
width='130' />
          <ColumnDirective field='Number of INPADOC patents'
headerText='Number of INPADOC patents'width='150' />
          <ColumnDirective field='Active' headerText='Active'
width='250' />

```

```

        <ColumnDirective field='Mainfieldsofinvention'
headerText='Main fields of invention' width='120' />
        </ColumnsDirective>
        <Inject services={[Resize]} />
    </GridComponent></div>

    )
}
export default App;

```

DATASOURCE.JSX

```

export const inventoryData = [
    {
        'Inventor': 'Kia Silverbrook',
        'NumberofPatentFamilies': 4737,
        'Country': 'Australia',
        'Number of INPADOC patents': 9839,
        'Active': '1994-2016',
        'Mainfieldsofinvention': 'Printing, Digital paper, Internet,
Electronics, Lab-on-a-chip, MEMS, Mechanical, VLSI',
    },
    {
        'Inventor': 'Shunpei Yamazaki',
        'NumberofPatentFamilies': 4677,
        'Country': 'Japan',
        'Number of INPADOC patents': '10000+',
        'Active': '1976-2016',
        'Mainfieldsofinvention': 'Thin film transistors, Liquid crystal
displays, Solar cells, Flash memory, OLED',
    },
    {
        'Inventor': 'Lowell L. Wood, Jr.',
        'NumberofPatentFamilies': 1419,
        'Country': 'USA',
        'Number of INPADOC patents': 1332,
        'Active': '1977-2016',
        'Mainfieldsofinvention': 'Mosquito laser, Nuclear weapons',
    },
    {
        'Inventor': 'Paul Lapstun',
        'NumberofPatentFamilies': 1281,
        'Country': 'Australia',
        'Number of INPADOC patents': 3099,
        'Active': '2000-2016',
        'Mainfieldsofinvention': 'Printing, Digital paper, Internet,
Electronics, CGI, VLSI',
    },
    {
        'Inventor': 'Gurtej Sandhu',
        'NumberofPatentFamilies': 1255,
        'Country': 'India',
        'Number of INPADOC patents': 2038,
        'Active': '1991-2016',
        'Mainfieldsofinvention': 'Thin film processes and materials, VLSI,
Semiconductor device fabrication',
    },
]

```

```

{
  'Inventor': 'Jun Koyama',
  'NumberofPatentFamilies': 1240,
  'Country': 'Japan',
  'Number of INPADOC patents': 4126,
  'Active': '1991-2016',
  'Mainfieldsofinvention': 'Thin film transistors, Liquid crystal
displays, OLED',
},
{
  'Inventor': 'Roderick A. Hyde',
  'NumberofPatentFamilies': 1240,
  'Country': 'USA',
  'Number of INPADOC patents': 3360,
  'Active': '2001-2016',
  'Mainfieldsofinvention': 'Various',
},
{
  'Inventor': 'Leonard Forbes',
  'NumberofPatentFamilies': 1093,
  'Country': 'Canada',
  'Number of INPADOC patents': 1398,
  'Active': '1991-2016',
  'Mainfieldsofinvention': 'Semiconductor Memories, CCDs, Thin film
processes and materials, VLSI',
},
{
  'Inventor': 'Thomas Edison',
  'NumberofPatentFamilies': 1084,
  'Country': 'USA',
  'Number of INPADOC patents': 2332,
  'Active': '1847(b)-1931(d)',
  'Mainfieldsofinvention': 'Electric power, Lighting, Batteries,
Phonograph, Cement, Telegraphy, Mining',
},
{
  'Inventor': 'Donald E. Weder',
  'NumberofPatentFamilies': 999,
  'Country': 'USA',
  'Number of INPADOC patents': 1993,
  'Active': '1976-2015',
  'Mainfieldsofinvention': 'Florist supplies',
},
{
  'Inventor': 'George Albert Lyon',
  'NumberofPatentFamilies': 993,
  'Country': 'Canada',
  'Number of INPADOC patents': 'NA',
  'Active': '1882(b)-1961(d)',
  'Mainfieldsofinvention': 'Automotive, Stainless steel products',
},
{
  'Inventor': 'John F. O\'Connor',
  'NumberofPatentFamilies': 949,
  'Country': 'USA',
  'Number of INPADOC patents': 'NA',
  'Active': '1864(b)-1938(d)',
}

```

```

    'Mainfieldsofinvention': 'Railway draft gearing',
  },
  {
    'Inventor': 'Melvin De Groote',
    'NumberofPatentFamilies': 925,
    'Country': 'USA',
    'Number of INPADOC patents': 'NA',
    'Active': '1895(b)-1963(d)',
    'Mainfieldsofinvention': 'Chemical de-emulsifiers',
  },
  {
    'Inventor': 'Jay S. Walker',
    'NumberofPatentFamilies': 918,
    'Country': 'USA',
    'Number of INPADOC patents': 2206,
    'Active': '1998-2016',
    'Mainfieldsofinvention': 'Gaming machines',
  },
  {
    'Inventor': 'Edward K. Y. Jung',
    'NumberofPatentFamilies': 911,
    'Country': 'USA',
    'Number of INPADOC patents': 2254,
    'Active': '1996-2016',
    'Mainfieldsofinvention': 'Various',
  },
  {
    'Inventor': 'Francis H. Richards',
    'NumberofPatentFamilies': 894,
    'Country': 'USA',
    'Number of INPADOC patents': 'NA',
    'Active': '1850(b)-19??(d)',
    'Mainfieldsofinvention': 'Mechanical, automation',
  },
  {
    'Inventor': 'Kangguo Cheng',
    'NumberofPatentFamilies': 884,
    'Country': 'USA',
    'Number of INPADOC patents': 1314,
    'Active': '2004-2016',
    'Mainfieldsofinvention': 'Semiconductor device fabrication,
Semiconductor memory, Semiconductor device',
  }
];

```

DATASOURCE.TSX

```

export const inventoryData: Object[] = [
  {
    'Inventor': 'Kia Silverbrook',
    'NumberofPatentFamilies': 4737,
    'Country': 'Australia',
    'Number of INPADOC patents': 9839,
    'Active': '1994-2016',
    'Mainfieldsofinvention': 'Printing, Digital paper, Internet,
Electronics, Lab-on-a-chip, MEMS, Mechanical, VLSI',
  }
];

```

```

    },
    {
      'Inventor': 'Shunpei Yamazaki',
      'NumberofPatentFamilies': 4677,
      'Country': 'Japan',
      'Number of INPADOC patents': '10000+',
      'Active': '1976-2016',
      'Mainfieldsofinvention': 'Thin film transistors, Liquid crystal
displays, Solar cells, Flash memory, OLED',
    },
    {
      'Inventor': 'Lowell L. Wood, Jr.',
      'NumberofPatentFamilies': 1419,
      'Country': 'USA',
      'Number of INPADOC patents': 1332,
      'Active': '1977-2016',
      'Mainfieldsofinvention': 'Mosquito laser, Nuclear weapons',
    },
    {
      'Inventor': 'Paul Lapstun',
      'NumberofPatentFamilies': 1281,
      'Country': 'Australia',
      'Number of INPADOC patents': 3099,
      'Active': '2000-2016',
      'Mainfieldsofinvention': 'Printing, Digital paper, Internet,
Electronics, CGI, VLSI',
    },
    {
      'Inventor': 'Gurtej Sandhu',
      'NumberofPatentFamilies': 1255,
      'Country': 'India',
      'Number of INPADOC patents': 2038,
      'Active': '1991-2016',
      'Mainfieldsofinvention': 'Thin film processes and materials, VLSI,
Semiconductor device fabrication',
    },
    {
      'Inventor': 'Jun Koyama',
      'NumberofPatentFamilies': 1240,
      'Country': 'Japan',
      'Number of INPADOC patents': 4126,
      'Active': '1991-2016',
      'Mainfieldsofinvention': 'Thin film transistors, Liquid crystal
displays, OLED',
    },
    {
      'Inventor': 'Roderick A. Hyde',
      'NumberofPatentFamilies': 1240,
      'Country': 'USA',
      'Number of INPADOC patents': 3360,
      'Active': '2001-2016',
      'Mainfieldsofinvention': 'Various',
    },
    {
      'Inventor': 'Leonard Forbes',
      'NumberofPatentFamilies': 1093,
      'Country': 'Canada',

```

```

      'Number of INPADOC patents': 1398,
      'Active': '1991-2016',
      'Mainfieldsofinvention': 'Semiconductor Memories, CCDs, Thin film
processes and materials, VLSI',
    },
    {
      'Inventor': 'Thomas Edison',
      'NumberofPatentFamilies': 1084,
      'Country': 'USA',
      'Number of INPADOC patents': 2332,
      'Active': '1847(b)-1931(d)',
      'Mainfieldsofinvention': 'Electric power, Lighting, Batteries,
Phonograph, Cement, Telegraphy, Mining',
    },
    {
      'Inventor': 'Donald E. Weder',
      'NumberofPatentFamilies': 999,
      'Country': 'USA',
      'Number of INPADOC patents': 1993,
      'Active': '1976-2015',
      'Mainfieldsofinvention': 'Florist supplies',
    },
    {
      'Inventor': 'George Albert Lyon',
      'NumberofPatentFamilies': 993,
      'Country': 'Canada',
      'Number of INPADOC patents': 'NA',
      'Active': '1882(b)-1961(d)',
      'Mainfieldsofinvention': 'Automotive, Stainless steel products',
    },
    {
      'Inventor': 'John F. O\'Connor',
      'NumberofPatentFamilies': 949,
      'Country': 'USA',
      'Number of INPADOC patents': 'NA',
      'Active': '1864(b)-1938(d)',
      'Mainfieldsofinvention': 'Railway draft gearing',
    },
    {
      'Inventor': 'Melvin De Groote',
      'NumberofPatentFamilies': 925,
      'Country': 'USA',
      'Number of INPADOC patents': 'NA',
      'Active': '1895(b)-1963(d)',
      'Mainfieldsofinvention': 'Chemical de-emulsifiers',
    },
    {
      'Inventor': 'Jay S. Walker',
      'NumberofPatentFamilies': 918,
      'Country': 'USA',
      'Number of INPADOC patents': 2206,
      'Active': '1998-2016',
      'Mainfieldsofinvention': 'Gaming machines',
    },
    {
      'Inventor': 'Edward K. Y. Jung',
      'NumberofPatentFamilies': 911,

```

```

        'Country': 'USA',
        'Number of INPADOC patents': 2254,
        'Active': '1996-2016',
        'Mainfieldsofinvention': 'Various',
    },
    {
        'Inventor': 'Francis H. Richards',
        'NumberofPatentFamilies': 894,
        'Country': 'USA',
        'Number of INPADOC patents': 'NA',
        'Active': '1850 (b)-19?? (d)',
        'Mainfieldsofinvention': 'Mechanical, automation',
    },
    {
        'Inventor': 'Kangguo Cheng',
        'NumberofPatentFamilies': 884,
        'Country': 'USA',
        'Number of INPADOC patents': 1314,
        'Active': '2004-2016',
        'Mainfieldsofinvention': 'Semiconductor device fabrication,
Semiconductor memory, Semiconductor device',
    }
]
];

```

Lock columns

The Syncfusion Grid allows you to lock columns, which prevents them from being reordered and moves them to the first position. This functionality can be achieved by setting the [lockColumn](#) property to true, which locks the column and moves it to the first position in the grid.

Here's an example of how you can use the `lockColumn` property to lock a `ColumnDirective` in the Syncfusion Grid:

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Reorder }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    const customAttributes = { class: 'customcss' };
    return <GridComponent dataSource={data} allowReordering={true}
allowSelection={false} height={315}>
        <Inject services={[Reorder]} />
        <ColumnsDirective>
            <ColumnDirective field='OrderID' width='100' textAlign="Right" />
            <ColumnDirective field='CustomerID' width='100' />
            <ColumnDirective field='ShipCity' width='100' lockColumn={true}
customAttributes={{ class: 'customcss' }} />
            <ColumnDirective field='ShipName' width='100' />
            <ColumnDirective field='ShipPostalCode' width='120' />
            <ColumnDirective field='ShipRegion' width='140' />
        </ColumnsDirective>
    </GridComponent>;
}
;
export default App;

```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Reorder }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const customAttributes: any = { class: 'customcss' };
  return <GridComponent dataSource={data} allowReordering={true}
allowSelection={false} height={315}>
    <Inject services={[Reorder]} />
    <ColumnsDirective>
      <ColumnDirective field='OrderID' width='100' textAlign="Right" />
      <ColumnDirective field='CustomerID' width='100' />
      <ColumnDirective field='ShipCity' width='100' lockColumn={true}
customAttributes={{ class: 'customcss' }} />
      <ColumnDirective field='ShipName' width='100' />
      <ColumnDirective field='ShipPostalCode' width='120' />
      <ColumnDirective field='ShipRegion' width='140' />
    </ColumnsDirective>
  </GridComponent>
};
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
```



```

        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),

```

```

        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
      },
      {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',

```

```

        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ];

```

Show or hide columns

The Syncfusion Grid control allows you to show or hide columns dynamically by using property or methods available in the grid. This feature can be useful when you want to customize the visibility of columns in the Grid based on the requirements.

Using property

You can show or hide columns in the React Grid using the [visible](#) property of each column. By setting the **visible** property to **true** or **false**, you can control whether the column should be visible or hidden in the grid. Here's an example of how to show or hide a column in the React Grid using the visible property:

In the below example, the **ShipCity** column is defined with **visible** property set to **false**, which will hide the column in the rendered grid.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  return (
    <div>
      <GridComponent dataSource={data} height={315} >
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID'
width='100' />
          <ColumnDirective field='CustomerID' headerText='Customer
ID' width='100' />
          <ColumnDirective field='Freight' headerText='Freight'
textAlign='Right' format='C' width='100' />
          <ColumnDirective field='OrderDate' headerText='Order
Date' textAlign='Right' format='yMd' width='140' />
          <ColumnDirective field='ShipCity' headerText='Ship City'
visible={false} width='140' />
        </ColumnsDirective>
      </GridComponent>
    </div>
  )
}
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  return (
    <div>
      <GridComponent dataSource={data} height={315} >
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID'
width='100' />
          <ColumnDirective field='CustomerID' headerText='Customer
ID' width='100' />
```

```

        <ColumnDirective field='Freight' headerText='Freight'
textAlign='Right' format='C' width='100' />
        <ColumnDirective field='OrderDate' headerText='Order
Date' textAlign='Right' format='yMd' width='140' />
        <ColumnDirective field='ShipCity' headerText='Ship City'
visible={false} width='140' />
    </ColumnsDirective>
</GridComponent></div>

)
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {

```

```

    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {

```

```

    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),

```



```

        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),

```

```

        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]
};

```

* Hiding a column using the `visible` property only affects the UI representation of the grid. The data for the hidden column will still be available in the underlying data source, and can be accessed or modified programmatically.

* When a column is hidden, its width is not included in the calculation of the total grid width.

* To hide a column permanently, you can set its `visible` property to `false` in the column definition, or remove the column definition altogether.

Using method

You can also show or hide columns in the React Grid using the [showColumns](#) and [hideColumns](#) methods of the grid component. These methods allow you to show or hide columns based on either the `headerText` or the `field` of the column.

Based on header text

You can dynamically show or hide columns in the Grid based on the header text by invoking the `showColumns` or `hideColumns` methods. These methods take an array of `ColumnDirective` header texts as the first parameter, and the value `headerText` as the second parameter to specify that you are showing or hiding columns based on the header text.

Here's an example of how to show or hide a `ColumnDirective` based on the `headerText` in the React Grid:

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  const show = () => {
    if (grid) {
      grid.showColumns('Customer ID', 'headerText'); //show by HeaderText
    }
  }
  const hide = () => {
    if (grid) {
      grid.hideColumns('Customer ID', 'headerText'); //hide by HeaderText
    }
  }
  return (<div>
    <ButtonComponent cssClass='e-info' onClick={show}>Show</ButtonComponent>
    <ButtonComponent style={{marginLeft:'20px'}} cssClass='e-info'
    onClick={hide}>Hide</ButtonComponent>
    <GridComponent dataSource={data} height={295} ref={g => grid = g}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='100'
        textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
        width='100' />
        <ColumnDirective field='EmployeeID' headerText='Employee ID'
        width='100' textAlign="Right" />
        <ColumnDirective field='Freight' headerText='Freight' width='100'
        format="C2" textAlign="Right" />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
        width='100' />
      </ColumnsDirective>
    </GridComponent>
  </div>);
};
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, Grid, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
import { data } from './datasource';
```

```
function App() {
  let grid: Grid | null;
  const show = () => {
    if (grid) {
      grid.showColumns('Customer ID', 'headerText'); //show by HeaderText
    }
  }
  const hide = () => {
    if (grid) {
      grid.hideColumns('Customer ID', 'headerText'); //hide by HeaderText
    }
  }
  return (<div>
    <ButtonComponent cssClass='e-info' onClick={show}>Show</ButtonComponent>
    <ButtonComponent style={{marginLeft:'20px'}} cssClass='e-info'
    onClick={hide}>Hide</ButtonComponent>
    <GridComponent dataSource={data} height={295} ref={g => grid = g}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='100'
        textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
        width='100' />
        <ColumnDirective field='EmployeeID' headerText='Employee ID'
        width='100' textAlign="Right" />
        <ColumnDirective field='Freight' headerText='Freight' width='100'
        format="C2" textAlign="Right" />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
        width='100' />
      </ColumnsDirective>
    </GridComponent>
  </div>);
};
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
```

```

    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
    Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
    Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
    Date(8374554e5),

```

```

      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
      'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
      'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
      Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
      Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
      'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
      Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }
  ]
};

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',

```



```

    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
    Freight: 48.29, Verified: !0
  }];

```

Based on field

You can dynamically show or hide columns in the Grid using external buttons based on the field by invoking the `showColumns` or `hideColumns` methods. These methods take an array of `ColumnDirective` fields as the first parameter, and the value field as the second parameter to specify that you are showing or hiding columns based on the field.

Here's an example of how to show or hide a `ColumnDirective` based on the `field` in the React Grid:

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  const show = () => {
    if (grid) {
      grid.showColumns('CustomerID', 'field'); //show by field
    }
  }
  const hide = () => {
    if (grid) {
      grid.hideColumns('CustomerID', 'field'); //hide by field
    }
  }
  return (
    <div>
      <ButtonComponent cssClass='e-info' onClick={show}>Show</ButtonComponent>
      <ButtonComponent style={{marginLeft:'20px'}} cssClass='e-info'
        onClick={hide}>Hide</ButtonComponent>
      <GridComponent dataSource={data} height={295} ref={g => grid = g}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='100'
            textAlign="Right" />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
            width='100' />
          <ColumnDirective field='EmployeeID' headerText='Employee ID'
            width='100' textAlign="Right" />
          <ColumnDirective field='Freight' headerText='Freight' width='100'
            format="C2" textAlign="Right" />
          <ColumnDirective field='ShipCountry' headerText='Ship Country'
            width='100' />
        </ColumnsDirective>
      </GridComponent>
    </div>
  );
};
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, Grid, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid: Grid | null;
  const show = () => {
    if (grid) {
      grid.showColumns('CustomerID', 'field'); //show by field
    }
  }
  const hide = () => {
    if (grid) {
      grid.hideColumns('CustomerID', 'field'); //hide by field
    }
  }
  return (<div>
    <ButtonComponent cssClass='e-info' onClick={show}>Show</ButtonComponent>
    <ButtonComponent style={{marginLeft:'20px'}} cssClass='e-info'
    onClick={hide}>Hide</ButtonComponent>
    <GridComponent dataSource={data} height={295} ref={g => grid = g}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='100'
        textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
        width='100' />
        <ColumnDirective field='EmployeeID' headerText='Employee ID'
        width='100' textAlign="Right" />
        <ColumnDirective field='Freight' headerText='Freight' width='100'
        format="C2" textAlign="Right" />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
        width='100' />
      </ColumnsDirective>
    </GridComponent>
  </div>);
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
      },
      {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',

```

```

        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]
  };

```

DATASOURCE.TSX

```
export let data: Object[] = [
```

```

    {
      OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
      ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
      ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
      OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
      ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {

```

```

    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {

```

```

    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
    Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
    ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
    Freight: 48.29, Verified: !0
  }];

```

Controlling grid actions

You can control various actions such as filtering, grouping, sorting, resizing, reordering, editing, and searching for specific columns in the Syncfusion React Grid using the following properties:

- [allowEditing](#): Enables or disables editing for a column.
- [allowFiltering](#): Enables or disables filtering for a column.
- [allowGrouping](#): Enables or disables grouping for a column.
- [allowSorting](#): Enables or disables sorting for a column.
- [allowReordering](#): Enables or disables reordering for a column.
- [allowResizing](#): Enables or disables resizing for a column.
- [allowSearching](#): Enables or disables searching for a column.

Here is an example code that demonstrates how to control grid actions for specific columns:

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Sort, Filter,
Group, Reorder, Inject, Toolbar, Page, Resize } from '@syncfusion/ej2-react-
grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const toolbarOptions = ['Search'];
  return <GridComponent dataSource={data} allowSorting={true}
allowPaging={true} allowResizing={true} toolbar={toolbarOptions}
allowFiltering={true} allowReordering={true} allowGrouping={true}
height={230}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" isPrimaryKey={true} allowGrouping={false}
allowResizing={false}/>
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' allowSorting={false}/>
      <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
allowReordering={false}/>
      <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='100' allowSearching={false}/>
      <ColumnDirective field='Freight' headerText='Freight' width='100'
format="C2" textAlign="Right" allowFiltering={false}/>
    </ColumnsDirective>
    <Inject services={[Sort, Filter, Group, Reorder, Toolbar, Page, Resize]}
/>
  </GridComponent>
};
export default App;

```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Sort, Filter,
Group, Reorder, Inject, Toolbar, Page, Resize } from '@syncfusion/ej2-react-
grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
    const toolbarOptions: any = ['Search'];
    return <GridComponent dataSource={data} allowSorting={true}
allowPaging={true} allowResizing={true} toolbar={toolbarOptions}
allowFiltering={true} allowReordering={true} allowGrouping={true}
height={230}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" isPrimaryKey={true} allowGrouping={false}
allowResizing={false}/>
            <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' allowSorting={false}/>
            <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
allowReordering={false}/>
            <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='100' allowSearching={false}/>
            <ColumnDirective field='Freight' headerText='Freight' width='100'
format="C2" textAlign="Right" allowFiltering={false}/>
        </ColumnsDirective>
        <Inject services={[Sort, Filter, Group, Reorder, Toolbar, Page, Resize]}
/>
    </GridComponent>
};
export default App;
```

DATASOURCE.JSX

```
export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
```



```

    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
    Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
    Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
    Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
    'Carrera 22 con Ave. Carlos Soublette #8-35',

```

```

        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]
  };

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },

```

```

    {
      OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
      ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
  ]
}

```

```

    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
    ]];

```

Customize column styles

Customizing the grid column styles allows you to modify the appearance of columns in the Grid control to meet your design requirements. You can customize the font, background color, and other styles of the columns. To customize the columns styles in the grid, you can use grid event, css, property or method support.

For more information check on this [documentation](#).

Manipulating columns

The Syncfusion Grid for React provides powerful features for manipulating columns in a grid. This section explains how to access columns, update column definitions, and add/remove columns using Syncfusion Grid properties, methods, and events.

Accessing columns

To access columns in the Syncfusion Grid, you can use the following methods in the grid.

- [getColumns](#):

This method returns the array of columns defined in the grid.

,

```
let columns = grid.getColumns();
```

,

- [getColumnByField](#):

This method returns the column object that matches the specified field name.

,

```
let column = grid.getColumnByField('ProductName');
```

,

- [getColumnByUid](#):

This method returns the column object that matches the specified UID.

,

```
let column = grid.getColumnByUid();
```

,

- [getVisibleColumns](#):

This method returns the array of visible columns.

,

```
let visibleColumns = grid.getVisibleColumns();
```

,

- [getForeignKeyColumns](#):

This method returns the array of foreignkey columns.

```
let foreignKeyColumns = grid.getForeignKeyColumns();
```

- [getColumnFieldNames](#):

This method returns an array of field names of all the columns in the Grid.

```
let fieldNames = grid.getColumnFieldNames()
```

For a complete list of column methods and properties, refer to this [section](#).

Updating column definitions

You can update the column definitions in the Grid using the [columns](#) property. You can modify the properties of the column objects in the columns array to update the columns dynamically. For example, you can change the headerText, width, visible, and other properties of a column to update its appearance and behavior in the grid and then call the [refreshColumns](#) method to apply the changes to the grid.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, Grid, GridComponent, Sort,
Filter, Group, Reorder, Inject, Toolbar, Page } from '@syncfusion/ej2-react-
grids';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  let grid;
  const updateColumn = () => {
    // Modifying column properties
    grid.columns[0].textAlign = 'Center';
    grid.columns[0].width = '100';
    grid.columns[2].visible = false;
    grid.columns[1].customAttributes = { class: 'customcss' };
    // Applying changes to the grid
    grid.refreshColumns();
  }
  return (
    <div>
      <ButtonComponent id='btnId' cssClass='e-info'
onClick={updateColumn}>Update Columns</ButtonComponent>
      <GridComponent dataSource={data} ref={g => grid = g} height={230}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID'
width='100' textAlign='Right' isPrimaryKey={true} allowGrouping={false}
allowResizing={false} />

```

```

        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' allowSorting={false} />
        <ColumnDirective field='ShipCity' headerText='Ship City'
width='100' allowReordering={false} />
        <ColumnDirective field='ShipCountry' headerText='Ship
Country' width='100' allowSearching={false} />
        <ColumnDirective field='Freight' headerText='Freight'
width='100' format="C2" textAlign="Right" allowFiltering={false} />
    </ColumnsDirective>
    <Inject services={[Sort, Filter, Group, Reorder, Toolbar, Page]}
/>
  </GridComponent>
</div>)
};
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, Grid, GridComponent, Sort,
Filter, Group, Reorder, Inject } from '@syncfusion/ej2-react-grids';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  let grid: Grid | null;
  const updateColumn = () => {
    // Modifying column properties
    (grid as any).columns[0].textAlign = 'Center';
    (grid as any).columns[0].width = '100';
    (grid as any).columns[2].visible = false;
    (grid as any).columns[1].customAttributes = { class: 'customcss' };
    // Applying changes to the grid
    (grid as any).refreshColumns();
  }
  return (<div>
    <ButtonComponent id='btnId' cssClass='e-info'
onClick={updateColumn}>Update Columns</ButtonComponent>
    <GridComponent dataSource={data} ref={g => grid = g} height={230}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID'
width='100' textAlign="Right" isPrimaryKey={true} allowGrouping={false}
allowResizing={false} />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' allowSorting={false} />
        <ColumnDirective field='ShipCity' headerText='Ship City'
width='100' allowReordering={false} />
        <ColumnDirective field='ShipCountry' headerText='Ship
Country' width='100' allowSearching={false} />
        <ColumnDirective field='Freight' headerText='Freight'
width='100' format="C2" textAlign="Right" allowFiltering={false} />
      </ColumnsDirective>
      <Inject services={[Sort, Filter, Group, Reorder]} />
    </GridComponent>
  </div>);
};
export default App;

```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
```



```

        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),

```

```

        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]
  ];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',

```

```

        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]];

```

Adding/Removing Columns

The Grid component allows you to dynamically add or remove columns to and from the grid using the `[columns]` <https://help.ej2.syncfusion.com/react/documentation/api/grid/column/#columns> property, which can be accessed through the instance of the Grid.

To add a new column to the Grid, you can directly **push** the new column object to the `columns` property. To remove a column from the Grid, you can use the **pop** method, which removes the last element from the `columns` array of the Grid. Alternatively, you can use the `splice` method to remove a specific column from the `columns` array.

Here's an example of how you can add and remove a column from the grid:

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Sort, Filter,
Group, Reorder, Inject, Toolbar, Page, ColumnModel } from '@syncfusion/ej2-
react-grids';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  const addColumn = () => {
    const newColumns = [
      { field: 'EmployeeID', headerText: 'EmployeeID', width: 120 },
      { field: 'OrderDate', headerText: 'Order Date', width: 120, format:
'yMd' },
    ];
  };

```

```

    for (const col of newColumns) {
      grid.columns.push(col);
    }
    grid.refreshColumns();
  });
  const deleteColumn = (() => {
    grid.columns.pop();
    grid.refreshColumns();
  });
  return (<div>
    <ButtonComponent id='btnAdd' cssClass='e-info' onClick={addColumn}>Add
Column</ButtonComponent>
    <ButtonComponent id='btnDel' cssClass='e-info'
onClick={deleteColumn}>Delete Column</ButtonComponent>
    <GridComponent dataSource={data} ref={g => grid = g} height={230}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" isPrimaryKey={true} allowGrouping={false}
allowResizing={false} />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' allowSorting={false} />
        <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
allowReordering={false} />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='100' allowSearching={false} />
        <ColumnDirective field='Freight' headerText='Freight' width='100'
format="C2" textAlign="Right" allowFiltering={false} />
      </ColumnsDirective>
      <Inject services={[Sort, Filter, Group, Reorder, Toolbar, Page]} />
    </GridComponent>
  </div>)
};
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, Grid, GridComponent, Sort,
Filter, Group, Reorder, Inject, Toolbar, Page, ColumnModel } from
'@syncfusion/ej2-react-grids';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  let grid: Grid | null;
  const addColumn = (() => {
    const newColumns: ColumnModel[] = [
      { field: 'EmployeeID', headerText: 'EmployeeID', width: 120 },
      { field: 'OrderDate', headerText: 'Order Date', width: 120, format:
'yMd' },
    ];
    for (const col of newColumns) {
      (grid as any).columns.push(col);
    }
    (grid as any).refreshColumns();
  });
  const deleteColumn = (() => {

```

```

    (grid as any).columns.pop();
    (grid as any).refreshColumns();
  });
  return (<div>
    <ButtonComponent id='btnAdd' cssClass='e-info' onClick={addColumn}>Add
    Column</ButtonComponent>
    <ButtonComponent id='btnDel' cssClass='e-info'
    onClick={deleteColumn}>Delete Column</ButtonComponent>
    <GridComponent dataSource={data} ref={g => grid = g} height={230}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='100'
        textAlign="Right" isPrimaryKey={true} allowGrouping={false}
        allowResizing={false} />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
        width='100' allowSorting={false} />
        <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
        allowReordering={false} />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
        width='100' allowSearching={false} />
        <ColumnDirective field='Freight' headerText='Freight' width='100'
        format="C2" textAlign="Right" allowFiltering={false} />
      </ColumnsDirective>
      <Inject services={[Sort, Filter, Group, Reorder, Toolbar, Page]} />
    </GridComponent>
  </div>
  );
  export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {

```

```

    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {

```

```

    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),

```



```

        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),

```

```

        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]];

```

How to refresh columns

You can use the [refreshColumns](#) method of the Syncfusion Grid to refresh the columns in the grid. This method can be used when you need to update the grid columns dynamically based on user actions or data changes.

```
`ts
```

```
grid.refreshColumns();
```

```
,
```

Responsive columns

The Syncfusion React Grid provides a built-in feature to toggle the visibility of columns based on media queries using the [hideAtMedia](#) property of the column object. The `hideAtMedia` accepts valid [Media Queries](#).

In this example, we have a Grid that displays data with three columns: **Order ID**, **Customer ID**, and **Freight**. We have set the `hideAtMedia` property of the **OrderID** column to (min-width: 700px) which means that this column will be hidden when the browser screen width is less than or equal to 700px.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  return <GridComponent dataSource={data} height={315}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='120'
        textAlign="Right"
        hideAtMedia='(min-width:700px)' /> // Column visibility hide when
        browser screen width less than 700px
      <ColumnDirective field='CustomerID' headerText='Customer ID'
        width='150'
        hideAtMedia='(max-width:700px)' /> //Column Visibility show when
        browser screen width 500px or less
      <ColumnDirective field='ShipCity' headerText='Ship City' width='150'
        hideAtMedia='(min-width:500px)' /> //Column visibility hide when
        browser screen width less than 700px
      <ColumnDirective field='ShipName' headerText='Ship Name' width='150' />
      //It is always shown
    </ColumnsDirective>
  </GridComponent>
}
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  return <GridComponent dataSource={data} height={315}>
    <ColumnsDirective>
```

```

    <ColumnDirective field='OrderID' headerText='Order ID' width='120'
    textAlign="Right"
        hideAtMedia='(min-width:700px)' /> // Column visibility hide when
    browser screen width less than 700px
    <ColumnDirective field='CustomerID' headerText='Customer ID'
    width='150'
        hideAtMedia='(max-width:700px)' /> //Column Visibility show when
    browser screen width 500px or less
    <ColumnDirective field='ShipCity' headerText='Ship City' width='150'
        hideAtMedia='(min-width:500px)' /> //Column visibility hide when
    browser screen width less than 700px
    <ColumnDirective field='ShipName' headerText='Ship Name' width='150' />
    //It is always shown
    </ColumnsDirective>
    </GridComponent>
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
        Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
    }
]

```

```

        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),

```

```

        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
        Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',

```

```

        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',

```

```

        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ];

```

See also

- [Group Column by Format](#)

Row in React Grid component

Each row typically represents a single record or item from a data source. Rows in a grid are used to present data in a tabular format. Each row displays a set of values representing the fields of an individual data record. Rows allow users to interact with the data in the grid. Users can select rows, edit cell values, perform sorting or filtering operations, and trigger events based on actions.

Customize row styles

Customizing the styles of rows in a Syncfusion Grid allows you to modify the appearance of rows to meet your design requirements. This feature is useful when you want to highlight certain rows or change the font style, background color, and other properties of the row to enhance the visual appeal of the grid. To customize the row styles in the grid, you can use CSS, properties, methods, or event support provided by the Syncfusion React Grid component.

Using event

You can customize the appearance of the rows by using the [rowDataBound](#) event. This event triggers for every row when it is bound to the data source. In the event handler, you can get the [RowDataBoundEventArgs](#) object, which contains details of the row. You can use this object to modify the row's appearance, add custom elements, or perform any other customization.

Here's an example of how you can use the [rowDataBound](#) event to customize the styles of rows based on the value of the **Freight** column. This example involves checking the value of the Freight column for each row and adding a CSS class to the row based on the value. The CSS classes **below-30**, **below-80**, and **above-80** can then be defined in your stylesheet to apply the desired styles to the rows.

APP.JSX

```
import { getValue } from '@syncfusion/ej2-base';
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  const rowDataBound = (args) => {
    if (args.row) {
      if (getValue('Freight', args.data) < 30) {
        args.row.classList.add('below-30');
      }
      else if (getValue('Freight', args.data) < 80) {
        args.row.classList.add('below-80');
      }
      else {
        args.row.classList.add('above-80');
      }
    }
  };
  return (
    <div>
      <GridComponent dataSource={data} height={315} enableHover={false}
        allowSelection={false} rowDataBound={rowDataBound}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='100'
            textAlign="Right"/>
          <ColumnDirective field='CustomerID' headerText='Customer ID'
            width='100'/>
          <ColumnDirective field='EmployeeID' headerText='Employee ID'
            width='100' textAlign="Right"/>
          <ColumnDirective field='Freight' headerText='Freight' width='80'
            textAlign="Right"/>
          <ColumnDirective field='ShipCountry' headerText='Ship Country'
            width='100'/>
        </ColumnsDirective>
      </GridComponent>
    </div>
  );
}
```

```

    </div>);
  }
;
export default App;

```

APP.TSX

```

import { getValue } from '@syncfusion/ej2-base';
import { ColumnDirective, ColumnsDirective, GridComponent,
RowDataBoundEventArgs } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const rowDataBound = (args: RowDataBoundEventArgs) => {
    if (args.row) {
      if (getValue('Freight', args.data) < 30) {
        args.row.classList.add('below-30');
      } else if (getValue('Freight', args.data) < 80) {
        args.row.classList.add('below-80');
      } else {
        args.row.classList.add('above-80');
      }
    }
  }
  return (<div>
    <GridComponent dataSource={data} height={315} enableHover={false}
allowSelection={false}
    rowDataBound={rowDataBound}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
        <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='100' textAlign="Right" />
        <ColumnDirective field='Freight' headerText='Freight' width='80'
textAlign="Right" />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='100' />
      </ColumnsDirective>
    </GridComponent>
  </div>);
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },

```

```

    {
      OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
      ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
  ]
}

```

```

    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```
export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
```

```

      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),

```

```

        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]];

```

The [queryCellInfo](#) event can also be used to customize cells and is triggered for every cell in the grid. It can be useful when you need to customize cells based on certain conditions or criteria.

Using CSS

You can apply styles to the rows using CSS selectors. The Grid provides a class name for each row element, which you can use to apply styles to that specific row.

Customize alternate rows

You can customize the appearance of the alternate rows using CSS. This can be useful for improving the readability of the data and making it easier to distinguish between rows. By default, Syncfusion Grid provides the CSS class **.e-altrow** to style the alternate rows. You can customize this default style by overriding the **.e-altrow** class with your custom CSS styles.

To change the background color of the alternate rows, you can add the following CSS code to your application's stylesheet:

```

`css
.e-grid .e-altrow {
background-color: #fafafa;
}
`

```

Here's an example of how to use the **.e-altrow** class to style alternate rows:

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Page }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const pageSettings = { pageSize: 7 };
  return <GridComponent dataSource={data} allowPaging={true}
    pageSettings={pageSettings}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' width='100' textAlign="Right"/>
      <ColumnDirective field='CustomerID' width='100' />
      <ColumnDirective field='EmployeeID' width='100' textAlign="Right"/>
    </ColumnsDirective>
  </GridComponent>

```

```

        <ColumnDirective field='Freight' width='100' format="C2"
        textAlign="Right"/>
        <ColumnDirective field='ShipCountry' width='100' />
    </ColumnsDirective>
    <Inject services={[Page]}/>
</GridComponent>;
}
;
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Page,
PageSettingsModel } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    const pageSettings: PageSettingsModel = { pageSize: 7 };
    return <GridComponent dataSource={data} allowPaging={true}
pageSettings={pageSettings}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' width='100' textAlign="Right" />
            <ColumnDirective field='CustomerID' width='100' />
            <ColumnDirective field='EmployeeID' width='100' textAlign="Right" />
            <ColumnDirective field='Freight' width='100' format="C2"
            textAlign="Right" />
            <ColumnDirective field='ShipCountry' width='100' />
        </ColumnsDirective>
        <Inject services={[Page]} />
    </GridComponent>
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),

```



```

      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
      Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
      'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
      Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
      'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
      Date(8374554e5),

```

```

      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
  ];
export let sdata = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'Brazil',
Freight: 32.38, Verified: !0
  },
  {

```

```

    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Brazil',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),

```

```

        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),

```

```

        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
  ];

```

Customize selected row

You can customize the appearance of the selected row using CSS. This is useful when you want to highlight the currently selected row for improve the visual appeal of the Grid. By default, the Grid provides the CSS class **.e-selectionbackground** to style the selected row. You can customize this default style by overriding the **.e-selectionbackground** class with your own custom CSS styles.

To change the background color of the selected row, you can add the following CSS code to your application:

```

`css
.e-grid .e-selectionbackground {
background-color: #f9920b;
}
`

```

Here's an example of how to use the **.e-selectionbackground** class to style the selected row:

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Page }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
    const pageSettings = { pageSize: 7 };
    return <GridComponent dataSource={data} allowPaging={true}
pageSettings={pageSettings}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' width='100' textAlign="Right"/>
            <ColumnDirective field='CustomerID' width='100' />
            <ColumnDirective field='EmployeeID' width='100'
textAlign="Right"/>
            <ColumnDirective field='Freight' width='100' format="C2"
textAlign="Right"/>
            <ColumnDirective field='ShipCountry' width='100' />
        </ColumnsDirective>
        <Inject services={[Page]} />
    </GridComponent>;
}

```

```
;
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Page,
PageSettingsModel } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const pageSettings: PageSettingsModel = { pageSize: 7 };
  return <GridComponent dataSource={data} allowPaging={true}
pageSettings={pageSettings}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' width='100' textAlign="Right"/>
      <ColumnDirective field='CustomerID' width='100' />
      <ColumnDirective field='EmployeeID' width='100'
textAlign="Right"/>
      <ColumnDirective field='Freight' width='100' format="C2"
textAlign="Right"/>
      <ColumnDirective field='ShipCountry' width='100' />
    </ColumnsDirective>
    <Inject services={[Page]} />
  </GridComponent>
};
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
```

```

    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {

```



```

    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),

```

```

        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),

```

```

        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]];

```

Using method

The Grid provides below methods to customize the appearance of the grid rows :

1. [getRowByIndex](#): This method returns the HTML element of a row at the specified index. You can use this method to apply custom styles to a specific row.
2. [getRowIndexByPrimaryKey](#): This method returns the index of the row with the specified primary key. You can use this method to get the index of a specific row and then apply custom styles to it.
3. [getRows](#): This method returns an array of all the row elements in the Grid. You can use this method to apply custom styles to all rows or to a specific set of rows based on some condition.
4. [getRowInfo](#): This method returns the data object and index of the row corresponding to the specified row element. You can use this method to apply custom styles based on the data in a row.
5. [getSelectedRowIndex](#): This method returns an array of the indexes of the selected rows in the Grid. You can use this method to apply custom styles to the selected rows.
6. [getSelectedRows](#): This method returns an array of the HTML elements representing the selected rows in the grid. You can use this method to directly loop through the selected rows and customize their styles.

The following example demonstrates how to use [getRowByIndex](#) methods to customize the appearance of the row inside the [dataBound](#) event of the grid.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  let grid;
  const customizeRow = () => {
    (grid.getRowByIndex(2)).style.background = 'rgb(193, 228, 234)';
  }
  return <GridComponent ref={g => grid = g} dataSource={data}
    dataBound={customizeRow}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' width='100' textAlign="Right" />
      <ColumnDirective field='CustomerID' width='100' />
      <ColumnDirective field='EmployeeID' width='100' textAlign="Right" />
      <ColumnDirective field='Freight' width='100' format="C2"
        textAlign="Right" />
      <ColumnDirective field='ShipCountry' width='100' />
    </ColumnsDirective>
  </GridComponent>
</App>
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  let grid: GridComponent | null;
  const customizeRow = () => {
```

```

    ((grid as GridComponent).getRowByIndex(2)).style.background = 'rgb(193,
228, 234)';
  })
  return <GridComponent ref={g => grid = g} dataSource={data}
dataBound={customizeRow}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' width='100' textAlign="Right" />
      <ColumnDirective field='CustomerID' width='100' />
      <ColumnDirective field='EmployeeID' width='100' textAlign="Right" />
      <ColumnDirective field='Freight' width='100' format="C2"
textAlign="Right" />
      <ColumnDirective field='ShipCountry' width='100' />
    </ColumnsDirective>
  </GridComponent>
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),

```

```

      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),

```

```

        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
];
export let sdata = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
        Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'Brazil',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {

```

```

    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Brazil',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),

```



```

        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),

```

```

        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]];

```

Row height

The Syncfusion Grid allows you to customize the height of rows based on your needs. This feature can be useful when you need to display more content in a row or when you want to reduce the height of rows to fit its content. You can achieve this by using the [rowHeight](#) property of the Grid component. This property allows you to change the height of the entire grid row to your desired value.

In the below example, we will demonstrate how to dynamically change the height of the rows using the `rowHeight` property.

APP.JSX

```
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  let heightRow = { small: 20, medium: 40, big: 60 };
  const changeHeight = (args) => {
    grid.rowHeight = heightRow[args.target.id];
  };
  return (
    <div>
      <ButtonComponent id="small" cssClass="e-small"
onClick={changeHeight}>Change height 20px</ButtonComponent>
      <ButtonComponent id="medium" cssClass="e-small"
onClick={changeHeight}>Change height 40px</ButtonComponent>
      <ButtonComponent id="big" cssClass="e-small"
onClick={changeHeight}>Change height 60px</ButtonComponent>
      <GridComponent dataSource={data} height={315} ref={g => grid = g}
rowHeight={42}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='100'
/>
          <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
          <ColumnDirective field='Freight' headerText='Freight' width='100'
/>
          <ColumnDirective field='OrderDate' headerText='Order Date'
width='140' format='yMd' />
        </ColumnsDirective>
      </GridComponent></div>
    )
  }
  export default App;
```

APP.TSX

```
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid: GridComponent | null;
  let heightRow: Object = { small: 20, medium: 40, big: 60 };
  const changeHeight = (args) => {
    grid!.rowHeight = heightRow[args.target.id];
  };
  return (
    <div>
      <ButtonComponent id="small" cssClass="e-small"
onClick={changeHeight}>Change height 20px</ButtonComponent>
      <ButtonComponent id="medium" cssClass="e-small"
onClick={changeHeight}>Change height 40px</ButtonComponent>
      <ButtonComponent id="big" cssClass="e-small"
onClick={changeHeight}>Change height 60px</ButtonComponent>
      <GridComponent dataSource={data} height={315} ref={g => grid = g}
rowHeight={42}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='100'
/>
          <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
          <ColumnDirective field='Freight' headerText='Freight' width='100'
/>
          <ColumnDirective field='OrderDate' headerText='Order Date'
width='140' format='yMd' />
        </ColumnsDirective>
      </GridComponent></div>
    )
  }
  export default App;
```

```

const changeHeight = ((args) => {
  (grid as GridComponent).rowHeight = heightRow[args.target.id];
});
return (
  <div>
    <ButtonComponent id="small" cssClass="e-small"
onClick={changeHeight}>Change height 20px</ButtonComponent>
    <ButtonComponent id="medium" cssClass="e-small"
onClick={changeHeight}>Change height 40px</ButtonComponent>
    <ButtonComponent id="big" cssClass="e-small"
onClick={changeHeight}>Change height 60px</ButtonComponent>
    <GridComponent dataSource={data} height={315} ref={g => grid = g}
rowHeight={42}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='100'
/>
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
        <ColumnDirective field='Freight' headerText='Freight' width='100'
/>
        <ColumnDirective field='OrderDate' headerText='Order Date'
width='140' format='yMd' />
      </ColumnsDirective>
    </GridComponent></div>
  )
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {

```

```

    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {

```

```

    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),

```

```

        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),

```

```

    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
    Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
    'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
    'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
    Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
    6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
    Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
    Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
    ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
    Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
    Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
    'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
    Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
    Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
    Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
    Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
    ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
    Freight: 48.29, Verified: !0
  }
  ]];

```


- * The `rowHeight` property can only be used to set the height of the entire grid row. It cannot be used to set the height of individual cells within a row.
- * The `rowHeight` property applies the height to all rows in the grid, including the header and footer rows.
- * You can also set the height for a specific row using the `rowHeight` property of the corresponding row object in the `rowDataBound` event.

Customize row height for particular row

Customizing the row height for a particular row can be useful when you want to display more content in a particular row, reduce the height of a row to fit its content, or make a specific row stand out from the other rows in the grid. This can be achieved by using the `rowHeight` property of the Grid component along with the `rowDataBound` event.

The `rowHeight` property of the Grid component allows you to set the height of all rows in the grid to a specific value. However, if you want to customize the row height for a specific row based on the row data, you can use the `rowDataBound` event. This event is triggered every time a request is made to access row information, element, or data, and before the row element is appended to the Grid element.

In the below example, the row height for the row with OrderID as '10249' is set as '90px' using the `rowDataBound` event.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { DataManager, Query } from '@syncfusion/ej2-data';
import { data } from './datasource';
function App() {
  const rowDataBound = (args) => {
    if (args.data.OrderID === 10249) {
      args.rowHeight = 90;
    }
  };
  const gridData = new DataManager(data).executeLocal(new Query().take(8));
  return (<div>
    <GridComponent dataSource={gridData} height={315}
    rowDataBound={rowDataBound}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='120'
        textAlign='Right' />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
        width='140' />
        <ColumnDirective field='Freight' headerText='Freight' width='120'
        format='C' />
        <ColumnDirective field='OrderDate' headerText='OrderDate' width='140'
        format='yMd' />
      </ColumnsDirective>
    </GridComponent>
  </div>);
}
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent,
RowDataBoundEventArgs } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { DataManager, Query } from '@syncfusion/ej2-data';
import { data } from '../datasource';
interface OrderDetails {
  OrderID?: number;
}
function App() {
  const rowDataBound = (args: RowDataBoundEventArgs) => {
    if ((args.data as OrderDetails).OrderID === 10249) {
      args.rowHeight = 90;
    }
  }
  const gridData: Object = new DataManager(data).executeLocal(new
Query().take(8));
  return (<div>
    <GridComponent dataSource={gridData} height={315}
rowDataBound={rowDataBound}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign='Right' />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='140' />
        <ColumnDirective field='Freight' headerText='Freight' width='120'
format='C' />
        <ColumnDirective field='OrderDate' headerText='OrderDate' width='140'
format='yMd' />
      </ColumnsDirective>
    </GridComponent>
  </div>);
};
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
```

```

    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {

```

```

    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),

```

```

      ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
      ShipAddress: '59 rue de l Abbaye',
      ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
      Freight: 32.38, Verified: !0
    },
    {
      OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
      Date(836505e6),
      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
      'Luisenstr. 48',
      ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
      Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
      Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
      Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),

```

```

      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),

```

```

        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }];

```

* In virtual scrolling mode, it is not applicable to set different row heights.

* You can customize the row height of multiple rows by checking the relevant criteria in the `rowDataBound` event and setting the `rowHeight` property accordingly.

* In the `rowDataBound` event handler, you can access the current row using the `args.row` property and set the `rowHeight` property for that row using the `setAttribute` method.

Row hover

The Row Hover feature in Grid provides a visual effect when the mouse pointer hovers over the rows, making it easy to highlight and identify the selected row. This feature can also improve the readability of data in the grid. The row hover effect can be enabled or disabled using the `enableHover` property of the Grid component.

By default, the `enableHover` property is set to **true**, which means that the row hovering effect is enabled. To disable the row hover effect, set the `enableHover` property to **false**.

Here is an example that demonstrates how to enable/disable the Row Hover feature:

APP.JSX

```

import { SwitchComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import React, { useState } from 'react';
import { data } from './datasource';
function App() {
    const [enableRowHover, setEnableRowHover] = useState(true);
    const changeValue = () => {
        setEnableRowHover(!enableRowHover);
    };
    return (
        <div>
            <label style={{ padding: "10px 10px" }}>
                Enable/Disable Row Hover
            </label>
            <SwitchComponent id="switch" checked={enableRowHover}
            change={changeValue}></SwitchComponent>
            <GridComponent dataSource={data} enableHover={enableRowHover}>
                <ColumnsDirective>
                    <ColumnDirective field='OrderID' headerText='Order ID' width='100'
                />
                    <ColumnDirective field='CustomerID' headerText='Customer ID'
                width='100' />
                    <ColumnDirective field='Freight' headerText='Freight' width='100'
                />
                    <ColumnDirective field='OrderDate' headerText='Order Date'
                width='140' format='yMd' />
                </ColumnsDirective>
            </GridComponent></div>

```

```
}
export default App;
```

APP.TSX

```
import { SwitchComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import React, { useState } from 'react';
import { data } from './datasource';
function App() {
  const [enableRowHover, setEnableRowHover] = useState(true);
  const changeValue = () => {
    setEnableRowHover(!enableRowHover);
  };
  return (
    <div>
      <label style={{ padding: "10px 10px" }}>
        Enable/Disable Row Hover
      </label>
      <SwitchComponent id="switch" checked={enableRowHover}
change={changeValue}></SwitchComponent>
      <GridComponent dataSource={data} enableHover={enableRowHover}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='100'
/>
          <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
          <ColumnDirective field='Freight' headerText='Freight' width='100'
/>
          <ColumnDirective field='OrderDate' headerText='Order Date'
width='140' format='yMd' />
        </ColumnsDirective>
      </GridComponent></div>
    )
  }
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
]
```



```

    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
  ]
}

```

```

    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),

```

```

      ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
      ShipAddress: '59 rue de l Abbaye',
      ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
      Freight: 32.38, Verified: !0
    },
    {
      OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
      Date(836505e6),
      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
      'Luisenstr. 48',
      ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
      Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
      Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
      Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),

```

```

      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),

```

```

    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
    ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
    Freight: 48.29, Verified: !0
  }];

```

The `enableHover` property applies to the entire grid, not individual rows or columns.

How to get the row information when hovering over the cell

You can retrieve row information when hovering over a specific cell. This can be useful if you want to display additional details or perform some action based on the data in the row. This can be achieved by using the `rowDataBound` event and the `getRowInfo` method of the Grid.

- The `rowDataBound` event is triggered every time a request is made to access row information, element, or data, before the row element is appended to the Grid element.
- The `getRowInfo` method is used to retrieve the row information when hovering over a specific cell. This method takes a single parameter, which is the target element that is being hovered over.

Here's an example that demonstrates how to use the `rowDataBound` event and `getRowInfo` method to retrieve the row information when hovering over a cell in the Syncfusion Grid.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  const rowDataBound = (args) => {
    args.row.addEventListener('mouseover', (e) => {
      const rowInformation = grid.getRowInfo(e.target);
      console.log(rowInformation);
      document.getElementById('show').innerHTML = `
        <table style="border-collapse: collapse; width: 600px;">
          <tr style="border: 2px solid;">
            <td style="padding: 2px;"><b>Row Information:</b></td>
          </tr>
          <tr style="border: 2px solid; padding: 8px;">
            <th style="border: 2px solid; padding: 8px; width:
120px;"><b>Class Name</b>
            </th>
            <td style="border: 2px solid; padding:
8px;">${rowInformation.row.className}
            </td>
          </tr>
          <tr style="border: 2px solid;">
            <th style="border: 2px solid; padding: 8px;"><b>Row
Index</b>
            </th>
            <td style="border: 2px solid; padding:
8px;">${rowInformation.rowIndex}
            </td>

```

```

        </tr>
      </table>`;
    });
  });
  return (
    <div>
      <div id='show' style={{ padding: "0px 0px 20px 0px" }} ></div>
      <GridComponent dataSource={data} ref={g => grid = g}
        rowDataBound={rowDataBound}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='100'
        />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
        width='100' />
          <ColumnDirective field='Freight' headerText='Freight' width='100'
        />
          <ColumnDirective field='OrderDate' headerText='Order Date'
        width='140' format='yMd' />
        </ColumnsDirective>
      </GridComponent></div>
    )
  }
  export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent,
RowDataBoundEventArgs } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid: GridComponent | null;
  const rowDataBound = ((args: RowDataBoundEventArgs) => {
    args.row.addEventListener('mouseover', (e: MouseEvent) => {
      const rowInformation = (grid as GridComponent).getRowInfo(e.target as
      HTMLInputElement);
      console.log(rowInformation);
      (document.getElementById('show') as HTMLInputElement).innerHTML = `
        <table style="border-collapse: collapse; width: 600px;">
          <tr style="border: 2px solid;">
            <td style="padding: 2px;"><b>Row Information:</b></td>
          </tr>
          <tr style="border: 2px solid; padding: 8px;">
            <th style="border: 2px solid; padding: 8px; width:
120px;"><b>Class Name</b>
            </th>
            <td style="border: 2px solid; padding:
8px;">${rowInformation.row.className}
            </td>
          </tr>
          <tr style="border: 2px solid;">
            <th style="border: 2px solid; padding: 8px;"><b>Row
Index</b>
            </th>
            <td style="border: 2px solid; padding:
8px;">${rowInformation.rowIndex}
            </td>

```

```

        </tr>
      </table>`;
    });
  });
  return (
    <div>
      <div id='show' style={{ padding: "0px 0px 20px 0px" }} ></div>
      <GridComponent dataSource={data} ref={g => grid = g}
        rowDataBound={rowDataBound}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='100'
        />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
          <ColumnDirective field='Freight' headerText='Freight' width='100'
        />
          <ColumnDirective field='OrderDate' headerText='Order Date'
width='140' format='yMd' />
        </ColumnsDirective>
      </GridComponent></div>)
    }
  export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',

```



```

        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]
  ];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },

```

```

    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
  ]
}

```

```

    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

The `getRowInfo` method can only be used in the `rowDataBound` event. Attempting to use it elsewhere will result in an error.

Row pinning (Frozen) in React Grid component

The Syncfusion React Grid allows you to freeze rows to keep them visible while scrolling vertically through large datasets. This feature enhances the experience by maintaining important information within view at all times.

In the following example, the [frozenRows](#) property is set to **3**. This configuration freezes the top three rows of the grid, and they will remain fixed in their positions while the rest of the grid can be scrolled vertically.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, Freeze, GridComponent, Inject }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { NumericTextBoxComponent } from '@syncfusion/ej2-react-inputs';
function App() {
  let grid;
  let textBox;
  const frozenRows = () => {
    grid.frozenRows = textBox.value;
  }
  return (
    <div>
      <label style={{ padding: "10px 10px 26px 0" }}> Change the frozen rows:
    </label>
    <NumericTextBoxComponent ref={t => textBox = t} id='frozenrows' min={0}
max={5} validateDecimalOnType={true} decimals={0} value={2} format='n'
width='150'></NumericTextBoxComponent>
    <ButtonComponent style={{ marginLeft: "5px" }}
onClick={frozenRows}>UPDATE</ButtonComponent>
    <GridComponent ref={g => grid = g} dataSource={data} height={315}
frozenRows={2}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='150'
/>
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='180' />
        <ColumnDirective field='Freight' headerText='Freight' width='120'
/>
        <ColumnDirective field='ShipCity' headerText='Ship City'
width='200' />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' />
        <ColumnDirective field='ShipName' headerText='Ship Name'
width='180' />
        <ColumnDirective field='ShipRegion' headerText='Ship Region'
width='220' />
        <ColumnDirective field='ShipAddress' headerText='Ship Address'
width='200' />
        <ColumnDirective field='OrderDate' headerText='Order Date'
width='140' format='yMd' />
      </ColumnsDirective>
      <Inject services={[Freeze]} />
    </GridComponent></div>
  )
}
export default App;
```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, Freeze, GridComponent, Inject }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { NumericTextBoxComponent } from '@syncfusion/ej2-react-inputs';
function App() {
  let grid: GridComponent | null;
  let textBox: NumericTextBoxComponent | null;
  const frozenRows = () => {
    (grid as GridComponent).frozenRows = (textBox as
NumericTextBoxComponent).value;
  }
  return (
    <div>
      <label style={{ padding: "10px 10px 26px 0" }}> Change the frozen rows:
</label>
      <NumericTextBoxComponent ref={t => textBox = t} id='frozenrows' min={0}
max={5} validateDecimalOnType={true} decimals={0} value={2} format='n'
width='150'></NumericTextBoxComponent>
      <ButtonComponent style={{ marginLeft: "5px" }}
onClick={frozenRows}>UPDATE</ButtonComponent>
      <GridComponent ref={g => grid = g} dataSource={data} height={315}
frozenRows={2}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='150'
/>
          <ColumnDirective field='CustomerID' headerText='Customer ID'
width='180' />
          <ColumnDirective field='Freight' headerText='Freight' width='120'
/>
          <ColumnDirective field='ShipCity' headerText='Ship City'
width='200' />
          <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' />
          <ColumnDirective field='ShipName' headerText='Ship Name'
width='180' />
          <ColumnDirective field='ShipRegion' headerText='Ship Region'
width='220' />
          <ColumnDirective field='ShipAddress' headerText='Ship Address'
width='200' />
          <ColumnDirective field='OrderDate' headerText='Order Date'
width='140' format='yMd' />
        </ColumnsDirective>
        <Inject services={[Freeze]} />
      </GridComponent></div>
    )
  }
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),

```

```

    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
    Date(8371098e5),

```

```

      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),

```

```
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',  
      ShipAddress: '2817 Milton Dr.',  
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',  
      Freight: 48.29, Verified: !0  
    }  
  ];  
};
```

DATASOURCE.TSX

```
export let data: Object[] = [  
  {  
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new  
Date(8364186e5),  
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',  
    ShipAddress: '59 rue de l Abbaye',  
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',  
    Freight: 32.38, Verified: !0  
  },  
  {  
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new  
Date(836505e6),  
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:  
'Luisenstr. 48',  
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',  
    Freight: 11.61, Verified: !1  
  },  
  {  
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new  
Date(8367642e5),  
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:  
'Rua do Paço, 67',  
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',  
    Freight: 65.83, Verified: !0  
  },  
  {  
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new  
Date(8367642e5),  
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,  
rue du Commerce',  
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',  
    Freight: 41.34, Verified: !0  
  },  
  {  
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new  
Date(8368506e5),  
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:  
'Boulevard Tirou, 255',  
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',  
    Freight: 51.3, Verified: !0  
  },  
  {  
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new  
Date(836937e6),  
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:  
'Rua do Paço, 67',
```



```

    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
    Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
    Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
    Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
    'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
    'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
    Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
    6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
    Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
    Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
    ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
    Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
    Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
    'Mehrheimerstr. 369',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]];

```

* Frozen rows should not be set outside the grid view port.

* Frozen Grid will support row virtualization feature, which helps to improve the Grid performance while loading a large dataset.

* The frozen feature is supported only for the rows that are visible in the current view.

* You can use both [frozenColumns](#) property and [frozenRows](#) property in the same application.

Change default frozen rows line color

You can easily customize the frozen line background color of frozen rows in the Syncfusion Grid component by applying custom CSS styles to the specific frozen row. This allows you to change the background color of frozen rows to match your application's design and theme.

To change the default frozen rows line color, you can use the following CSS class:

```

`css
.e-grid .e-frozenrow-border {
background-color: rgb(5, 114, 47);
}
`

```

By applying this CSS class, you can set the background color of frozen rows to the specified RGB color. The following example demonstrates how to change the default frozen rows line color using CSS.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, Freeze, GridComponent, Inject }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  return (
    <div>

```

```

    <GridComponent dataSource={data} height={315} frozenRows={3}
    allowSelection={false} enableHover={false}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='150'
      />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='180' />
        <ColumnDirective field='Freight' headerText='Freight' width='120'
      />
        <ColumnDirective field='ShipCity' headerText='Ship City'
width='200' />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' />
        <ColumnDirective field='ShipName' headerText='Ship Name'
width='180' />
        <ColumnDirective field='ShipRegion' headerText='Ship Region'
width='220' />
        <ColumnDirective field='ShipAddress' headerText='Ship Address'
width='200' />
        <ColumnDirective field='OrderDate' headerText='Order Date'
width='140' format='yMd' />
      </ColumnsDirective>
      <Inject services={[Freeze]} />
    </GridComponent></div>
  }
  export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, Freeze, GridComponent, Inject }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  return (
    <div>
      <GridComponent dataSource={data} height={315} frozenRows={3}
      allowSelection={false} enableHover={false}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='150'
        />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
width='180' />
          <ColumnDirective field='Freight' headerText='Freight' width='120'
        />
          <ColumnDirective field='ShipCity' headerText='Ship City'
width='200' />
          <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' />
          <ColumnDirective field='ShipName' headerText='Ship Name'
width='180' />
          <ColumnDirective field='ShipRegion' headerText='Ship Region'
width='220' />
          <ColumnDirective field='ShipAddress' headerText='Ship Address'
width='200' />

```

```

        <ColumnDirective field='OrderDate' headerText='Order Date'
width='140' format='yMd' />
      </ColumnsDirective>
      <Inject services={[Freeze]} />
    </GridComponent></div>)
  }
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',

```

```

        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]
  ];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },

```

```

{
  OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
  ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
  ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
},
{
  OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
  ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
  ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
},
{
  OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
  ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
  ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
},
{
  OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
  ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
  ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
},
{
  OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
  ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
  ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
},
{
  OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
  ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
  ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
},
{
  OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
  ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
  ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
},
{

```

```

    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

Deprecated methods

Previous | Current | Explanation

getMovableRows() `gridInstance.getMovableRows()[0].querySelectorAll('.e-unfreeze')` | **getRows()** `gridInstance.getRows()[0].querySelectorAll('.e-unfreeze')` | The previous architecture used separate tables for left, right, and movable contents, returning only movable rows when calling the method, whereas the current architecture combines them into one table, returning all rows and introduces the `e-unfreeze` class for selecting movable rows

getFrozenRightRows() `gridInstance.getFrozenRightRows()[0].querySelectorAll('.e-rightfreeze')` | **getRows()** `gridInstance.getRows()[0].querySelectorAll('.e-rightfreeze')` | In the previous architecture, it returned only the table rows from the right freeze table, but in the current architecture, all rows of the entire table are returned, introducing the `e-rightfreeze` class for selecting right freeze rows.

getMovableRowByIndex()
 getFrozenRowByIndex()
 getFrozenRightRowByIndex() | **getRowByIndex()** `gridInstance.getRowByIndex(1).querySelectorAll('.e-unfreeze')` | In the previous architecture, separate methods were used to select rows from different table sections, while in the current architecture, the `getMovableRowByIndex()`, `getFrozenRightRowByIndex()`, and `getFrozenRowByIndex()` methods now return the same table row based on the given index. Additionally, class names for table cells (td's) have been separated into `e-leftfreeze`, `e-unfreeze`, and `e-rightfreeze`, making it easier to customize cells within a row.

`getMovableCellFromIndex()`
 `getFrozenRightCellFromIndex()` | `getCellFromIndex()`
`gridInstance.getCellFromIndex(1,1)` | In the previous approach, the `getMovableCellFromIndex()` method was used to choose a specific cell within the movable table, and the `getFrozenRightCellFromIndex()` method was utilized to target a particular cell within the right freeze table. However, in the current architecture, you have the flexibility to select a specific cell in either the movable or right freeze table by using both the `getFrozenRightCellFromIndex()` and `getMovableCellFromIndex()` methods. This new method simplifies the process of selecting and retrieving specific cells within these tables, offering more versatility and convenience.

`getMovableDataRows()`
 `getFrozenRightDataRows()`
 `getFrozenDataRows()` | `getDataRows()` `gridInstance.getDataRows()[0].querySelectorAll('.e-unfreeze')` | In the previous approach, there were separate methods (`getMovableDataRows()`, `getFrozenRightDataRows()`, and `getFrozenDataRows()`) for obtaining viewport data rows from the freeze, movable, and right tables individually. However, in the new approach, these methods have been enhanced to return the entire viewport data rows for all sections together, simplifying data retrieval. You can now extract specific cells within these rows using selectors such as `e-leftfreeze` for the **left freeze**, `e-unfreeze` for the **movable**, and `e-rightfreeze` for the **right freeze** tables, providing greater flexibility in working with the data.

`getMovableColumnHeaderByIndex()`
 `getFrozenRightColumnHeaderByIndex()`
 `getFrozenLeftColumnHeaderByIndex()` | `getColumnHeaderByIndex()`
`gridInstance.getColumnHeaderByIndex(1)` | In the previous architecture, the methods selected movable, right freeze, and left freeze headers separately. However, in the new approach, when using the `getMovableColumnHeaderByIndex()`, `getFrozenRightColumnHeaderByIndex()`, and `getFrozenLeftColumnHeaderByIndex()` methods, you will still obtain the same results as in the previous architecture.

When a validation message is displayed in the frozen part (Left, Right, Fixed) of the table, scrolling is prevented until the validation message is cleared.

Limitations

- Frozen row is not compatible with the following features:
 1. Autofill

Adding a new row programmatically

The Syncfusion Grid provides a way to add a new row to the grid programmatically. This feature is useful when you want to add a new record to the grid without having the manually enter data in the grid. This can be done using the [addRecord](#) method of the Grid.

The `addRecord` method takes two parameters:

- The **data** object representing the new row to be added
- The **index** at which the new row should be inserted. If no index is specified, the new row will be added at the end of the Grid.

Here's an example of how to add a new row using the `addRecord` method:

APP.JSX

```
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
```

```

import { ColumnDirective, ColumnsDirective, Edit, GridComponent, Inject }
  from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  const editOptions = { allowEditing: true, allowAdding: true,
allowDeleting: true };
  const generateOrderId = () => {
    return Math.floor(10000 + Math.random() * 90000);
  };
  const generateCustomerId = () => {
    const characters = 'ABCDEFGHIJKLMNOPQRSTUVWXYZ';
    let result = '';
    for (let i = 0; i < 5; i++) {
      result += characters.charAt(Math.floor(Math.random() *
characters.length));
    }
    return result;
  };
  const generateShipCity = () => {
    const cities = ['London', 'Paris', 'New York', 'Tokyo', 'Berlin'];
    return cities[Math.floor(Math.random() * cities.length)];
  };
  const generateFreight = () => {
    return Math.random() * 100;
  };
  const generateShipName = () => {
    const names = ['Que Delicia', 'Bueno Foods', 'Island Trading',
'Laughing Bacchus Winecellars'];
    return names[Math.floor(Math.random() * names.length)];
  };
  const addRow = () => {
    const newRecord = {
      OrderID: generateOrderId(),
      CustomerID: generateCustomerId(),
      ShipCity: generateShipCity(),
      Freight: generateFreight(),
      ShipName: generateShipName()
    };
    grid.addRecord(newRecord, 0);
  }
  return (<div><ButtonComponent id='add' onClick={addRow}>Add New
Row</ButtonComponent>
  <GridComponent dataSource={data} ref={g => grid = g}
editSettings={editOptions}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' width='100'
textAlign="Right" isPrimaryKey={true} />
      <ColumnDirective field='CustomerID' width='100' />
      <ColumnDirective field='Freight' width='100' format="C2"
textAlign="Right" />
      <ColumnDirective field='ShipName' width='100' />
      <ColumnDirective field='ShipCity' width='100'
textAlign="Right" />
    </ColumnsDirective>
    <Inject services={[Edit]} />
  </div>);
}

```

```

    </GridComponent></div>)
  }
  export default App;

```

APP.TSX

```

import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, Edit, EditSettingsModel,
GridComponent, Inject } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid: GridComponent | null;
  const editOptions: EditSettingsModel = { allowEditing: true, allowAdding:
true, allowDeleting: true };
  const generateOrderId = () => {
    return Math.floor(10000 + Math.random() * 90000);
  };
  const generateCustomerId = () => {
    const characters = 'ABCDEFGHIJKLMNOPQRSTUVWXYZ';
    let result = '';
    for (let i = 0; i < 5; i++) {
      result += characters.charAt(Math.floor(Math.random() *
characters.length));
    }
    return result;
  };
  const generateShipCity = () => {
    const cities = ['London', 'Paris', 'New York', 'Tokyo', 'Berlin'];
    return cities[Math.floor(Math.random() * cities.length)];
  };
  const generateFreight = () => {
    return Math.random() * 100;
  };
  const generateShipName = () => {
    const names = ['Que Delícia', 'Bueno Foods', 'Island Trading',
'Laughing Bacchus Winecellars'];
    return names[Math.floor(Math.random() * names.length)];
  };
  const addRow = () => {
    const newRecord: Object = {
      OrderID: generateOrderId(),
      CustomerID: generateCustomerId(),
      ShipCity: generateShipCity(),
      Freight: generateFreight(),
      ShipName: generateShipName()
    };
    (grid as GridComponent).addRecord(newRecord, 0);
  }
  return (<div><ButtonComponent id='add' onClick={addRow}>Add New
Row</ButtonComponent>
  <GridComponent dataSource={data} ref={g => grid = g}
editSettings={editOptions}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' width='100'
textAlign="Right" isPrimaryKey={true} />

```

```

        <ColumnDirective field='CustomerID' width='100' />
        <ColumnDirective field='Freight' width='100' format="C2"
textAlign="Right" />
        <ColumnDirective field='ShipName' width='100' />
        <ColumnDirective field='ShipCity' width='100'
textAlign="Right" />
    </ColumnsDirective>
    <Inject services={[Edit]} />
    </GridComponent></div>
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {

```

```

    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {

```

```

    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),

```

```

        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),

```

```

        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]];

```

* When working with remote data, it is impossible to add a new row between the existing rows.

* If you want to add a new record to the beginning of the data source, you can pass **0** as the second parameter to the `addRecord` method.

* If you do not specify an index, the new row will be added at the end of the grid.

Show or hide a row using an external actions

In a Syncfusion grid, you can show or hide a particular row based on some external action, such as a checkbox click. This can be useful in scenarios where you want to hide certain rows from the grid temporarily, without removing them from the underlying data source. This can be achieved by using the `getRowByIndex` and `getRowsObject` methods of the grid along with the `change` event of the checkbox.

The `getRowsObject` method returns an array of row objects that represents all the rows in the grid. You can use this method to iterate through all the rows and access their data and index.

The [getRowByIndex](#) method returns the HTML element of a row at the specified index. You can use this method to get a specific row and apply changes to it.

In the following example, the **onCheckBoxChange** method is used to check whether the checkbox is checked or not. If it is checked, the method iterates through all the rows in the grid using the **getRowsObject** method. For each row, it checks whether the value in the **CustomerID** column is equal to "VINET". If it is, the index of that row is obtained using the **getRowByIndex** method and hidden by setting its display style to "none". The index of the hidden row is also added to an array called **hiddenRows**.

If the checkbox is unchecked, the method iterates through the **hiddenRows** array and shows each row by setting its display style to an empty string. The **hiddenRows** array is also cleared.

APP.JSX

```
import { CheckBoxComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, Edit, GridComponent, Inject }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { useState } from 'react';
import { data } from './datasource';
let rowIndex;
let hiddenRows = [];
function App() {
  let grid;
  const [message, setMessage] = useState('');
  const onCheckBoxChange = (args) => {
    if (args.checked) {
      for (let i = 0; i < grid.getRowsObject().length; i++) {
        if (grid.getRowsObject()[i].data.CustomerID === 'VINET') {
          // check the row value
          rowIndex = grid.getRowsObject()[i].index; //get
          particular row index
          grid.getRowByIndex(rowIndex).style.display = 'none';
          //hide row
          hiddenRows.push(rowIndex); // add row index to hiddenRows
          array
        }
      }
      if (hiddenRows.length > 0) {
        setMessage('Rows with a customer name column value of VINET
        have been hidden');
      }
    }
    else {
      // Show hidden rows
      hiddenRows.forEach((rowIndex) => {
        grid.getRowByIndex(rowIndex).style.display = '';
      });
      hiddenRows = [];
      setMessage('Show all hidden rows');
    }
  }
  return (<div><CheckBoxComponent label='Show / Hide Row'
  change={onCheckBoxChange}></CheckBoxComponent>
  <p id='message'>{message}</p>
```

```

        <GridComponent dataSource={data} ref={g => grid = g} >
            <ColumnsDirective>
                <ColumnDirective field='OrderID' width='100'
textAlign="Right" isPrimaryKey={true} />
                <ColumnDirective field='CustomerID' width='100' />
                <ColumnDirective field='Freight' width='100' format="C2"
textAlign="Right" />
                <ColumnDirective field='ShipName' width='100' />
                <ColumnDirective field='ShipCity' width='100'
textAlign="Right" />
            </ColumnsDirective>
            <Inject services={[Edit]} />
        </GridComponent></div>
    }
    export default App;

```

APP.TSX

```

import { CheckBoxComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, Edit, GridComponent, Inject }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { useState } from 'react';
import { data } from './datasource';
let rowIndex: number;
let hiddenRows: number[] = [];
function App() {
    let grid: GridComponent | null;
    const [message, setMessage] = useState('');
    const onCheckBoxChange = (args) => {
        if (args.checked) {
            for (let i = 0; i < (grid as
GridComponent).getRowsObject().length; i++) {
                if ((grid as
GridComponent).getRowsObject()[i].data.CustomerID === 'VINET') {
                    // check the row value
                    rowIndex = (grid as
GridComponent).getRowsObject()[i].index; //get particular row index
                    (grid as
GridComponent).getRowByIndex(rowIndex).style.display = 'none'; //hide row
                    hiddenRows.push(rowIndex); // add row index to hiddenRows
                    array
                }
            }
            if (hiddenRows.length > 0) {
                setMessage('Rows with a customer name column value of VINET
have been hidden');
            }
        }
        else {
            // Show hidden rows
            hiddenRows.forEach((rowIndex: number) => {
                (grid as GridComponent).getRowByIndex(rowIndex).style.display
= '';
            });
            hiddenRows = [];

```

```

        setMessage('Show all hidden rows');
    }
}
return (<div><CheckBoxComponent label='Show / Hide Row'
change={onCheckBoxChange}></CheckBoxComponent>
    <p id='message'>{message}</p>
    <GridComponent dataSource={data} ref={g => grid = g} >
        <ColumnsDirective>
            <ColumnDirective field='OrderID' width='100'
textAlign="Right" isPrimaryKey={true} />
            <ColumnDirective field='CustomerID' width='100' />
            <ColumnDirective field='Freight' width='100' format="C2"
textAlign="Right" />
            <ColumnDirective field='ShipName' width='100' />
            <ColumnDirective field='ShipCity' width='100'
textAlign="Right" />
        </ColumnsDirective>
        <Inject services={[Edit]} />
    </GridComponent></div>)
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    }
]

```

```

    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
  },

```

```

    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
  ]
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),

```

```

    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
    Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
    Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
    Date(8374554e5),

```

```

        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
  ]];

```

How to get the row data and element

Grid provides several methods to retrieve row data and elements. This feature is useful when you need to access specific rows, perform custom operations, or manipulate the data displayed in the grid.

1. [getRowByIndex](#): This method returns the HTML element of a row at the specified index. It can be used to retrieve the element of a specific row in the grid.

`ts

```
const rowElement = grid.getRowByIndex(rowIndex);
```

```
,
```

2. [getRowByPrimaryKey](#):The method allows you to retrieve the row index based on a specific primary key value or row data.

```
`ts
```

```
const rowIndex = grid.getRowByPrimaryKey(primaryKey);
```

```
,
```

3. [getRowInfo](#):This method allows you to retrieve row information based on a cell target element.

```
`ts
```

```
const rowInformation = grid.getRowInfo(targetElement);
```

```
,
```

4. [getRows](#): This method returns an array of all the row elements in the Grid. If you need to retrieve row data and elements, you can combine the `getRows` method with the `getRowInfo` method.

```
`ts
```

```
const rowElements = grid.getRows();
```

```
,
```

5. [getSelectedRowIndexes](#):This method allows you to retrieve the collection of indexes of the selected rows. However, it does not directly provide the row elements and associated data. To access the row elements and data of the selected rows, you can combine the `getSelectedRowIndexes` method with `getRowByIndex` and `getRowInfo` method.

```
`ts
```

```
const selectedIndexes = grid.getSelectedRowIndexes();
```

```
,
```

6. [getSelectedRows](#):This method returns an array of HTML elements representing the selected rows in the grid.By iterating over this array, you can access each row element and data using the `getRowInfo` method. This way, you can access both the row elements and their associated data for the selected rows.

```
`ts
```

```
const selectedRowElements = grid.getSelectedRows();
```

```
,
```


Cell in React Grid component

Displaying the HTML content

Displaying HTML content in a Grid can be useful in scenarios where you want to display formatted content, such as images, links, or tables, in a tabular format. Grid component allows you to display HTML tags in the Grid header and content. By default, the HTML content is encoded to prevent potential security vulnerabilities. However, you can enable the [disableHtmlEncode](#) property by setting the value as false to display HTML tags without encoding. This feature is useful when you want to display HTML content in a grid cell.

In the following example, the [EJ2 Toggle Switch Button](#) component is added to enable and disable the [disableHtmlEncode](#) property. When the switch is toggled, the [change](#) event is triggered and the [disableHtmlEncode](#) property of the column is updated accordingly. The [refresh](#) method is called to refresh the grid and display the updated content.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
import { SwitchComponent } from '@syncfusion/ej2-react-buttons';
function App() {
  let grid;
  const change = ((args) => {
    if (args.checked) {
      grid.getColumnByField('CustomerID').disableHtmlEncode = false;
    } else {
      grid.getColumnByField('CustomerID').disableHtmlEncode = true;
    }
    grid.refreshColumns();
  })
  return (
    <div>
      <div>
        <label style={{ padding: "10px 10px" }}>
          Enable or disable HTML Encode
        </label>
        <SwitchComponent id="switch" change={change}></SwitchComponent>
        <GridComponent ref={g => grid = g} dataSource={data} height={315}>
          <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID'
width='100' />
            <ColumnDirective field='CustomerID' headerText='<strong> Customer
ID </strong>' width='120' />
            <ColumnDirective field='Freight' headerText='Freight' width='150'
textAlign='Right' format='C' />
            <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='120' />
          </ColumnsDirective>
        </GridComponent></div></div>
      )
    }
    export default App;
```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
import { SwitchComponent, ChangeEventArgs } from '@syncfusion/ej2-react-
 buttons';
function App() {
  let grid: GridComponent | null;
  const change = ((args: ChangeEventArgs) => {
    if (args.checked) {
      (grid as
GridComponent).getColumnByField('CustomerID').disableHtmlEncode = false;
    } else {
      (grid as
GridComponent).getColumnByField('CustomerID').disableHtmlEncode = true;
    }
    (grid as GridComponent).refreshColumns();
  })
  return (
    <div>
      <div>
        <label style={{ padding: "10px 10px" }}>
          Enable or disable HTML Encode
        </label>
        <SwitchComponent id="switch" change={change}></SwitchComponent>
        <GridComponent ref={g => grid = g} dataSource={data} height={315}>
          <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID'
width='100' />
            <ColumnDirective field='CustomerID' headerText='<strong> Customer
ID </strong>' width='120' />
            <ColumnDirective field='Freight' headerText='Freight' width='150'
textAlign='Right' format='C' />
            <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='120' />
          </ColumnsDirective>
        </GridComponent></div></div>
      )
    }
  export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: '<b>VINET</b>', EmployeeID: 5, OrderDate:
new Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: '<b>TOMSP</b>', EmployeeID: 6, OrderDate:
new Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
      },
      {
        OrderID: 10250, CustomerID: '<b>HANAR</b>', EmployeeID: 4, OrderDate:
new Date(8367642e5),
        ShipName: '<b>HANAR</b>i Carnes', ShipCity: 'Rio de Janeiro',
        ShipAddress: 'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10251, CustomerID: '<b>VICTE</b>', EmployeeID: 3, OrderDate:
new Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: '<b>SUPRD</b>', EmployeeID: 4, OrderDate:
new Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: '<b>HANAR</b>', EmployeeID: 3, OrderDate:
new Date(836937e6),
        ShipName: '<b>HANAR</b>i Carnes', ShipCity: 'Rio de Janeiro',
        ShipAddress: 'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: '<b>CHOPS</b>', EmployeeID: 5, OrderDate:
new Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: '<b>RICSU</b>', EmployeeID: 9, OrderDate:
new Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: '<b>WELLI</b>', EmployeeID: 3, OrderDate:
new Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',

```

```

    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: '<b>HILAA</b>', EmployeeID: 4, OrderDate:
    new Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
    'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
    'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: '<b>ERNSH</b>', EmployeeID: 1, OrderDate:
    new Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
    6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
    Freight: 140.51, Verified: !0
  },
]

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: '<b>VINET</b>', EmployeeID: 5, OrderDate:
    new Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: '<b>TOMSP</b>', EmployeeID: 6, OrderDate:
    new Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: '<b>HANAR</b>', EmployeeID: 4, OrderDate:
    new Date(8367642e5),
    ShipName: '<b>HANAR</b>i Carnes', ShipCity: 'Rio de Janeiro',
    ShipAddress: 'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: '<b>VICTE</b>', EmployeeID: 3, OrderDate:
    new Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
]

```

```

    {
      OrderID: 10252, CustomerID: '<b>SUPRD</b>', EmployeeID: 4, OrderDate:
new Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: '<b>HANAR</b>', EmployeeID: 3, OrderDate:
new Date(836937e6),
      ShipName: '<b>HANAR</b>i Carnes', ShipCity: 'Rio de Janeiro',
      ShipAddress: 'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: '<b>CHOPS</b>', EmployeeID: 5, OrderDate:
new Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: '<b>RICSU</b>', EmployeeID: 9, OrderDate:
new Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: '<b>WELLI</b>', EmployeeID: 3, OrderDate:
new Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: '<b>HILAA</b>', EmployeeID: 4, OrderDate:
new Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: '<b>ERNSH</b>', EmployeeID: 1, OrderDate:
new Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
  ]

```

-
- * The [disableHtmlEncode](#) property disables HTML encoding for the corresponding column in the grid.
 - * If the property is set to **true**, any HTML tags in the column's data will be displayed.
 - * If the property is set to **false**, the HTML tags will be removed and displayed as plain text.
 - * Disabling HTML encoding can potentially introduce security vulnerabilities, so use caution when enabling this feature.
 - * If [enableHtmlSanitizer](#) property of grid is set to true, then the content is sanitized to prevent any potential security vulnerabilities.
 - * You can also disable the `disableHtmlEncode` property of the column using [getColumnns](#) method on [change](#) event of Switch component. This is demonstrated in the below code snippet,
-

```
`typescript
const change = ((args:ChangeEventArgs) {
if (args.checked) {
grid.getColumnns()[1].disableHtmlEncode = false;
} else {
grid.getColumnns()[1].disableHtmlEncode = true;
}
grid.refresh();
});
`
```

[Autowrap the grid content](#)

The auto wrap feature allows the cell content in the grid to wrap to the next line when it exceeds the boundary of the specified cell width. The cell content wrapping works based on the position of white space between words. To support the Autowrap functionality in Syncfusion Grid, you should set the appropriate [width](#) for the columns. The column width defines the maximum width of a column and helps to wrap the content automatically.

To enable auto wrap, set the [allowTextWrap](#) property to **true**. You can also configure the wrap mode by setting the [textWrapSettings.wrapMode](#) property.

Grid provides the below three options for configuring:

- **Both** - This is the default value for wrapMode. With this option, both the grid **Header** and **Content** text is wrapped.
- **Header** - With this option, only the grid header text is wrapped.
- **Content** - With this option, only the grid content is wrapped.

-
- * If a column width is not specified, then the Autowrap of columns will be adjusted with respect to the grid's width.
 - * If a column's header text contains no white space, the text may not be wrapped.

* If the content of a cell contains HTML tags, the Autowrap functionality may not work as expected. In such cases, you can use the [headerTemplate](#) and [template](#) properties of the column to customize the appearance of the header and cell content.

The following example demonstrates how to set the [allowTextWrap](#) property to **true** and specify the wrap mode as **Content** by setting the [textWrapSettings.wrapMode](#) property. Also change the [textWrapSettings.wrapMode](#) property to **Content** and **Both** on changing the dropdown value using the [change](#) event of the DropDownList component.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import React, { useState } from 'react';
import { inventoryData } from '../datasource';
function App() {
  const [wrapSettings, setWrapSettings] = useState({ wrapMode: 'Content' });
  const dropDownData = [
    { text: 'Content', value: 'Content' },
    { text: 'Both', value: 'Both' },
  ];
  const valueChange = ((args) => {
    const newWrapValue = { wrapMode: args.value };
    setWrapSettings(newWrapValue);
  })
  return (
    <div>
      <label style={{ padding: '30px 17px 0 0' }}>Change the wrapmode of auto
      wrap feature:</label>
      <DropDownListComponent dataSource={dropDownData} index={0} width="100"
      change={valueChange}></DropDownListComponent>
      <GridComponent dataSource={inventoryData} height={315}
      allowPaging={true} allowTextWrap={true} textWrapSettings={wrapSettings}>
        <ColumnsDirective>
          <ColumnDirective field='Inventor' headerText='Inventor' width='100'
        />
          <ColumnDirective field='NumberofPatentFamilies' headerText='Number
        of Patent Families' width='100' />
          <ColumnDirective field='Country' headerText='Country' width='100'
        />
          <ColumnDirective field='Mainfieldsofinvention' headerText='Main
        fields of invention' width='140' />
        </ColumnsDirective>
      </GridComponent></div>
    )
  }
  export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent,
 TextWrapSettingsModel } from '@syncfusion/ej2-react-grids';
import { ChangeEventArgs, DropDownListComponent } from '@syncfusion/ej2-
react-dropdowns';
import React, { useState } from 'react';
import { inventoryData } from '../datasource';
```

```
function App() {
  const [wrapSettings, setWrapSettings] = useState<TextWrapSettingsModel>({
    wrapMode: 'Content' });
  const dropDownData: { [key: string]: Object; }[] = [
    { text: 'Content', value: 'Content' },
    { text: 'Both', value: 'Both' },
  ];
  const valueChange = ((args: ChangeEventArgs) => {
    const newWrapValue: TextWrapSettingsModel = { wrapMode: args.value };
    setWrapSettings(newWrapValue);
  })
  return (
    <div>
      <label style={{ padding: '30px 17px 0 0' }}>Change the wrapmode of auto
      wrap feature:</label>
      <DropDownListComponent dataSource={dropDownData} index={0} width="100"
      change={valueChange}></DropDownListComponent>
      <GridComponent dataSource={inventoryData} height={315}
      allowPaging={true} allowTextWrap={true} textWrapSettings={wrapSettings}>
        <ColumnsDirective>
          <ColumnDirective field='Inventor' headerText='Inventor' width='100'
        />
          <ColumnDirective field='NumberofPatentFamilies' headerText='Number
        of Patent Families' width='100' />
          <ColumnDirective field='Country' headerText='Country' width='100'
        />
          <ColumnDirective field='Mainfieldsofinvention' headerText='Main
        fields of invention' width='140' />
        </ColumnsDirective>
      </GridComponent></div>
    )
  }
  export default App;
}
```

DATASOURCE.JSX

```
export const inventoryData = [
  {
    'Inventor': 'Kia Silverbrook',
    'NumberofPatentFamilies': 4737,
    'Country': 'Australia',
    'Number of INPADOC patents': 9839,
    'Active': '1994-2016',
    'Mainfieldsofinvention': 'Printing, Digital paper, Internet,
    Electronics, Lab-on-a-chip, MEMS, Mechanical, VLSI',
  },
  {
    'Inventor': 'Shunpei Yamazaki',
    'NumberofPatentFamilies': 4677,
    'Country': 'Japan',
    'Number of INPADOC patents': '10000+',
    'Active': '1976-2016',
    'Mainfieldsofinvention': 'Thin film transistors, Liquid crystal
    displays, Solar cells, Flash memory, OLED',
  },
  {
    'Inventor': 'Lowell L. Wood, Jr.',
  }
]
```



```

      'NumberofPatentFamilies': 1419,
      'Country': 'USA',
      'Number of INPADOC patents': 1332,
      'Active': '1977-2016',
      'Mainfieldsofinvention': 'Mosquito laser, Nuclear weapons',
    },
    {
      'Inventor': 'Paul Lapstun',
      'NumberofPatentFamilies': 1281,
      'Country': 'Australia',
      'Number of INPADOC patents': 3099,
      'Active': '2000-2016',
      'Mainfieldsofinvention': 'Printing, Digital paper, Internet,
Electronics, CGI, VLSI',
    },
    {
      'Inventor': 'Gurtej Sandhu',
      'NumberofPatentFamilies': 1255,
      'Country': 'India',
      'Number of INPADOC patents': 2038,
      'Active': '1991-2016',
      'Mainfieldsofinvention': 'Thin film processes and materials, VLSI,
Semiconductor device fabrication',
    },
    {
      'Inventor': 'Jun Koyama',
      'NumberofPatentFamilies': 1240,
      'Country': 'Japan',
      'Number of INPADOC patents': 4126,
      'Active': '1991-2016',
      'Mainfieldsofinvention': 'Thin film transistors, Liquid crystal
displays, OLED',
    },
    {
      'Inventor': 'Roderick A. Hyde',
      'NumberofPatentFamilies': 1240,
      'Country': 'USA',
      'Number of INPADOC patents': 3360,
      'Active': '2001-2016',
      'Mainfieldsofinvention': 'Various',
    },
    {
      'Inventor': 'Leonard Forbes',
      'NumberofPatentFamilies': 1093,
      'Country': 'Canada',
      'Number of INPADOC patents': 1398,
      'Active': '1991-2016',
      'Mainfieldsofinvention': 'Semiconductor Memories, CCDs, Thin film
processes and materials, VLSI',
    },
    {
      'Inventor': 'Thomas Edison',
      'NumberofPatentFamilies': 1084,
      'Country': 'USA',
      'Number of INPADOC patents': 2332,
      'Active': '1847(b)-1931(d)',
    }
  ]

```

```

    'Mainfieldsofinvention': 'Electric power, Lighting, Batteries,
    Phonograph, Cement, Telegraphy, Mining',
  },
  {
    'Inventor': 'Donald E. Weder',
    'NumberofPatentFamilies': 999,
    'Country': 'USA',
    'Number of INPADOC patents': 1993,
    'Active': '1976-2015',
    'Mainfieldsofinvention': 'Florist supplies',
  },
  {
    'Inventor': 'George Albert Lyon',
    'NumberofPatentFamilies': 993,
    'Country': 'Canada',
    'Number of INPADOC patents': 'NA',
    'Active': '1882(b)-1961(d)',
    'Mainfieldsofinvention': 'Automotive, Stainless steel products',
  },
  {
    'Inventor': 'John F. O\'Connor',
    'NumberofPatentFamilies': 949,
    'Country': 'USA',
    'Number of INPADOC patents': 'NA',
    'Active': '1864(b)-1938(d)',
    'Mainfieldsofinvention': 'Railway draft gearing',
  },
  {
    'Inventor': 'Melvin De Groote',
    'NumberofPatentFamilies': 925,
    'Country': 'USA',
    'Number of INPADOC patents': 'NA',
    'Active': '1895(b)-1963(d)',
    'Mainfieldsofinvention': 'Chemical de-emulsifiers',
  },
  {
    'Inventor': 'Jay S. Walker',
    'NumberofPatentFamilies': 918,
    'Country': 'USA',
    'Number of INPADOC patents': 2206,
    'Active': '1998-2016',
    'Mainfieldsofinvention': 'Gaming machines',
  },
  {
    'Inventor': 'Edward K. Y. Jung',
    'NumberofPatentFamilies': 911,
    'Country': 'USA',
    'Number of INPADOC patents': 2254,
    'Active': '1996-2016',
    'Mainfieldsofinvention': 'Various',
  },
  {
    'Inventor': 'Francis H. Richards',
    'NumberofPatentFamilies': 894,
    'Country': 'USA',
    'Number of INPADOC patents': 'NA',
    'Active': '1850(b)-19??(d)',
  }

```

```

    'Mainfieldsofinvention': 'Mechanical, automation',
  },
  {
    'Inventor': 'Kangguo Cheng',
    'NumberofPatentFamilies': 884,
    'Country': 'USA',
    'Number of INPADOC patents': 1314,
    'Active': '2004-2016',
    'Mainfieldsofinvention': 'Semiconductor device fabrication,
Semiconductor memory, Semiconductor device',
  }
];

```

DATASOURCE.TSX

```

export const inventoryData: Object[] = [
  {
    'Inventor': 'Kia Silverbrook',
    'NumberofPatentFamilies': 4737,
    'Country': 'Australia',
    'Number of INPADOC patents': 9839,
    'Active': '1994-2016',
    'Mainfieldsofinvention': 'Printing, Digital paper, Internet,
Electronics, Lab-on-a-chip, MEMS, Mechanical, VLSI',
  },
  {
    'Inventor': 'Shunpei Yamazaki',
    'NumberofPatentFamilies': 4677,
    'Country': 'Japan',
    'Number of INPADOC patents': '10000+',
    'Active': '1976-2016',
    'Mainfieldsofinvention': 'Thin film transistors, Liquid crystal
displays, Solar cells, Flash memory, OLED',
  },
  {
    'Inventor': 'Lowell L. Wood, Jr.',
    'NumberofPatentFamilies': 1419,
    'Country': 'USA',
    'Number of INPADOC patents': 1332,
    'Active': '1977-2016',
    'Mainfieldsofinvention': 'Mosquito laser, Nuclear weapons',
  },
  {
    'Inventor': 'Paul Lapstun',
    'NumberofPatentFamilies': 1281,
    'Country': 'Australia',
    'Number of INPADOC patents': 3099,
    'Active': '2000-2016',
    'Mainfieldsofinvention': 'Printing, Digital paper, Internet,
Electronics, CGI, VLSI',
  },
  {
    'Inventor': 'Gurtej Sandhu',
    'NumberofPatentFamilies': 1255,
    'Country': 'India',
    'Number of INPADOC patents': 2038,
  }
];

```

```

      'Active': '1991-2016',
      'Mainfieldsofinvention': 'Thin film processes and materials, VLSI,
Semiconductor device fabrication',
    },
    {
      'Inventor': 'Jun Koyama',
      'NumberofPatentFamilies': 1240,
      'Country': 'Japan',
      'Number of INPADOC patents': 4126,
      'Active': '1991-2016',
      'Mainfieldsofinvention': 'Thin film transistors, Liquid crystal
displays, OLED',
    },
    {
      'Inventor': 'Roderick A. Hyde',
      'NumberofPatentFamilies': 1240,
      'Country': 'USA',
      'Number of INPADOC patents': 3360,
      'Active': '2001-2016',
      'Mainfieldsofinvention': 'Various',
    },
    {
      'Inventor': 'Leonard Forbes',
      'NumberofPatentFamilies': 1093,
      'Country': 'Canada',
      'Number of INPADOC patents': 1398,
      'Active': '1991-2016',
      'Mainfieldsofinvention': 'Semiconductor Memories, CCDs, Thin film
processes and materials, VLSI',
    },
    {
      'Inventor': 'Thomas Edison',
      'NumberofPatentFamilies': 1084,
      'Country': 'USA',
      'Number of INPADOC patents': 2332,
      'Active': '1847(b)-1931(d)',
      'Mainfieldsofinvention': 'Electric power, Lighting, Batteries,
Phonograph, Cement, Telegraphy, Mining',
    },
    {
      'Inventor': 'Donald E. Weder',
      'NumberofPatentFamilies': 999,
      'Country': 'USA',
      'Number of INPADOC patents': 1993,
      'Active': '1976-2015',
      'Mainfieldsofinvention': 'Florist supplies',
    },
    {
      'Inventor': 'George Albert Lyon',
      'NumberofPatentFamilies': 993,
      'Country': 'Canada',
      'Number of INPADOC patents': 'NA',
      'Active': '1882(b)-1961(d)',
      'Mainfieldsofinvention': 'Automotive, Stainless steel products',
    },
    {
      'Inventor': 'John F. O\'Connor',

```

```

      'NumberofPatentFamilies': 949,
      'Country': 'USA',
      'Number of INPADOC patents': 'NA',
      'Active': '1864(b)-1938(d)',
      'Mainfieldsofinvention': 'Railway draft gearing',
    },
    {
      'Inventor': 'Melvin De Groote',
      'NumberofPatentFamilies': 925,
      'Country': 'USA',
      'Number of INPADOC patents': 'NA',
      'Active': '1895(b)-1963(d)',
      'Mainfieldsofinvention': 'Chemical de-emulsifiers',
    },
    {
      'Inventor': 'Jay S. Walker',
      'NumberofPatentFamilies': 918,
      'Country': 'USA',
      'Number of INPADOC patents': 2206,
      'Active': '1998-2016',
      'Mainfieldsofinvention': 'Gaming machines',
    },
    {
      'Inventor': 'Edward K. Y. Jung',
      'NumberofPatentFamilies': 911,
      'Country': 'USA',
      'Number of INPADOC patents': 2254,
      'Active': '1996-2016',
      'Mainfieldsofinvention': 'Various',
    },
    {
      'Inventor': 'Francis H. Richards',
      'NumberofPatentFamilies': 894,
      'Country': 'USA',
      'Number of INPADOC patents': 'NA',
      'Active': '1850(b)-19??(d)',
      'Mainfieldsofinvention': 'Mechanical, automation',
    },
    {
      'Inventor': 'Kangguo Cheng',
      'NumberofPatentFamilies': 884,
      'Country': 'USA',
      'Number of INPADOC patents': 1314,
      'Active': '2004-2016',
      'Mainfieldsofinvention': 'Semiconductor device fabrication,
Semiconductor memory, Semiconductor device',
    }
  ];

```

Customize cell styles

Customizing the grid cell styles allows you to modify the appearance of cells in the Grid control to meet your design requirements. You can customize the font, background color, and other styles of the cells. To customize the cell styles in the grid, you can use grid event, css, property or method support.

Using event

To customize the appearance of the grid cell, you can use the [queryCellInfo](#) event of the grid. This event is triggered when each header cell is rendered in the grid, and provides an object that contains information about the header cell. You can use this object to modify the styles of the header cell.

The following example demonstrates how to add a [queryCellInfo](#) event handler to the grid. In the event handler, checked whether the current column is **Freight** field and then applied the appropriate CSS class to the cell based on its value.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const customizeCell = (args) => {
    if (args.column.field === "Freight") {
      if (args.data[args.column.field] <= 30) {
        args.cell.classList.add('below-30');
      } else if (args.data[args.column.field] > 30 &&
args.data[args.column.field] < 80) {
        args.cell.classList.add('below-80');
      } else {
        args.cell.classList.add('above-80');
      }
    }
  };
  return (<div>
    <GridComponent dataSource={data} height={315} enableHover={false}
allowSelection={false} queryCellInfo={customizeCell}>
      <ColumnsDirective>
        <ColumnDirective field="OrderID" headerText="Order ID" width="100"
textAlign="Right" />
        <ColumnDirective field="CustomerID" headerText="Customer ID"
width="100" />
        <ColumnDirective field="EmployeeID" headerText="Employee ID"
width="100" textAlign="Right" />
        <ColumnDirective field="Freight" headerText="Freight" width="80"
textAlign="Right" format="C2" />
        <ColumnDirective field="ShipCountry" headerText="Ship Country"
width="100" />
      </ColumnsDirective>
    </GridComponent>
  </div>);
}
;
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent,
QueryCellInfoEventArgs } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
```

```

const customizeCell = (args: QueryCellInfoEventArgs) => {
  if (args.column.field === "Freight") {
    if (args.data[args.column.field] <= 30) {
      args.cell.classList.add('below-30');
    } else if (args.data[args.column.field] > 30 &&
args.data[args.column.field] < 80) {
      args.cell.classList.add('below-80');
    } else {
      args.cell.classList.add('above-80');
    }
  }
}

return (<div>
  <GridComponent dataSource={data} height={315} enableHover={false}
allowSelection={false}
  queryCellInfo={customizeCell}>
    <ColumnsDirective>
      <ColumnDirective field="OrderID" headerText="Order ID" width="100"
textAlign="Right" />
      <ColumnDirective field="CustomerID" headerText="Customer ID"
width="100" />
      <ColumnDirective field="EmployeeID" headerText="Employee ID"
width="100" textAlign="Right" />
      <ColumnDirective field="Freight" headerText="Freight" width="80"
textAlign="Right" format="C2" />
      <ColumnDirective field="ShipCountry" headerText="Ship Country"
width="100" />
    </ColumnsDirective>
  </GridComponent>
</div>)
);
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),

```

```

      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
      Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
      'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
      Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
      'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
      Date(8374554e5),

```



```

      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
      'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
      'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
      Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
      Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
      'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
      Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }
  ]
};

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
      },
      {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
      },
      {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',

```

```

        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
  ];

```

* The [queryCellInfo](#) event is triggered for every cell of the grid, so it may impact the performance of the grid whether used to modify a large number of cells.

Using CSS

You can apply styles to the cells using CSS selectors. The Grid provides a class name for each cell element, which you can use to apply styles to that specific cell or cells in a particular column. The `e-rowcell` class is used to style the row cells, and the `e-selectionbackground` class is used to change the background color of the selected row.

`CSS

```

.e-grid td.e-cellselectionbackground {
background: #9ac5ee;
font-style: italic;
}
`

```

The following example demonstrates how to customize the appearance of a specific row in the grid on selection using `className`.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const selectOptions = {
    type: 'Multiple',
    mode: 'Cell'
  }
  return (
    <div>
      <div style={{ padding: '40px 0 0 0' }}>
        <GridComponent dataSource={data} height={315}
selectionSettings={selectOptions}>
          <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='OrderID' width='100'
/>
            <ColumnDirective field='CustomerID' headerText='CustomerID'
width='100' />
            <ColumnDirective field='Freight' headerText='Freight' width='100'
/>
            <ColumnDirective field='ShipCountry' headerText='ShipCountry'
width='140' />
          </ColumnsDirective>
        </GridComponent></div></div>
      )
}
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent,
SelectionSettingsModel } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const selectOptions: SelectionSettingsModel = {
    type: 'Multiple',
    mode: 'Cell'
  }
  return (
    <div>
      <div style={{ padding: '40px 0 0 0' }}>
        <GridComponent dataSource={data} height={315}
selectionSettings={selectOptions}>
          <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='OrderID' width='100'
/>
            <ColumnDirective field='CustomerID' headerText='CustomerID'
width='100' />
            <ColumnDirective field='Freight' headerText='Freight' width='100'
/>
            <ColumnDirective field='ShipCountry' headerText='ShipCountry'
width='140' />
          </ColumnsDirective>
        </GridComponent></div></div>
      )
    }
  export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',

```

```

        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',

```

```

        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]
  };

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },

```

```

{
  OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
  ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
  ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
},
{
  OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
  ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
  ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
},
{
  OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
  ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
  ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
},
{
  OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
  ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
  ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
},
{
  OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
  ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
  ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
},
{
  OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
  ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
  ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
},
{
  OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
  ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
  ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
},
{

```



```

    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
    ]];

```

Using property

To customize the style of grid cells, define [customAttributes](#) property to the column definition object. The `customAttributes` property takes an object with the name-value pair to customize the CSS properties for grid cells. You can also set multiple CSS properties to the custom class using the `customAttributes` property.

```
`CSS
.custom-css {
background: #d7f0f4;
font-style: italic;
color:navy
}
```

Here, setting the `customAttributes` property of the **ShipCity** column to an object that contains the CSS class 'custom-css'. This CSS class will be applied to all the cells in the **ShipCity** column of the grid.

```
`typescript
<ColumnDirective field="OrderID" headerText="Order ID" customAttributes={class: 'custom-css'}
width="100" textAlign="Right" />
```

The following example demonstrates how to customize the appearance of the **OrderID** and **ShipCity** columns using custom attributes.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  return (<div>
    <GridComponent dataSource={data} height={315} enableHover={false}
allowSelection={false}>
      <ColumnsDirective>
        <ColumnDirective field="OrderID" headerText="Order ID"
customAttributes={{class: 'custom-css'}} width="100" textAlign="Right" />
        <ColumnDirective field="CustomerID" headerText="Customer ID"
width="100" />
        <ColumnDirective field="EmployeeID" headerText="Employee ID"
customAttributes={{class: 'custom-css'}} width="100" textAlign="Right" />
        <ColumnDirective field="Freight" headerText="Freight" width="80"
textAlign="Right" format="C2" />
        <ColumnDirective field="ShipCountry" headerText="Ship Country"
width="100" />
      </ColumnsDirective>
    </GridComponent>
  </div>);
};
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  return (<div>
    <GridComponent dataSource={data} height={315} enableHover={false}
allowSelection={false}>
      <ColumnsDirective>
        <ColumnDirective field="OrderID" headerText="Order ID"
customAttributes={{class: 'custom-css'}} width="100" textAlign="Right" />
        <ColumnDirective field="CustomerID" headerText="Customer ID"
width="100" />
        <ColumnDirective field="EmployeeID" headerText="Employee ID"
customAttributes={{class: 'custom-css'}} width="100" textAlign="Right" />
        <ColumnDirective field="Freight" headerText="Freight" width="80"
textAlign="Right" format="C2" />
        <ColumnDirective field="ShipCountry" headerText="Ship Country"
width="100" />
      </ColumnsDirective>
    </GridComponent>
  </div>);
};
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
```

```

    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {

```

```

    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),

```

```

        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),

```

```

      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
      'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
      Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
      'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
      'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
      Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
      Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
      'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
      Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }
  ]];

```

Custom attributes can be used to customize any cell in the grid, including header and footer cells.

Using methods

The Grid provides below methods to customize the appearance of the grid columns header and cell:

1. [getHeaderContent](#): The `getHeaderContent` method is used to customize the appearance of the column header in the grid and accessing the header element using the `querySelector` method and applying the style using the `style` property of the cell element.
2. [getCellFromIndex](#): The `getCellFromIndex` method is used to customize the appearance of a specific cell in the grid by specifying the index of the row and column for which you want to customize the appearance.

The following example demonstrates how to use [getColumnHeaderByIndex](#) and [getCellFromIndex](#) methods to customize the appearance of the **CustomerID** column header and specific cell inside the [dataBound](#) event of the grid.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  const dataBound = () => {
    let header = grid.getHeaderContent().querySelector('.e-headercell');
    header.style.backgroundColor = 'red';
    header.style.color = 'white';
    let cell = grid.getCellFromIndex(1, 2);
    cell.style.background = '#f9920b';
    cell.style.color = 'white';
  };
  return (
    <div>
      <div style={{ padding: '40px 0 0 0' }}>
        <GridComponent dataSource={data} height={315} ref={g => grid = g}
          dataBound={dataBound}>
          <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='OrderID' width='100'
            />
            <ColumnDirective field='CustomerID' headerText='CustomerID'
            width='100' />
            <ColumnDirective field='Freight' headerText='Freight' width='100'
            />
            <ColumnDirective field='ShipCountry' headerText='ShipCountry'
            width='140' />
          </ColumnsDirective>
        </GridComponent></div></div>
      )
  }
  export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
```



```
import { data } from './datasource';
function App() {
  let grid: GridComponent | null;
  const dataBound = (() => {
    let header = (grid as
GridComponent).getHeaderContent().querySelector('.e-headercell');
    header.style.backgroundColor = 'red';
    header.style.color = 'white';
    let cell = (grid as GridComponent).getCellFromIndex(1, 2);
    cell.style.background = '#f9920b';
    cell.style.color = 'white';
  });
  return (
    <div>
      <div style={{ padding: '40px 0 0 0' }}>
        <GridComponent dataSource={data} height={315} ref={g => grid = g}
dataBound={dataBound}>
          <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='OrderID' width='100'
/>
            <ColumnDirective field='CustomerID' headerText='CustomerID'
width='100' />
            <ColumnDirective field='Freight' headerText='Freight' width='100'
/>
            <ColumnDirective field='ShipCountry' headerText='ShipCountry'
width='140' />
          </ColumnsDirective>
        </GridComponent></div></div>
      )
}
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
```

```

        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',

```

```

        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]
  };

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },

```

```

    {
      OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
      ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
  ]
}

```

```

    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
    ]
};

```

Make sure to pass the correct row and column indices to [getCellFromIndex](#) method, or else the appearance of the wrong cell might get customized.

Clip mode

The clip mode feature is useful when you have a long text or content in a grid cell, which overflows the cell's width or height. It provides options to display the overflow content by either truncating it, displaying an ellipsis or displaying an ellipsis with a tooltip. You can enable this feature by setting [clipMode](#) property to one of the below available options.

There are three types of [clipMode](#) available:

- **Clip:** Truncates the cell content when it overflows its area.
- **Ellipsis:** Displays ellipsis when the cell content overflows its area.
- **EllipsisWithTooltip:** Displays ellipsis when the cell content overflows its area, also it will display the tooltip while hover on ellipsis is applied. Also it will display the tooltip while hover on ellipsis is applied.

The following example demonstrates, how to set the [clipMode](#) property to **Clip** for the **Name of the Inventor** column, **Ellipsis** for the **Number of Patent Families** column, and **EllipsisWithTooltip** for the **Main Fields of Invention** column, on changing the dropdown value using the [change](#) event of the DropDownList component.

APP.JSX

```
import { ClipMode, ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { DropDownListComponent, ChangeEventArgs } from '@syncfusion/ej2-
 react-dropdowns';
import * as React from 'react';
import { inventoryData } from '../datasource';
function App() {
  let grid;
  const dropDownData = [
    { text: 'Ellipsis', value: 'Ellipsis' },
    { text: 'Clip', value: 'Clip' },
    { text: 'EllipsisWithTooltip', value: 'EllipsisWithTooltip' }
  ];
  const valueChange = (args) => {
    grid.getColumnByField('Mainfieldsofinvention').clipMode = args.value ;
    grid.refreshColumns();
  }
  return (
    <div>
      <label style={{ padding: '30px 17px 0 0' }}> Change the clip mode:
    </label>
      <DropDownListComponent dataSource={dropDownData} index={0} width="100"
      change={valueChange}></DropDownListComponent>
      <GridComponent dataSource={inventoryData} height={315} ref={g => grid =
      g} allowPaging={true}>
        <ColumnsDirective>
          <ColumnDirective field='Inventor' headerText='Inventor' width='100'
        />
          <ColumnDirective field='NumberofPatentFamilies' headerText='Number
        of Patent Families' width='100' />
      </GridComponent>
    </div>
  );
}
```

```

        <ColumnDirective field='Country' headerText='Country' width='100'
/>
        <ColumnDirective field='Mainfieldsofinvention' headerText='Main
fields of invention' width='140' />
    </ColumnsDirective>
</GridComponent></div>)
}
export default App;

```

APP.TSX

```

import { ClipMode, ColumnDirective, ColumnsDirective, GridComponent } from
'@syncfusion/ej2-react-grids';
import { DropDownListComponent, ChangeEventArgs } from '@syncfusion/ej2-
react-dropdowns';
import * as React from 'react';
import { inventoryData } from './datasource';
function App() {
    let grid: GridComponent | null;
    const dropDownData: { [key: string]: Object; }[] = [
        { text: 'Ellipsis', value: 'Ellipsis' },
        { text: 'Clip', value: 'Clip' },
        { text: 'EllipsisWithTooltip', value: 'EllipsisWithTooltip' }
    ];
    const valueChange = ((args: ChangeEventArgs) => {
        (grid as
GridComponent).getColumnByField('Mainfieldsofinvention').clipMode =
args.value as ClipMode;
        (grid as GridComponent).refreshColumns();
    })
    return (
        <div>
            <label style={{ padding: '30px 17px 0 0' }}> Change the clip mode:
</label>
            <DropDownListComponent dataSource={dropDownData} index={0} width="100"
change={valueChange}></DropDownListComponent>
            <GridComponent dataSource={inventoryData} height={315} ref={g => grid =
g} allowPaging={true}>
                <ColumnsDirective>
                    <ColumnDirective field='Inventor' headerText='Inventor' width='100'
/>
                    <ColumnDirective field='NumberofPatentFamilies' headerText='Number
of Patent Families' width='100' />
                    <ColumnDirective field='Country' headerText='Country' width='100'
/>
                    <ColumnDirective field='Mainfieldsofinvention' headerText='Main
fields of invention' width='140' />
                </ColumnsDirective>
            </GridComponent></div>)
    )
}
export default App;

```

DATASOURCE.JSX

```

export const inventoryData = [
    {

```

```

      'Inventor': 'Kia Silverbrook',
      'NumberofPatentFamilies': 4737,
      'Country': 'Australia',
      'Number of INPADOC patents': 9839,
      'Active': '1994-2016',
      'Mainfieldsofinvention': 'Printing, Digital paper, Internet,
Electronics, Lab-on-a-chip, MEMS, Mechanical, VLSI',
    },
    {
      'Inventor': 'Shunpei Yamazaki',
      'NumberofPatentFamilies': 4677,
      'Country': 'Japan',
      'Number of INPADOC patents': '10000+',
      'Active': '1976-2016',
      'Mainfieldsofinvention': 'Thin film transistors, Liquid crystal
displays, Solar cells, Flash memory, OLED',
    },
    {
      'Inventor': 'Lowell L. Wood, Jr.',
      'NumberofPatentFamilies': 1419,
      'Country': 'USA',
      'Number of INPADOC patents': 1332,
      'Active': '1977-2016',
      'Mainfieldsofinvention': 'Mosquito laser, Nuclear weapons',
    },
    {
      'Inventor': 'Paul Lapstun',
      'NumberofPatentFamilies': 1281,
      'Country': 'Australia',
      'Number of INPADOC patents': 3099,
      'Active': '2000-2016',
      'Mainfieldsofinvention': 'Printing, Digital paper, Internet,
Electronics, CGI, VLSI',
    },
    {
      'Inventor': 'Gurtej Sandhu',
      'NumberofPatentFamilies': 1255,
      'Country': 'India',
      'Number of INPADOC patents': 2038,
      'Active': '1991-2016',
      'Mainfieldsofinvention': 'Thin film processes and materials, VLSI,
Semiconductor device fabrication',
    },
    {
      'Inventor': 'Jun Koyama',
      'NumberofPatentFamilies': 1240,
      'Country': 'Japan',
      'Number of INPADOC patents': 4126,
      'Active': '1991-2016',
      'Mainfieldsofinvention': 'Thin film transistors, Liquid crystal
displays, OLED',
    },
    {
      'Inventor': 'Roderick A. Hyde',
      'NumberofPatentFamilies': 1240,
      'Country': 'USA',
      'Number of INPADOC patents': 3360,

```



```

      'Active': '2001-2016',
      'Mainfieldsofinvention': 'Various',
    },
    {
      'Inventor': 'Leonard Forbes',
      'NumberofPatentFamilies': 1093,
      'Country': 'Canada',
      'Number of INPADOC patents': 1398,
      'Active': '1991-2016',
      'Mainfieldsofinvention': 'Semiconductor Memories, CCDs, Thin film
processes and materials, VLSI',
    },
    {
      'Inventor': 'Thomas Edison',
      'NumberofPatentFamilies': 1084,
      'Country': 'USA',
      'Number of INPADOC patents': 2332,
      'Active': '1847(b)-1931(d)',
      'Mainfieldsofinvention': 'Electric power, Lighting, Batteries,
Phonograph, Cement, Telegraphy, Mining',
    },
    {
      'Inventor': 'Donald E. Weder',
      'NumberofPatentFamilies': 999,
      'Country': 'USA',
      'Number of INPADOC patents': 1993,
      'Active': '1976-2015',
      'Mainfieldsofinvention': 'Florist supplies',
    },
    {
      'Inventor': 'George Albert Lyon',
      'NumberofPatentFamilies': 993,
      'Country': 'Canada',
      'Number of INPADOC patents': 'NA',
      'Active': '1882(b)-1961(d)',
      'Mainfieldsofinvention': 'Automotive, Stainless steel products',
    },
    {
      'Inventor': 'John F. O\'Connor',
      'NumberofPatentFamilies': 949,
      'Country': 'USA',
      'Number of INPADOC patents': 'NA',
      'Active': '1864(b)-1938(d)',
      'Mainfieldsofinvention': 'Railway draft gearing',
    },
    {
      'Inventor': 'Melvin De Groote',
      'NumberofPatentFamilies': 925,
      'Country': 'USA',
      'Number of INPADOC patents': 'NA',
      'Active': '1895(b)-1963(d)',
      'Mainfieldsofinvention': 'Chemical de-emulsifiers',
    },
    {
      'Inventor': 'Jay S. Walker',
      'NumberofPatentFamilies': 918,
      'Country': 'USA',

```

```

      'Number of INPADOC patents': 2206,
      'Active': '1998-2016',
      'Mainfieldsofinvention': 'Gaming machines',
    },
    {
      'Inventor': 'Edward K. Y. Jung',
      'NumberofPatentFamilies': 911,
      'Country': 'USA',
      'Number of INPADOC patents': 2254,
      'Active': '1996-2016',
      'Mainfieldsofinvention': 'Various',
    },
    {
      'Inventor': 'Francis H. Richards',
      'NumberofPatentFamilies': 894,
      'Country': 'USA',
      'Number of INPADOC patents': 'NA',
      'Active': '1850 (b)-19?? (d)',
      'Mainfieldsofinvention': 'Mechanical, automation',
    },
    {
      'Inventor': 'Kangguo Cheng',
      'NumberofPatentFamilies': 884,
      'Country': 'USA',
      'Number of INPADOC patents': 1314,
      'Active': '2004-2016',
      'Mainfieldsofinvention': 'Semiconductor device fabrication,
Semiconductor memory, Semiconductor device',
    }
  ],
];

```

DATASOURCE.TSX

```

export const inventoryData: Object[] = [
  {
    'Inventor': 'Kia Silverbrook',
    'NumberofPatentFamilies': 4737,
    'Country': 'Australia',
    'Number of INPADOC patents': 9839,
    'Active': '1994-2016',
    'Mainfieldsofinvention': 'Printing, Digital paper, Internet,
Electronics, Lab-on-a-chip, MEMS, Mechanical, VLSI',
  },
  {
    'Inventor': 'Shunpei Yamazaki',
    'NumberofPatentFamilies': 4677,
    'Country': 'Japan',
    'Number of INPADOC patents': '10000+',
    'Active': '1976-2016',
    'Mainfieldsofinvention': 'Thin film transistors, Liquid crystal
displays, Solar cells, Flash memory, OLED',
  },
  {
    'Inventor': 'Lowell L. Wood, Jr.',
    'NumberofPatentFamilies': 1419,
    'Country': 'USA',
  }
];

```

```

      'Number of INPADOC patents': 1332,
      'Active': '1977-2016',
      'Mainfieldsofinvention': 'Mosquito laser, Nuclear weapons',
    },
    {
      'Inventor': 'Paul Lapstun',
      'NumberofPatentFamilies': 1281,
      'Country': 'Australia',
      'Number of INPADOC patents': 3099,
      'Active': '2000-2016',
      'Mainfieldsofinvention': 'Printing, Digital paper, Internet,
Electronics, CGI, VLSI',
    },
    {
      'Inventor': 'Gurtej Sandhu',
      'NumberofPatentFamilies': 1255,
      'Country': 'India',
      'Number of INPADOC patents': 2038,
      'Active': '1991-2016',
      'Mainfieldsofinvention': 'Thin film processes and materials, VLSI,
Semiconductor device fabrication',
    },
    {
      'Inventor': 'Jun Koyama',
      'NumberofPatentFamilies': 1240,
      'Country': 'Japan',
      'Number of INPADOC patents': 4126,
      'Active': '1991-2016',
      'Mainfieldsofinvention': 'Thin film transistors, Liquid crystal
displays, OLED',
    },
    {
      'Inventor': 'Roderick A. Hyde',
      'NumberofPatentFamilies': 1240,
      'Country': 'USA',
      'Number of INPADOC patents': 3360,
      'Active': '2001-2016',
      'Mainfieldsofinvention': 'Various',
    },
    {
      'Inventor': 'Leonard Forbes',
      'NumberofPatentFamilies': 1093,
      'Country': 'Canada',
      'Number of INPADOC patents': 1398,
      'Active': '1991-2016',
      'Mainfieldsofinvention': 'Semiconductor Memories, CCDs, Thin film
processes and materials, VLSI',
    },
    {
      'Inventor': 'Thomas Edison',
      'NumberofPatentFamilies': 1084,
      'Country': 'USA',
      'Number of INPADOC patents': 2332,
      'Active': '1847(b)-1931(d)',
      'Mainfieldsofinvention': 'Electric power, Lighting, Batteries,
Phonograph, Cement, Telegraphy, Mining',
    },
  ],

```

```

{
  'Inventor': 'Donald E. Weder',
  'NumberofPatentFamilies': 999,
  'Country': 'USA',
  'Number of INPADOC patents': 1993,
  'Active': '1976-2015',
  'Mainfieldsofinvention': 'Florist supplies',
},
{
  'Inventor': 'George Albert Lyon',
  'NumberofPatentFamilies': 993,
  'Country': 'Canada',
  'Number of INPADOC patents': 'NA',
  'Active': '1882(b)-1961(d)',
  'Mainfieldsofinvention': 'Automotive, Stainless steel products',
},
{
  'Inventor': 'John F. O\'Connor',
  'NumberofPatentFamilies': 949,
  'Country': 'USA',
  'Number of INPADOC patents': 'NA',
  'Active': '1864(b)-1938(d)',
  'Mainfieldsofinvention': 'Railway draft gearing',
},
{
  'Inventor': 'Melvin De Groote',
  'NumberofPatentFamilies': 925,
  'Country': 'USA',
  'Number of INPADOC patents': 'NA',
  'Active': '1895(b)-1963(d)',
  'Mainfieldsofinvention': 'Chemical de-emulsifiers',
},
{
  'Inventor': 'Jay S. Walker',
  'NumberofPatentFamilies': 918,
  'Country': 'USA',
  'Number of INPADOC patents': 2206,
  'Active': '1998-2016',
  'Mainfieldsofinvention': 'Gaming machines',
},
{
  'Inventor': 'Edward K. Y. Jung',
  'NumberofPatentFamilies': 911,
  'Country': 'USA',
  'Number of INPADOC patents': 2254,
  'Active': '1996-2016',
  'Mainfieldsofinvention': 'Various',
},
{
  'Inventor': 'Francis H. Richards',
  'NumberofPatentFamilies': 894,
  'Country': 'USA',
  'Number of INPADOC patents': 'NA',
  'Active': '1850(b)-19??(d)',
  'Mainfieldsofinvention': 'Mechanical, automation',
},
{

```

```
'Inventor': 'Kangguo Cheng',
'NumberofPatentFamilies': 884,
'Country': 'USA',
'Number of INPADOC patents': 1314,
'Active': '2004-2016',
'Mainfieldsofinvention': 'Semiconductor device fabrication,
Semiconductor memory, Semiconductor device',
}
];
```

* By default, [clipMode](#) value is **Ellipsis**.

* If you set the [width](#) property of a column, the clip mode feature will be automatically applied to that column if the content exceeds the specified width.

* Be careful when using the Clip mode, as it may result in important information being cut off. It is generally recommended to use the Ellipsis or EllipsisWithTooltip modes instead.

Tooltip

The Syncfusion Grid allows you to display information about the grid columns to the user when they hover over them with the mouse.

Render bootstrap tooltip in grid cells

The Grid component allows rendering Bootstrap tooltips in the cells. To enable this feature, you need to add the Bootstrap link.

This is demonstrated in the sample code below which shows how to enable Bootstrap tooltip for the **CustomerID** field using `template` in grid cells,

Step 1: Run the following command to install the Bootstrap package using npm.

`

```
npm install react-bootstrap
```

```
npm install bootstrap
```

`

Step 2: You need to import the below required files in your component.

```
`typescript
```

```
import Tooltip from 'react-bootstrap/Tooltip';
```

```
import OverlayTrigger from 'react-bootstrap/OverlayTrigger';
```

```
import 'bootstrap/dist/css/bootstrap.min.css';
```

```
`
```

Step 3: The following code demonstrates how to render Bootstrap tooltip for the **CustomerID** field with `template` on grid cells,

```
`typescript
```

```
import React from 'react';
```

```
import { GridComponent, ColumnsDirective, ColumnDirective } from '@syncfusion/ej2-react-grids';
```

```
import Tooltip from 'react-bootstrap/Tooltip';
import OverlayTrigger from 'react-bootstrap/OverlayTrigger';
import 'bootstrap/dist/css/bootstrap.min.css';
import { data } from './datasource';

const customerIDTemplate = (props:any) => {
  return (
    <div className="tooltip-container">
      <div className="col-md-2" style={textAlign:"right"}>
        <OverlayTrigger
          data-placement="left"
          overlay={<Tooltip id={tooltip-`${props.CustomerID}`}>{props.CustomerID}</Tooltip>}
        </div>
        <i className="fas fa-pencil-alt"></i>
        {props.CustomerID}
      </div>
    </OverlayTrigger></div>
  );
};

function App() {
  return (
    <div>
      <GridComponent dataSource={data} height={315}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='OrderID' width='100' />
          <ColumnDirective field='CustomerID' headerText='CustomerID' width='100'
            template={customerIDTemplate} />
          <ColumnDirective field='Freight' headerText='Freight' width='100' format='C' />
          <ColumnDirective field='ShipCountry' headerText='ShipCountry' width='140' />
        </ColumnsDirective>
      </GridComponent>
    </div>
  );
}
```

```
);
}
export default App;
`
```

The following screenshot represents the Bootstrap tooltip for the **CustomerID** field,



Order ID	Customer ID	Freight	Order Date
10248	VINET	\$32.38	7/4/1996
10249	TOMSP	\$11.61	7/5/1996
10250	HANAR	\$65.83	7/8/1996
10251	VICTE	\$41.34	7/8/1996
10252	SUPRD	\$51.30	7/9/1996
10253	HANAR	\$58.17	7/10/1996
10254	CHOPS	\$22.98	7/11/1996
10255	RICSU	\$146.33	7/12/1996
10256	WELLI	\$13.97	7/13/1996
10257	HLAA	\$81.91	7/16/1996
10258	ERNSH	\$140.51	7/17/1996
10259	CENTC	\$5.25	7/18/1996

* The Bootstrap link must be import to the App.tsx file.

Display custom tooltip for columns

The Grid provides a feature to display custom tooltips for its columns using the [EJ2 Tooltip](#) component. This allows you to provide additional information about the columns when the user hovers over them.

To enable custom tooltips for columns in the Grid, you can render the Grid control inside the Tooltip component and set the target as `.e-rowcell`. This will display the tooltip when hovering over the grid cells.

Change the tooltip content for the grid cells by using the following code in the [beforeRender](#) event.

```
`typescript
const beforeRender = (args: TooltipEventArgs) => {
  if (args.target.classList.contains('e-rowcell')) {
    // event triggered before render the tooltip on target element.
    tooltip.content = 'This is value "' + args.target.innerText + '"';
  }
}
```

The following example demonstrates how to customize the tooltip content for the grid cells by using the [beforeRender](#) event of the EJ2 Tooltip component.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
import { TooltipComponent } from '@syncfusion/ej2-react-popups';
function App() {
  let tooltip;
  const beforeRender = ((args) => {
    if (args.target.classList.contains('e-rowcell')) {
      tooltip.content = 'This is value ' + args.target.innerText + ' ';
    }
  });
  return (
    <div>
      <TooltipComponent ref={t => tooltip = t} beforeRender={beforeRender}
target=".e-rowcell">
        <GridComponent dataSource={data} height={315}>
          <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='OrderID' width='100'
/>
            <ColumnDirective field='CustomerID' headerText='CustomerID'
width='120' />
            <ColumnDirective field='Freight' headerText='Freight' format='C'
width='80' />
            <ColumnDirective field='ShipCity' headerText='ShipCity'
width='120' />
          </ColumnsDirective>
        </GridComponent></TooltipComponent></div>
      </div>
    </div>
  );
}
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
import { TooltipComponent, TooltipEventArgs } from '@syncfusion/ej2-react-
popups';
function App() {
  let tooltip: TooltipComponent | null;
  const beforeRender = ((args: TooltipEventArgs) => {
    if (args.target.classList.contains('e-rowcell')) {
      (tooltip as TooltipComponent).content = 'This is value ' +
args.target.innerText + ' ';
    }
  });
  return (
    <div>
      <TooltipComponent ref={t => tooltip = t} beforeRender={beforeRender}
target=".e-rowcell">
        <GridComponent dataSource={data} height={315}>
          <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='OrderID' width='100'
/>

```



```

        <ColumnDirective field='CustomerID' headerText='CustomerID'
width='120' />
        <ColumnDirective field='Freight' headerText='Freight' format='C'
width='80' />
        <ColumnDirective field='ShipCity' headerText='ShipCity'
width='120' />
    </ColumnsDirective>
    </GridComponent></TooltipComponent></div>
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {

```

```

    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {

```

```

    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),

```

```

        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),

```

```

        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]];

```

Grid lines

The [gridLines](#) in a grid are used to separate the cells with horizontal and vertical lines for better readability. You can enable the grid lines by setting the [gridLines](#) property to one of the following values:

| Modes | Actions |

|-----|-----|

| Both | Displays both the horizontal and vertical grid lines.|

| None | No grid lines are displayed.|

| Horizontal | Displays the horizontal grid lines only.|

| Vertical | Displays the vertical grid lines only.|

| Default | Displays grid lines based on the theme.|

The following example demonstrates how to set the [gridLines](#) property based on changing the dropdown value using the [change](#) event of the DropDownList component.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import * as React from 'react';
import { inventoryData } from './datasource';
function App() {
  const [gridLine, setGridLine] = useState('Default');
  const dropDownData = [
    { text: 'Default', value: 'Default' },
    { text: 'Both', value: 'Both' },
    { text: 'Horizontal', value: 'Horizontal' },
    { text: 'Vertical', value: 'Vertical' },
    { text: 'None', value: 'None' }
  ];
  const valueChange = (args) => {
    setGridLine(args.value);
  }
  return (
    <div>
      <label style={{ padding: '30px 17px 0 0' }}>Change the grid
lines:</label>
      <DropDownListComponent dataSource={dropDownData} index={0} width="100"
change={valueChange}></DropDownListComponent>
      <GridComponent dataSource={inventoryData} height={315}
gridLines={gridLine}>
        <ColumnsDirective>
          <ColumnDirective field='Inventor' headerText='Inventor' width='100'
/>
          <ColumnDirective field='NumberofPatentFamilies' headerText='Number
of Patent Families' width='100' />
          <ColumnDirective field='Country' headerText='Country' width='100'
/>
          <ColumnDirective field='Mainfieldsofinvention' headerText='Main
fields of invention' width='140' />
        </ColumnsDirective>
      </GridComponent></div>
    )
  }
  export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, GridLine } from
 '@syncfusion/ej2-react-grids';
import { DropDownListComponent, ChangeEventArgs } from '@syncfusion/ej2-
react-dropdowns';
import React, { useState } from 'react';
import { inventoryData } from './datasource';
function App() {
  const [gridLine, setGridLine] = useState<GridLine>('Default');
  const dropDownData: any = [
    { text: 'Default', value: 'Default' },
```

```

    { text: 'Both', value: 'Both' },
    { text: 'Horizontal', value: 'Horizontal' },
    { text: 'Vertical', value: 'Vertical' },
    { text: 'None', value: 'None' }
  ];
  const valueChange = ((args: ChangeEventArgs) => {
    setGridLine(args.value);
  })
  return (
    <div>
      <label style={{ padding: '30px 17px 0 0' }}>Change the grid
lines:</label>
      <DropDownListComponent dataSource={dropDownData} index={0} width="100"
change={valueChange}></DropDownListComponent>
      <GridComponent dataSource={inventoryData} height={315}
gridLines={gridLine}>
        <ColumnsDirective>
          <ColumnDirective field='Inventor' headerText='Inventor' width='100'
/>
          <ColumnDirective field='NumberofPatentFamilies' headerText='Number
of Patent Families' width='100' />
          <ColumnDirective field='Country' headerText='Country' width='100'
/>
          <ColumnDirective field='Mainfieldsofinvention' headerText='Main
fields of invention' width='140' />
        </ColumnsDirective>
      </GridComponent></div>
    )
  }
export default App;

```

DATASOURCE.JSX

```

export const inventoryData = [
  {
    'Inventor': 'Kia Silverbrook',
    'NumberofPatentFamilies': 4737,
    'Country': 'Australia',
    'Number of INPADOC patents': 9839,
    'Active': '1994-2016',
    'Mainfieldsofinvention': 'Printing, Digital paper, Internet,
Electronics,Lab-on-a-chip, MEMS, Mechanical, VLSI',
  },
  {
    'Inventor': 'Shunpei Yamazaki',
    'NumberofPatentFamilies': 4677,
    'Country': 'Japan',
    'Number of INPADOC patents': '10000+',
    'Active': '1976-2016',
    'Mainfieldsofinvention': 'Thin film transistors, Liquid crystal
displays, Solar cells, Flash memory, OLED',
  },
  {
    'Inventor': 'Lowell L. Wood, Jr.',
    'NumberofPatentFamilies': 1419,
    'Country': 'USA',
    'Number of INPADOC patents': 1332,
  }
]

```

```

      'Active': '1977-2016',
      'Mainfieldsofinvention': 'Mosquito laser, Nuclear weapons',
    },
    {
      'Inventor': 'Paul Lapstun',
      'NumberofPatentFamilies': 1281,
      'Country': 'Australia',
      'Number of INPADOC patents': 3099,
      'Active': '2000-2016',
      'Mainfieldsofinvention': 'Printing, Digital paper, Internet,
Electronics, CGI, VLSI',
    },
    {
      'Inventor': 'Gurtej Sandhu',
      'NumberofPatentFamilies': 1255,
      'Country': 'India',
      'Number of INPADOC patents': 2038,
      'Active': '1991-2016',
      'Mainfieldsofinvention': 'Thin film processes and materials, VLSI,
Semiconductor device fabrication',
    },
    {
      'Inventor': 'Jun Koyama',
      'NumberofPatentFamilies': 1240,
      'Country': 'Japan',
      'Number of INPADOC patents': 4126,
      'Active': '1991-2016',
      'Mainfieldsofinvention': 'Thin film transistors, Liquid crystal
displays, OLED',
    },
    {
      'Inventor': 'Roderick A. Hyde',
      'NumberofPatentFamilies': 1240,
      'Country': 'USA',
      'Number of INPADOC patents': 3360,
      'Active': '2001-2016',
      'Mainfieldsofinvention': 'Various',
    },
    {
      'Inventor': 'Leonard Forbes',
      'NumberofPatentFamilies': 1093,
      'Country': 'Canada',
      'Number of INPADOC patents': 1398,
      'Active': '1991-2016',
      'Mainfieldsofinvention': 'Semiconductor Memories, CCDs, Thin film
processes and materials, VLSI',
    },
    {
      'Inventor': 'Thomas Edison',
      'NumberofPatentFamilies': 1084,
      'Country': 'USA',
      'Number of INPADOC patents': 2332,
      'Active': '1847(b)-1931(d)',
      'Mainfieldsofinvention': 'Electric power, Lighting, Batteries,
Phonograph, Cement, Telegraphy, Mining',
    },
    {

```



```

    'Inventor': 'Donald E. Weder',
    'NumberofPatentFamilies': 999,
    'Country': 'USA',
    'Number of INPADOC patents': 1993,
    'Active': '1976-2015',
    'Mainfieldsofinvention': 'Florist supplies',
  },
  {
    'Inventor': 'George Albert Lyon',
    'NumberofPatentFamilies': 993,
    'Country': 'Canada',
    'Number of INPADOC patents': 'NA',
    'Active': '1882(b)-1961(d)',
    'Mainfieldsofinvention': 'Automotive, Stainless steel products',
  },
  {
    'Inventor': 'John F. O\'Connor',
    'NumberofPatentFamilies': 949,
    'Country': 'USA',
    'Number of INPADOC patents': 'NA',
    'Active': '1864(b)-1938(d)',
    'Mainfieldsofinvention': 'Railway draft gearing',
  },
  {
    'Inventor': 'Melvin De Groote',
    'NumberofPatentFamilies': 925,
    'Country': 'USA',
    'Number of INPADOC patents': 'NA',
    'Active': '1895(b)-1963(d)',
    'Mainfieldsofinvention': 'Chemical de-emulsifiers',
  },
  {
    'Inventor': 'Jay S. Walker',
    'NumberofPatentFamilies': 918,
    'Country': 'USA',
    'Number of INPADOC patents': 2206,
    'Active': '1998-2016',
    'Mainfieldsofinvention': 'Gaming machines',
  },
  {
    'Inventor': 'Edward K. Y. Jung',
    'NumberofPatentFamilies': 911,
    'Country': 'USA',
    'Number of INPADOC patents': 2254,
    'Active': '1996-2016',
    'Mainfieldsofinvention': 'Various',
  },
  {
    'Inventor': 'Francis H. Richards',
    'NumberofPatentFamilies': 894,
    'Country': 'USA',
    'Number of INPADOC patents': 'NA',
    'Active': '1850(b)-19??(d)',
    'Mainfieldsofinvention': 'Mechanical, automation',
  },
  {
    'Inventor': 'Kangguo Cheng',

```

```

      'NumberofPatentFamilies': 884,
      'Country': 'USA',
      'Number of INPADOC patents': 1314,
      'Active': '2004-2016',
      'Mainfieldsofinvention': 'Semiconductor device fabrication,
Semiconductor memory, Semiconductor device',
    }
  ];

```

DATASOURCE.TSX

```

export const inventoryData: Object[] = [
  {
    'Inventor': 'Kia Silverbrook',
    'NumberofPatentFamilies': 4737,
    'Country': 'Australia',
    'Number of INPADOC patents': 9839,
    'Active': '1994-2016',
    'Mainfieldsofinvention': 'Printing, Digital paper, Internet,
Electronics, Lab-on-a-chip, MEMS, Mechanical, VLSI',
  },
  {
    'Inventor': 'Shunpei Yamazaki',
    'NumberofPatentFamilies': 4677,
    'Country': 'Japan',
    'Number of INPADOC patents': '10000+',
    'Active': '1976-2016',
    'Mainfieldsofinvention': 'Thin film transistors, Liquid crystal
displays, Solar cells, Flash memory, OLED',
  },
  {
    'Inventor': 'Lowell L. Wood, Jr.',
    'NumberofPatentFamilies': 1419,
    'Country': 'USA',
    'Number of INPADOC patents': 1332,
    'Active': '1977-2016',
    'Mainfieldsofinvention': 'Mosquito laser, Nuclear weapons',
  },
  {
    'Inventor': 'Paul Lapstun',
    'NumberofPatentFamilies': 1281,
    'Country': 'Australia',
    'Number of INPADOC patents': 3099,
    'Active': '2000-2016',
    'Mainfieldsofinvention': 'Printing, Digital paper, Internet,
Electronics, CGI, VLSI',
  },
  {
    'Inventor': 'Gurtej Sandhu',
    'NumberofPatentFamilies': 1255,
    'Country': 'India',
    'Number of INPADOC patents': 2038,
    'Active': '1991-2016',
    'Mainfieldsofinvention': 'Thin film processes and materials, VLSI,
Semiconductor device fabrication',
  },
];

```

```

{
  'Inventor': 'Jun Koyama',
  'NumberofPatentFamilies': 1240,
  'Country': 'Japan',
  'Number of INPADOC patents': 4126,
  'Active': '1991-2016',
  'Mainfieldsofinvention': 'Thin film transistors, Liquid crystal
displays, OLED',
},
{
  'Inventor': 'Roderick A. Hyde',
  'NumberofPatentFamilies': 1240,
  'Country': 'USA',
  'Number of INPADOC patents': 3360,
  'Active': '2001-2016',
  'Mainfieldsofinvention': 'Various',
},
{
  'Inventor': 'Leonard Forbes',
  'NumberofPatentFamilies': 1093,
  'Country': 'Canada',
  'Number of INPADOC patents': 1398,
  'Active': '1991-2016',
  'Mainfieldsofinvention': 'Semiconductor Memories, CCDs, Thin film
processes and materials, VLSI',
},
{
  'Inventor': 'Thomas Edison',
  'NumberofPatentFamilies': 1084,
  'Country': 'USA',
  'Number of INPADOC patents': 2332,
  'Active': '1847(b)-1931(d)',
  'Mainfieldsofinvention': 'Electric power, Lighting, Batteries,
Phonograph, Cement, Telegraphy, Mining',
},
{
  'Inventor': 'Donald E. Weder',
  'NumberofPatentFamilies': 999,
  'Country': 'USA',
  'Number of INPADOC patents': 1993,
  'Active': '1976-2015',
  'Mainfieldsofinvention': 'Florist supplies',
},
{
  'Inventor': 'George Albert Lyon',
  'NumberofPatentFamilies': 993,
  'Country': 'Canada',
  'Number of INPADOC patents': 'NA',
  'Active': '1882(b)-1961(d)',
  'Mainfieldsofinvention': 'Automotive, Stainless steel products',
},
{
  'Inventor': 'John F. O\'Connor',
  'NumberofPatentFamilies': 949,
  'Country': 'USA',
  'Number of INPADOC patents': 'NA',
  'Active': '1864(b)-1938(d)',
}

```

```

    'Mainfieldsofinvention': 'Railway draft gearing',
  },
  {
    'Inventor': 'Melvin De Groote',
    'NumberofPatentFamilies': 925,
    'Country': 'USA',
    'Number of INPADOC patents': 'NA',
    'Active': '1895(b)-1963(d)',
    'Mainfieldsofinvention': 'Chemical de-emulsifiers',
  },
  {
    'Inventor': 'Jay S. Walker',
    'NumberofPatentFamilies': 918,
    'Country': 'USA',
    'Number of INPADOC patents': 2206,
    'Active': '1998-2016',
    'Mainfieldsofinvention': 'Gaming machines',
  },
  {
    'Inventor': 'Edward K. Y. Jung',
    'NumberofPatentFamilies': 911,
    'Country': 'USA',
    'Number of INPADOC patents': 2254,
    'Active': '1996-2016',
    'Mainfieldsofinvention': 'Various',
  },
  {
    'Inventor': 'Francis H. Richards',
    'NumberofPatentFamilies': 894,
    'Country': 'USA',
    'Number of INPADOC patents': 'NA',
    'Active': '1850(b)-19??(d)',
    'Mainfieldsofinvention': 'Mechanical, automation',
  },
  {
    'Inventor': 'Kangguo Cheng',
    'NumberofPatentFamilies': 884,
    'Country': 'USA',
    'Number of INPADOC patents': 1314,
    'Active': '2004-2016',
    'Mainfieldsofinvention': 'Semiconductor device fabrication,
Semiconductor memory, Semiconductor device',
  }
];

```

By default, the grid renders with **Default** mode.

See also

- [How to customize the header cell styles using methods](#)

Edit in React Grid component

The Grid component provides powerful options for dynamically inserting, deleting, and updating records, enabling you to modify data directly within the grid. This feature is useful when you want to enable you to perform CRUD (Create, Read, Update, Delete) operations seamlessly.

To enable editing functionality directly within the grid, you need to configure the [allowEditing](#), [allowAdding](#), and [allowDeleting](#) properties within the [editSettings](#) to **true**.

Editing feature requires a primary key column for CRUD operations. To define the primary key, set [isPrimaryKey](#) to **true** in particular column.

You can start the edit action either by double clicking the particular row or by selecting the required row and click on **Edit** button in the toolbar. Similarly, you can add a new record to grid either by clicking on **Add** button in the toolbar or on an external button which is bound to invoke the [addRecord](#) method of the grid, **Save** and **Cancel** while in edit mode is possible using respective toolbar icon in grid. Deletion of the record is possible by selecting the required row and click on **Delete** button in the toolbar.

To use CRUD, inject the [EditLink to the Video](#) module into the grid.

To learn about what are all the edit modes and edit types are available in React Grid, you can check on this video

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Edit, Inject } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  const editOptions = { allowEditing: true, allowAdding: true, allowDeleting:
    true };
  const orderIDRules = { required: true, number: true };
  const customerIDRules = { required: true };
  const freightRules = { required: true, min: 1, max: 1000 };
  return <GridComponent dataSource={data} editSettings={editOptions}
    height={315}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
        textAlign="Right" isPrimaryKey={true} validationRules={orderIDRules} />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
        width='120' validationRules={customerIDRules} />
      <ColumnDirective field='Freight' headerText='Freight' width='120'
        format="C2" textAlign="Right" validationRules={freightRules} />
      <ColumnDirective field='ShipCountry' headerText='Ship Country'
        width='150' />
    </ColumnsDirective>
    <Inject services={[Edit]} />
  </GridComponent>
};
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
```

```
import { Edit, EditSettingsModel, Inject } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const editOptions: EditSettingsModel = { allowEditing: true, allowAdding: true, allowDeleting: true };
  const orderIDRules: Object = { required: true, number: true };
  const customerIDRules: Object = { required: true };
  const freightRules: Object = { required: true, min: 1, max: 1000 };
  return <GridComponent dataSource={data} editSettings={editOptions} height={315}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100' textAlign="Right" isPrimaryKey={true} validationRules={orderIDRules} />
      <ColumnDirective field='CustomerID' headerText='Customer ID' width='120' validationRules={customerIDRules} />
      <ColumnDirective field='Freight' headerText='Freight' width='120' format="C2" textAlign="Right" validationRules={freightRules} />
      <ColumnDirective field='ShipCountry' headerText='Ship Country' width='150' />
    </ColumnsDirective>
    <Inject services={[Edit]} />
  </GridComponent>
};
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', Role: 'Admin', EmployeeID: 5,
    OrderDate: new Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', Mask: '1111', ShipPostalCode: '51100', ShipCountry: 'France', Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', Role: 'Employee', EmployeeID: 6,
    OrderDate: new Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress: 'Luisenstr. 48',
    ShipRegion: 'CJ', Mask: '2222', ShipPostalCode: '44087', ShipCountry: 'Germany', Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 4,
    OrderDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua do Paço, 67',
    ShipRegion: 'RJ', Mask: '3333', ShipPostalCode: '05454-876',
    ShipCountry: 'Brazil', Freight: 65.83, Verified: !0
  },
  {

```

```

      OrderID: 10251, CustomerID: 'VICTE', Role: 'Manager', EmployeeID: 3,
      OrderDate: new Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', Mask: '4444', ShipPostalCode: '69004', ShipCountry:
'France', Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', Role: 'Manager', EmployeeID: 4,
      OrderDate: new Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', Mask: '5555', ShipPostalCode: 'B-6000',
      ShipCountry: 'Belgium', Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 3,
      OrderDate: new Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', Mask: '6666', ShipPostalCode: '05454-876',
      ShipCountry: 'Brazil', Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', Role: 'Employee', EmployeeID: 5,
      OrderDate: new Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', Mask: '7777', ShipPostalCode: '3012', ShipCountry:
'Switzerland', Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', Role: 'Admin', EmployeeID: 9,
      OrderDate: new Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', Mask: '8888', ShipPostalCode: '1204', ShipCountry:
'Switzerland', Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', Role: 'Employee', EmployeeID: 3,
      OrderDate: new Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', Mask: '9999', ShipPostalCode: '08737-363',
      ShipCountry: 'Brazil', Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', Role: 'Admin', EmployeeID: 4,
      OrderDate: new Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', Mask: '1234', ShipPostalCode: '5022',
      ShipCountry: 'Venezuela', Freight: 81.91, Verified: !0
    },
    {

```

```

      OrderID: 10258, CustomerID: 'ERNSH', Role: 'Manager', EmployeeID: 1,
      OrderDate: new Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', Mask: '2345', ShipPostalCode: '8010', ShipCountry:
'Austria', Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', Role: 'Admin', EmployeeID: 4,
      OrderDate: new Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', Mask: '3456', ShipPostalCode: '05022', ShipCountry:
'Mexico', Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', Role: 'Admin', EmployeeID: 4,
      OrderDate: new Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', Mask: '4567', ShipPostalCode: '50739', ShipCountry:
'Germany', Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', Role: 'Manager', EmployeeID: 4,
      OrderDate: new Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', Mask: '5678', ShipPostalCode: '02389-673',
      ShipCountry: 'Brazil', Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', Role: 'Employee', EmployeeID: 8,
      OrderDate: new Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', Mask: '6789', ShipPostalCode: '87110', ShipCountry:
'USA', Freight: 48.29, Verified: !0
    }
  ]
};

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', Role: 'Admin', EmployeeID: 5,
    OrderDate: new Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', Mask: '1111', ShipPostalCode: '51100', ShipCountry:
'France', Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', Role: 'Employee', EmployeeID: 6,
    OrderDate: new Date(836505e6),

```



```

      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
      'Luisenstr. 48',
      ShipRegion: 'CJ', Mask: '2222', ShipPostalCode: '44087', ShipCountry:
      'Germany', Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10250, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 4,
      OrderDate: new Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', Mask: '3333', ShipPostalCode: '05454-876',
      ShipCountry: 'Brazil', Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', Role: 'Manager', EmployeeID: 3,
      OrderDate: new Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', Mask: '4444', ShipPostalCode: '69004', ShipCountry:
      'France', Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', Role: 'Manager', EmployeeID: 4,
      OrderDate: new Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', Mask: '5555', ShipPostalCode: 'B-6000',
      ShipCountry: 'Belgium', Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 3,
      OrderDate: new Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', Mask: '6666', ShipPostalCode: '05454-876',
      ShipCountry: 'Brazil', Freight: 58.17, Verified: !0
    },
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      OrderID: 10254, CustomerID: 'CHOPS', Role: 'Employee', EmployeeID: 5,
      OrderDate: new Date(8370234e5),
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      ShipRegion: 'CJ', Mask: '7777', ShipPostalCode: '3012', ShipCountry:
      'Switzerland', Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', Role: 'Admin', EmployeeID: 9,
      OrderDate: new Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
      'Starenweg 5',
      ShipRegion: 'CJ', Mask: '8888', ShipPostalCode: '1204', ShipCountry:
      'Switzerland', Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', Role: 'Employee', EmployeeID: 3,
      OrderDate: new Date(837369e6),

```

```

        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', Mask: '9999', ShipPostalCode: '08737-363',
        ShipCountry: 'Brazil', Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', Role: 'Admin', EmployeeID: 4,
        OrderDate: new Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', Mask: '1234', ShipPostalCode: '5022',
        ShipCountry: 'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', Role: 'Manager', EmployeeID: 1,
        OrderDate: new Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', Mask: '2345', ShipPostalCode: '8010', ShipCountry:
        'Austria', Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', Role: 'Admin', EmployeeID: 4,
        OrderDate: new Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', Mask: '3456', ShipPostalCode: '05022', ShipCountry:
        'Mexico', Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', Role: 'Admin', EmployeeID: 4,
        OrderDate: new Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', Mask: '4567', ShipPostalCode: '50739', ShipCountry:
        'Germany', Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', Role: 'Manager', EmployeeID: 4,
        OrderDate: new Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', Mask: '5678', ShipPostalCode: '02389-673',
        ShipCountry: 'Brazil', Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', Role: 'Employee', EmployeeID: 8,
        OrderDate: new Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', Mask: '6789', ShipPostalCode: '87110', ShipCountry:
        'USA', Freight: 48.29, Verified: !0
    }
    ]];

```

* If [isIdentity](#) is enabled, then it will be considered as a read-only column when editing and adding a record.

* You can disable editing for a particular column, by specifying `allowEditing` to `false`.

* You can use the **Insert** key to add a new row to the grid and use the **Delete** key to delete the selected row from the grid.

Toolbar with edit option

The toolbar with edit option feature in the Grid component provides a [built-in toolbar](#) that includes various items for executing editing actions. This feature allows you to easily perform edit operations on the grid data, such as modifying cell values, updating changes, and canceling edits.

To enable this feature, you need to configure the [toolbar](#) property of the Grid component. This property allows you to define the items that will be displayed in the grid toolbar. By including the relevant items like **Edit**, **Add**, **Delete**, **Update**, and **Cancel** within the `toolbar` property, you can enable the edit options in the toolbar.

Here's an example of how to enable the toolbar with edit option in the Grid:

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Edit, Inject, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  const editOptions = { allowEditing: true, allowAdding: true, allowDeleting:
    true };
  const toolbarOptions = ['Add', 'Edit', 'Delete', 'Update', 'Cancel'];
  const orderIDRules = { required: true, number: true };
  const customerIDRules = { required: true };
  const freightRules = { required: true, number: true };
  const shipCountryrules = { required: true };
  return <GridComponent dataSource={data} editSettings={editOptions}
    toolbar={toolbarOptions} height={265}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
        textAlign="Right" isPrimaryKey={true} validationRules={orderIDRules} />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
        width='120' validationRules={customerIDRules} />
      <ColumnDirective field='Freight' headerText='Freight' width='120'
        format="C2" textAlign="Right" validationRules={freightRules} />
      <ColumnDirective field='ShipCountry' headerText='Ship Country'
        width='150' validationRules={shipCountryrules} />
    </ColumnsDirective>
    <Inject services={[Edit, Toolbar]} />
  </GridComponent>;
};
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
```

```
import { Edit, EditSettingsModel, Inject, Toolbar, ToolbarItems } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const editOptions: EditSettingsModel = { allowEditing: true, allowAdding:
true, allowDeleting: true };
  const toolbarOptions: ToolbarItems[] = ['Add', 'Edit', 'Delete', 'Update',
'Cancel'];
  const orderIDRules: Object = { required: true, number: true };
  const customerIDRules: Object = { required: true };
  const freightRules: Object = { required: true, number: true };
  const shipCountryrules: Object = { required: true };
  return <GridComponent dataSource={data} editSettings={editOptions}
toolbar={toolbarOptions} height={265}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" isPrimaryKey={true} validationRules={orderIDRules} />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='120' validationRules={customerIDRules} />
      <ColumnDirective field='Freight' headerText='Freight' width='120'
format="C2" textAlign="Right" validationRules={freightRules} />
      <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' validationRules={shipCountryrules} />
    </ColumnsDirective>
    <Inject services={[Edit, Toolbar]} />
  </GridComponent>
};
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', Role: 'Admin', EmployeeID: 5,
    OrderDate: new Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', Mask: '1111', ShipPostalCode: '51100', ShipCountry:
'France', Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', Role: 'Employee', EmployeeID: 6,
    OrderDate: new Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', Mask: '2222', ShipPostalCode: '44087', ShipCountry:
'Germany', Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 4,
    OrderDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', Mask: '3333', ShipPostalCode: '05454-876',
    ShipCountry: 'Brazil', Freight: 65.83, Verified: !0
  }
]
```

```

    },
    {
      OrderID: 10251, CustomerID: 'VICTE', Role: 'Manager', EmployeeID: 3,
      OrderDate: new Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', Mask: '4444', ShipPostalCode: '69004', ShipCountry:
      'France', Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', Role: 'Manager', EmployeeID: 4,
      OrderDate: new Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', Mask: '5555', ShipPostalCode: 'B-6000',
      ShipCountry: 'Belgium', Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 3,
      OrderDate: new Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', Mask: '6666', ShipPostalCode: '05454-876',
      ShipCountry: 'Brazil', Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', Role: 'Employee', EmployeeID: 5,
      OrderDate: new Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', Mask: '7777', ShipPostalCode: '3012', ShipCountry:
      'Switzerland', Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', Role: 'Admin', EmployeeID: 9,
      OrderDate: new Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
      'Starenweg 5',
      ShipRegion: 'CJ', Mask: '8888', ShipPostalCode: '1204', ShipCountry:
      'Switzerland', Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', Role: 'Employee', EmployeeID: 3,
      OrderDate: new Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
      'Rua do Mercado, 12',
      ShipRegion: 'SP', Mask: '9999', ShipPostalCode: '08737-363',
      ShipCountry: 'Brazil', Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', Role: 'Admin', EmployeeID: 4,
      OrderDate: new Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
      'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', Mask: '1234', ShipPostalCode: '5022',
      ShipCountry: 'Venezuela', Freight: 81.91, Verified: !0
    },
  ],

```

```

    {
      OrderID: 10258, CustomerID: 'ERNSH', Role: 'Manager', EmployeeID: 1,
      OrderDate: new Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', Mask: '2345', ShipPostalCode: '8010', ShipCountry:
'Austria', Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', Role: 'Admin', EmployeeID: 4,
      OrderDate: new Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', Mask: '3456', ShipPostalCode: '05022', ShipCountry:
'Mexico', Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', Role: 'Admin', EmployeeID: 4,
      OrderDate: new Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', Mask: '4567', ShipPostalCode: '50739', ShipCountry:
'Germany', Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', Role: 'Manager', EmployeeID: 4,
      OrderDate: new Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', Mask: '5678', ShipPostalCode: '02389-673',
      ShipCountry: 'Brazil', Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', Role: 'Employee', EmployeeID: 8,
      OrderDate: new Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', Mask: '6789', ShipPostalCode: '87110', ShipCountry:
'USA', Freight: 48.29, Verified: !0
    }
  ]
};

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', Role: 'Admin', EmployeeID: 5,
    OrderDate: new Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', Mask: '1111', ShipPostalCode: '51100', ShipCountry:
'France', Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', Role: 'Employee', EmployeeID: 6,
    OrderDate: new Date(836505e6),

```

```

      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
      'Luisenstr. 48',
      ShipRegion: 'CJ', Mask: '2222', ShipPostalCode: '44087', ShipCountry:
      'Germany', Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10250, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 4,
      OrderDate: new Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', Mask: '3333', ShipPostalCode: '05454-876',
      ShipCountry: 'Brazil', Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', Role: 'Manager', EmployeeID: 3,
      OrderDate: new Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', Mask: '4444', ShipPostalCode: '69004', ShipCountry:
      'France', Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', Role: 'Manager', EmployeeID: 4,
      OrderDate: new Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', Mask: '5555', ShipPostalCode: 'B-6000',
      ShipCountry: 'Belgium', Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 3,
      OrderDate: new Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', Mask: '6666', ShipPostalCode: '05454-876',
      ShipCountry: 'Brazil', Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', Role: 'Employee', EmployeeID: 5,
      OrderDate: new Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', Mask: '7777', ShipPostalCode: '3012', ShipCountry:
      'Switzerland', Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', Role: 'Admin', EmployeeID: 9,
      OrderDate: new Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
      'Starenweg 5',
      ShipRegion: 'CJ', Mask: '8888', ShipPostalCode: '1204', ShipCountry:
      'Switzerland', Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', Role: 'Employee', EmployeeID: 3,
      OrderDate: new Date(837369e6),

```

```

        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', Mask: '9999', ShipPostalCode: '08737-363',
        ShipCountry: 'Brazil', Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', Role: 'Admin', EmployeeID: 4,
        OrderDate: new Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', Mask: '1234', ShipPostalCode: '5022',
        ShipCountry: 'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', Role: 'Manager', EmployeeID: 1,
        OrderDate: new Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', Mask: '2345', ShipPostalCode: '8010', ShipCountry:
        'Austria', Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', Role: 'Admin', EmployeeID: 4,
        OrderDate: new Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', Mask: '3456', ShipPostalCode: '05022', ShipCountry:
        'Mexico', Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', Role: 'Admin', EmployeeID: 4,
        OrderDate: new Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', Mask: '4567', ShipPostalCode: '50739', ShipCountry:
        'Germany', Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', Role: 'Manager', EmployeeID: 4,
        OrderDate: new Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', Mask: '5678', ShipPostalCode: '02389-673',
        ShipCountry: 'Brazil', Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', Role: 'Employee', EmployeeID: 8,
        OrderDate: new Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', Mask: '6789', ShipPostalCode: '87110', ShipCountry:
        'USA', Freight: 48.29, Verified: !0
    }
    ]];

```


Disable editing for particular column

In Grid component, you have an option to disable editing for a specific column. This feature is useful when you want to prevent editing certain columns, such as columns that contain calculated values or read-only data.

To disable editing for a particular column, you can use the [allowEditing](#) property of the **columns** object. By setting this property to **false**, you can prevent editing for that specific column.

Here's an example that demonstrates how to disable editing for the column in the Grid:

APP.JSX

```
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns'
import { ColumnDirective, ColumnsDirective, GridComponent, Toolbar, Page }
from '@syncfusion/ej2-react-grids';
import { Edit, Inject } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  let currentColumn;
  const pageSettings = { pageSize: 6 };
  const editOptions = { allowEditing: true, allowAdding: true, allowDeleting:
true };
  const toolbar = ['Add', 'Edit', 'Delete', 'Update', 'Cancel'];
  const orderIDRules = { required: true, number: true };
  const customerIDRules = { required: true };
  const freightRules = { required: true, min: 1, max: 1000 };
  const editparams = { params: { popupHeight: '300px' } };
  const alignmentData = [
    { text: 'Order ID', value: 'OrderID' },
    { text: 'Customer ID', value: 'CustomerID' },
    { text: 'Freight', value: 'Freight' },
    { text: 'Order Date', value: 'OrderDate' },
    { text: 'Ship Country', value: 'ShipCountry' },
  ];
  const dropdownFields = { text: 'text', value: 'value' };
  const changeAlignment = (args) => {
    // Reset the allowEditing property of the previously selected column
    if (currentColumn) {
      currentColumn.allowEditing = true;
    }
    // Update the 'allowEditing' property for the selected column
    currentColumn = grid.getColumnByField(args.value);
    currentColumn.allowEditing = false;
  }
  return (<div>
    <label style={{ padding: "30px 17px 0 0" }}> Select column to disable
editing:</label>
    <DropDownListComponent index={0} width={150} dataSource={alignmentData}
fields={dropdownFields} change={changeAlignment}></DropDownListComponent>
    <GridComponent ref={g => grid = g} dataSource={data}
editSettings={editOptions} toolbar={toolbar} height={315} allowPaging={true}
pageSettings={pageSettings}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" isPrimaryKey={true} validationRules={orderIDRules} />

```

```

        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='120' validationRules={customerIDRules} />
        <ColumnDirective field='Freight' headerText='Freight' width='120'
format="C2" textAlign="Right" validationRules={freightRules}
editType='numericedit' />
        <ColumnDirective field='OrderDate' headerText='OrderDate' width='150'
format='yMd' editType='datepickeredit' />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' editType='dropdownedit' edit={editparams} />
    </ColumnsDirective>
    <Inject services={[Edit, Page, Toolbar]} />
    </GridComponent></div>
);
export default App;

```

APP.TSX

```

import { ChangeEventArgs, DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { Column, ColumnDirective, ColumnsDirective, GridComponent, PageSettingsModel, Toolbar, ToolbarItems, Page } from '@syncfusion/ej2-react-grids';
import { Edit, EditSettingsModel, Inject } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    let grid: GridComponent | null;
    let currentColumn: Column;
    const pageSettings: PageSettingsModel = { pageSize: 6 };
    const editOptions: EditSettingsModel = { allowEditing: true, allowAdding: true, allowDeleting: true };
    const toolbar: ToolbarItems[] = ['Add', 'Edit', 'Delete', 'Update', 'Cancel'];
    const orderIDRules: Object = { required: true, number: true };
    const customerIDRules: Object = { required: true };
    const freightRules: Object = { required: true, min: 1, max: 1000 };
    const editparams = { params: { popupHeight: '300px' } };
    const alignmentData: { [key: string]: Object; }[] = [
        { text: 'Order ID', value: 'OrderID' },
        { text: 'Customer ID', value: 'CustomerID' },
        { text: 'Freight', value: 'Freight' },
        { text: 'Order Date', value: 'OrderDate' },
        { text: 'Ship Country', value: 'ShipCountry' },
    ];
    const dropdownFields: Object = { text: 'text', value: 'value' };
    const changeAlignment = (args: ChangeEventArgs) => {
        // Reset the allowEditing property of the previously selected column
        if (currentColumn) {
            currentColumn.allowEditing = true;
        }
        // Update the 'allowEditing' property for the selected column
        currentColumn = (grid as GridComponent).getColumnByField(args.value) as Column;
        currentColumn.allowEditing = false;
    }
}

```

```

return (<div>
  <label style={{ padding: "30px 17px 0 0" }}> Select column to disable
  editing:</label>
  <DropDownListComponent index={0} width={150} dataSource={alignmentData}
  fields={dropdownFields} change={changeAlignment}></DropDownListComponent>
  <GridComponent ref={g => grid = g} dataSource={data}
  editSettings={editOptions} toolbar={toolbar} height={315} allowPaging={true}
  pageSettings={pageSettings}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
      textAlign="Right" isPrimaryKey={true} validationRules={orderIDRules} />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
      width='120' validationRules={customerIDRules} />
      <ColumnDirective field='Freight' headerText='Freight' width='120'
      format="C2" textAlign="Right" validationRules={freightRules}
      editType='numericedit' />
      <ColumnDirective field='OrderDate' headerText='OrderDate' width='150'
      format='yMd' editType='datepickeredit' />
      <ColumnDirective field='ShipCountry' headerText='Ship Country'
      width='150' editType='dropdownedit' edit={editparams} />
    </ColumnsDirective>
    <Inject services={[Edit, Page, Toolbar]} />
  </GridComponent></div>)
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', Role: 'Admin', EmployeeID: 5,
    OrderDate: new Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', Mask: '1111', ShipPostalCode: '51100', ShipCountry:
    'France', Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', Role: 'Employee', EmployeeID: 6,
    OrderDate: new Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', Mask: '2222', ShipPostalCode: '44087', ShipCountry:
    'Germany', Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 4,
    OrderDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', Mask: '3333', ShipPostalCode: '05454-876',
    ShipCountry: 'Brazil', Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', Role: 'Manager', EmployeeID: 3,
    OrderDate: new Date(8367642e5),

```

```

      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', Mask: '4444', ShipPostalCode: '69004', ShipCountry:
'France', Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', Role: 'Manager', EmployeeID: 4,
OrderDate: new Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', Mask: '5555', ShipPostalCode: 'B-6000',
ShipCountry: 'Belgium', Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 3,
OrderDate: new Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', Mask: '6666', ShipPostalCode: '05454-876',
ShipCountry: 'Brazil', Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', Role: 'Employee', EmployeeID: 5,
OrderDate: new Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', Mask: '7777', ShipPostalCode: '3012', ShipCountry:
'Switzerland', Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', Role: 'Admin', EmployeeID: 9,
OrderDate: new Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', Mask: '8888', ShipPostalCode: '1204', ShipCountry:
'Switzerland', Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', Role: 'Employee', EmployeeID: 3,
OrderDate: new Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', Mask: '9999', ShipPostalCode: '08737-363',
ShipCountry: 'Brazil', Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', Role: 'Admin', EmployeeID: 4,
OrderDate: new Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', Mask: '1234', ShipPostalCode: '5022',
ShipCountry: 'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', Role: 'Manager', EmployeeID: 1,
OrderDate: new Date(8375418e5),

```

```

        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', Mask: '2345', ShipPostalCode: '8010', ShipCountry:
'Austria', Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', Role: 'Admin', EmployeeID: 4,
        OrderDate: new Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', Mask: '3456', ShipPostalCode: '05022', ShipCountry:
'Mexico', Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', Role: 'Admin', EmployeeID: 4,
        OrderDate: new Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', Mask: '4567', ShipPostalCode: '50739', ShipCountry:
'Germany', Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', Role: 'Manager', EmployeeID: 4,
        OrderDate: new Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', Mask: '5678', ShipPostalCode: '02389-673',
        ShipCountry: 'Brazil', Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', Role: 'Employee', EmployeeID: 8,
        OrderDate: new Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', Mask: '6789', ShipPostalCode: '87110', ShipCountry:
'USA', Freight: 48.29, Verified: !0
    }
]
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', Role: 'Admin', EmployeeID: 5,
        OrderDate: new Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', Mask: '1111', ShipPostalCode: '51100', ShipCountry:
'France', Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', Role: 'Employee', EmployeeID: 6,
        OrderDate: new Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',

```

```

        ShipRegion: 'CJ', Mask: '2222', ShipPostalCode: '44087', ShipCountry:
        'Germany', Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 4,
        OrderDate: new Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', Mask: '3333', ShipPostalCode: '05454-876',
        ShipCountry: 'Brazil', Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', Role: 'Manager', EmployeeID: 3,
        OrderDate: new Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', Mask: '4444', ShipPostalCode: '69004', ShipCountry:
        'France', Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', Role: 'Manager', EmployeeID: 4,
        OrderDate: new Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', Mask: '5555', ShipPostalCode: 'B-6000',
        ShipCountry: 'Belgium', Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 3,
        OrderDate: new Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', Mask: '6666', ShipPostalCode: '05454-876',
        ShipCountry: 'Brazil', Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', Role: 'Employee', EmployeeID: 5,
        OrderDate: new Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', Mask: '7777', ShipPostalCode: '3012', ShipCountry:
        'Switzerland', Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', Role: 'Admin', EmployeeID: 9,
        OrderDate: new Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', Mask: '8888', ShipPostalCode: '1204', ShipCountry:
        'Switzerland', Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', Role: 'Employee', EmployeeID: 3,
        OrderDate: new Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',

```

```

        ShipRegion: 'SP', Mask: '9999', ShipPostalCode: '08737-363',
        ShipCountry: 'Brazil', Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', Role: 'Admin', EmployeeID: 4,
        OrderDate: new Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', Mask: '1234', ShipPostalCode: '5022',
        ShipCountry: 'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', Role: 'Manager', EmployeeID: 1,
        OrderDate: new Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', Mask: '2345', ShipPostalCode: '8010', ShipCountry:
        'Austria', Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', Role: 'Admin', EmployeeID: 4,
        OrderDate: new Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', Mask: '3456', ShipPostalCode: '05022', ShipCountry:
        'Mexico', Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', Role: 'Admin', EmployeeID: 4,
        OrderDate: new Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', Mask: '4567', ShipPostalCode: '50739', ShipCountry:
        'Germany', Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', Role: 'Manager', EmployeeID: 4,
        OrderDate: new Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', Mask: '5678', ShipPostalCode: '02389-673',
        ShipCountry: 'Brazil', Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', Role: 'Employee', EmployeeID: 8,
        OrderDate: new Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', Mask: '6789', ShipPostalCode: '87110', ShipCountry:
        'USA', Freight: 48.29, Verified: !0
    }
    ];

```

* If you have set the [isPrimaryKey](#) property to **true** for a column, editing will be automatically disabled for that column.

* You can disable the particular row using [actionBegin](#) event. please refer this [link](#).

* You can disable the particular cell using [cellEdit](#) event. please refer this [link](#).

Editing template column

The editing template column feature in the Grid allows you to create custom editing templates for specific columns in the grid. This feature is particularly useful when you need to customize the editing experience for certain columns, such as using custom input controls or displaying additional information during editing.

To enable the editing template column feature, you need to define the [field](#) property for the specific column in the grid's configuration. The [field](#) property maps the column to the corresponding field name in the data source, allowing you to edit the value of that field.

In the below demo, the **ShipCountry** column is rendered with the template.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Toolbar,
ToolbarItems } from '@syncfusion/ej2-react-grids';
import { Edit, EditSettingsModel, Inject } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const editOptions = { allowEditing: true, allowAdding: true, allowDeleting: true };
  const toolbar = ['Add', 'Edit', 'Delete', 'Update', 'Cancel'];
  const orderIDRules = { required: true, number: true };
  const customerIDRules = { required: true };
  const freightRules = { required: true, min: 1, max: 1000 };
  const template = (props) => {
    return (
      <a href="#">{props.ShipCountry}</a>
    )
  }
  return (<div>
    <GridComponent dataSource={data} editSettings={editOptions}
    toolbar={toolbar} height={315}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='100'
        textAlign="Right" isPrimaryKey={true} validationRules={orderIDRules} />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
        width='120' validationRules={customerIDRules} />
        <ColumnDirective field='Freight' headerText='Freight' width='120'
        format="C2" textAlign="Right" validationRules={freightRules}
        editType='numericedit' />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
        width='150' editType='dropdownedit' template={template} />
      </ColumnsDirective>
      <Inject services={[Edit, Toolbar]} />
    </GridComponent></div>)
  );
}
export default App;
```

APP.TSX


```

import { ColumnDirective, ColumnsDirective, GridComponent, Toolbar,
ToolbarItems } from '@syncfusion/ej2-react-grids';
import { Edit, EditSettingsModel, Inject } from '@syncfusion/ej2-react-
grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const editOptions: EditSettingsModel = { allowEditing: true, allowAdding:
true, allowDeleting: true };
  const toolbar: ToolbarItems[] = ['Add', 'Edit', 'Delete', 'Update',
'Cancel'];
  const orderIDRules: Object = { required: true, number: true };
  const customerIDRules: Object = { required: true };
  const freightRules: Object = { required: true, min: 1, max: 1000 };
  const template = (props: any) => {
    return (
      <a href="#">{props.ShipCountry}</a>
    )
  }
  return (<div>
    <GridComponent dataSource={data} editSettings={editOptions}
toolbar={toolbar} height={315}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" isPrimaryKey={true} validationRules={orderIDRules} />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='120' validationRules={customerIDRules} />
        <ColumnDirective field='Freight' headerText='Freight' width='120'
format="C2" textAlign="Right" validationRules={freightRules}
editType='numericedit' />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' editType='dropdownedit' template={template} />
      </ColumnsDirective>
      <Inject services={[Edit, Toolbar]} />
    </GridComponent></div>
  );
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', Role: 'Admin', EmployeeID: 5,
    OrderDate: new Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', Mask: '1111', ShipPostalCode: '51100', ShipCountry:
'France', Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', Role: 'Employee', EmployeeID: 6,
    OrderDate: new Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', Mask: '2222', ShipPostalCode: '44087', ShipCountry:
'Germany', Freight: 11.61, Verified: !1
  }
];

```

```

    },
    {
      OrderID: 10250, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 4,
      OrderDate: new Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', Mask: '3333', ShipPostalCode: '05454-876',
      ShipCountry: 'Brazil', Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', Role: 'Manager', EmployeeID: 3,
      OrderDate: new Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', Mask: '4444', ShipPostalCode: '69004', ShipCountry:
      'France', Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', Role: 'Manager', EmployeeID: 4,
      OrderDate: new Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', Mask: '5555', ShipPostalCode: 'B-6000',
      ShipCountry: 'Belgium', Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 3,
      OrderDate: new Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', Mask: '6666', ShipPostalCode: '05454-876',
      ShipCountry: 'Brazil', Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', Role: 'Employee', EmployeeID: 5,
      OrderDate: new Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', Mask: '7777', ShipPostalCode: '3012', ShipCountry:
      'Switzerland', Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', Role: 'Admin', EmployeeID: 9,
      OrderDate: new Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
      'Starenweg 5',
      ShipRegion: 'CJ', Mask: '8888', ShipPostalCode: '1204', ShipCountry:
      'Switzerland', Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', Role: 'Employee', EmployeeID: 3,
      OrderDate: new Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
      'Rua do Mercado, 12',
      ShipRegion: 'SP', Mask: '9999', ShipPostalCode: '08737-363',
      ShipCountry: 'Brazil', Freight: 13.97, Verified: !1
    },
  ],

```

```

{
  OrderID: 10257, CustomerID: 'HILAA', Role: 'Admin', EmployeeID: 4,
  OrderDate: new Date(8374554e5),
  ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
  'Carrera 22 con Ave. Carlos Soublette #8-35',
  ShipRegion: 'Táchira', Mask: '1234', ShipPostalCode: '5022',
  ShipCountry: 'Venezuela', Freight: 81.91, Verified: !0
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{
  OrderID: 10258, CustomerID: 'ERNSH', Role: 'Manager', EmployeeID: 1,
  OrderDate: new Date(8375418e5),
  ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
  ShipRegion: 'CJ', Mask: '2345', ShipPostalCode: '8010', ShipCountry:
'Austria', Freight: 140.51, Verified: !0
},
{
  OrderID: 10259, CustomerID: 'CENTC', Role: 'Admin', EmployeeID: 4,
  OrderDate: new Date(8376282e5),
  ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
  ShipAddress: 'Sierras de Granada 9993',
  ShipRegion: 'CJ', Mask: '3456', ShipPostalCode: '05022', ShipCountry:
'Mexico', Freight: 3.25, Verified: !1
},
{
  OrderID: 10260, CustomerID: 'OTTIK', Role: 'Admin', EmployeeID: 4,
  OrderDate: new Date(8377146e5),
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'Mehrheimerstr. 369',
  ShipRegion: 'CJ', Mask: '4567', ShipPostalCode: '50739', ShipCountry:
'Germany', Freight: 55.09, Verified: !0
},
{
  OrderID: 10261, CustomerID: 'QUEDE', Role: 'Manager', EmployeeID: 4,
  OrderDate: new Date(8377146e5),
  ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
  ShipRegion: 'RJ', Mask: '5678', ShipPostalCode: '02389-673',
  ShipCountry: 'Brazil', Freight: 3.05, Verified: !1
},
{
  OrderID: 10262, CustomerID: 'RATTC', Role: 'Employee', EmployeeID: 8,
  OrderDate: new Date(8379738e5),
  ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
  ShipAddress: '2817 Milton Dr.',
  ShipRegion: 'NM', Mask: '6789', ShipPostalCode: '87110', ShipCountry:
'USA', Freight: 48.29, Verified: !0
}
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
{
  OrderID: 10248, CustomerID: 'VINET', Role: 'Admin', EmployeeID: 5,
  OrderDate: new Date(8364186e5),

```

```

      ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
      ShipAddress: '59 rue de l Abbaye',
      ShipRegion: 'CJ', Mask: '1111', ShipPostalCode: '51100', ShipCountry:
      'France', Freight: 32.38, Verified: !0
    },
    {
      OrderID: 10249, CustomerID: 'TOMSP', Role: 'Employee', EmployeeID: 6,
      OrderDate: new Date(836505e6),
      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
      'Luisenstr. 48',
      ShipRegion: 'CJ', Mask: '2222', ShipPostalCode: '44087', ShipCountry:
      'Germany', Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10250, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 4,
      OrderDate: new Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', Mask: '3333', ShipPostalCode: '05454-876',
      ShipCountry: 'Brazil', Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', Role: 'Manager', EmployeeID: 3,
      OrderDate: new Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', Mask: '4444', ShipPostalCode: '69004', ShipCountry:
      'France', Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', Role: 'Manager', EmployeeID: 4,
      OrderDate: new Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', Mask: '5555', ShipPostalCode: 'B-6000',
      ShipCountry: 'Belgium', Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 3,
      OrderDate: new Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', Mask: '6666', ShipPostalCode: '05454-876',
      ShipCountry: 'Brazil', Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', Role: 'Employee', EmployeeID: 5,
      OrderDate: new Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', Mask: '7777', ShipPostalCode: '3012', ShipCountry:
      'Switzerland', Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', Role: 'Admin', EmployeeID: 9,
      OrderDate: new Date(8371098e5),

```

```

      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', Mask: '8888', ShipPostalCode: '1204', ShipCountry:
'Switzerland', Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', Role: 'Employee', EmployeeID: 3,
OrderDate: new Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', Mask: '9999', ShipPostalCode: '08737-363',
ShipCountry: 'Brazil', Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', Role: 'Admin', EmployeeID: 4,
OrderDate: new Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', Mask: '1234', ShipPostalCode: '5022',
ShipCountry: 'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', Role: 'Manager', EmployeeID: 1,
OrderDate: new Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', Mask: '2345', ShipPostalCode: '8010', ShipCountry:
'Austria', Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', Role: 'Admin', EmployeeID: 4,
OrderDate: new Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', Mask: '3456', ShipPostalCode: '05022', ShipCountry:
'Mexico', Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', Role: 'Admin', EmployeeID: 4,
OrderDate: new Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', Mask: '4567', ShipPostalCode: '50739', ShipCountry:
'Germany', Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', Role: 'Manager', EmployeeID: 4,
OrderDate: new Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', Mask: '5678', ShipPostalCode: '02389-673',
ShipCountry: 'Brazil', Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', Role: 'Employee', EmployeeID: 8,
OrderDate: new Date(8379738e5),

```

```

        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', Mask: '6789', ShipPostalCode: '87110', ShipCountry:
        'USA', Freight: 48.29, Verified: !0
    }];

```

Customize delete confirmation dialog

Customizing the delete confirmation dialog in Grid allows you to personalize the appearance, content, and behavior of the dialog that appears when you attempts to delete an item. You can modify properties like header, showCloseIcon, and height to tailor the edit dialog to your specific requirements. Additionally, you can override default localization strings to provide custom text for buttons or other elements within the dialog.

To customize the delete confirmation dialog, you can utilize the [toolbarClick](#) event. This event is triggered when a toolbar item, such as the delete button, is clicked.

* To enable the confirmation dialog for the delete operation in the Grid, you can set the [showDeleteConfirmDialog](#) property of the [editSettings](#) configuration to **true**.

* You can refer the Grid [Default text](#) list for more localization.

The following example that demonstrates how to customize the delete confirmation dialog using the [toolbarClick](#) event:

APP.JSX

```

import { L10n } from '@syncfusion/ej2-base';
import { ColumnDirective, ColumnsDirective, GridComponent, Toolbar } from
 '@syncfusion/ej2-react-grids';
import { Edit, Inject } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
L10n.load({
    'en-US': {
        grid: {
            'OKButton': 'YES',
            'CancelButton': 'Discard',
            'ConfirmDelete': 'Are you sure you want to delete the selected Record?'
        }
    }
});
function App() {
    let grid;
    const editOptions = { allowEditing: true, allowAdding: true, allowDeleting:
    true, showDeleteConfirmDialog: true };
    const toolbar = ['Add', 'Edit', 'Delete', 'Update', 'Cancel'];
    const toolbarClick = (args) => {
        if (args.item.properties.text === 'Delete') {
            const dialogObj = grid.editModule.dialogObj;
            dialogObj.header = 'Delete Confirmation Dialog';
            dialogObj.showCloseIcon = true;
        }
    }
    return (<div>

```

```

    <GridComponent ref={g => grid = g} dataSource={data}
    editSettings={editOptions} toolbar={toolbar} height={315}
    toolbarClick={toolbarClick}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='100'
        textAlign="Right" isPrimaryKey={true} />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
        width='120' />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
        width='150' />
        <ColumnDirective field='ShipCity' headerText='Ship City' width='150'
        />
      </ColumnsDirective>
      <Inject services={[Edit, Toolbar]} />
    </GridComponent></div>
  };
  export default App;

```

APP.TSX

```

import { L10n } from '@syncfusion/ej2-base';
import { ClickEventArgs } from '@syncfusion/ej2-react-navigations';
import { ColumnDirective, ColumnsDirective, GridComponent, Toolbar,
ToolbarItems } from '@syncfusion/ej2-react-grids';
import { Edit, EditSettingsModel, Inject } from '@syncfusion/ej2-react-
grids';
import * as React from 'react';
import { data } from './datasource';
L10n.load({
  'en-US': {
    grid: {
      'OKButton': 'YES',
      'CancelButton': 'Discard',
      'ConfirmDelete': 'Are you sure you want to delete the selected Record?'
    }
  }
});
function App() {
  let grid: GridComponent | null;
  const editOptions: EditSettingsModel = { allowEditing: true, allowAdding:
true, allowDeleting: true, showDeleteConfirmDialog: true };
  const toolbar: ToolbarItems[] = ['Add', 'Edit', 'Delete', 'Update',
'Cancel'];
  const toolbarClick = (args: ClickEventArgs) => {
    if (args.item.properties.text === 'Delete') {
      const dialogObj = (grid as GridComponent).editModule.dialogObj;
      dialogObj.header = 'Delete Confirmation Dialog';
      dialogObj.showCloseIcon = true;
    }
  }
  return (<div>
    <GridComponent ref={g => grid = g} dataSource={data}
    editSettings={editOptions} toolbar={toolbar} height={315}
    toolbarClick={toolbarClick}>
      <ColumnsDirective>

```

```

    <ColumnDirective field='OrderID' headerText='Order ID' width='100'
    textAlign="Right" isPrimaryKey={true} />
    <ColumnDirective field='CustomerID' headerText='Customer ID'
    width='120' />
    <ColumnDirective field='ShipCountry' headerText='Ship Country'
    width='150' />
    <ColumnDirective field='ShipCity' headerText='Ship City' width='150'
    />
  </ColumnsDirective>
  <Inject services={[Edit, Toolbar]} />
</GridComponent></div>
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', Role: 'Admin', EmployeeID: 5,
    OrderDate: new Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', Mask: '1111', ShipPostalCode: '51100', ShipCountry:
    'France', Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', Role: 'Employee', EmployeeID: 6,
    OrderDate: new Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', Mask: '2222', ShipPostalCode: '44087', ShipCountry:
    'Germany', Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 4,
    OrderDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', Mask: '3333', ShipPostalCode: '05454-876',
    ShipCountry: 'Brazil', Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', Role: 'Manager', EmployeeID: 3,
    OrderDate: new Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', Mask: '4444', ShipPostalCode: '69004', ShipCountry:
    'France', Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', Role: 'Manager', EmployeeID: 4,
    OrderDate: new Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', Mask: '5555', ShipPostalCode: 'B-6000',
    ShipCountry: 'Belgium', Freight: 51.3, Verified: !0
  }
]

```



```

    },
    {
      OrderID: 10253, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 3,
      OrderDate: new Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', Mask: '6666', ShipPostalCode: '05454-876',
      ShipCountry: 'Brazil', Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', Role: 'Employee', EmployeeID: 5,
      OrderDate: new Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', Mask: '7777', ShipPostalCode: '3012', ShipCountry:
      'Switzerland', Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', Role: 'Admin', EmployeeID: 9,
      OrderDate: new Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
      'Starenweg 5',
      ShipRegion: 'CJ', Mask: '8888', ShipPostalCode: '1204', ShipCountry:
      'Switzerland', Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', Role: 'Employee', EmployeeID: 3,
      OrderDate: new Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
      'Rua do Mercado, 12',
      ShipRegion: 'SP', Mask: '9999', ShipPostalCode: '08737-363',
      ShipCountry: 'Brazil', Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', Role: 'Admin', EmployeeID: 4,
      OrderDate: new Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
      'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', Mask: '1234', ShipPostalCode: '5022',
      ShipCountry: 'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', Role: 'Manager', EmployeeID: 1,
      OrderDate: new Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
      ShipRegion: 'CJ', Mask: '2345', ShipPostalCode: '8010', ShipCountry:
      'Austria', Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', Role: 'Admin', EmployeeID: 4,
      OrderDate: new Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', Mask: '3456', ShipPostalCode: '05022', ShipCountry:
      'Mexico', Freight: 3.25, Verified: !1
    },
  ],

```

```

{
  OrderID: 10260, CustomerID: 'OTTIK', Role: 'Admin', EmployeeID: 4,
  OrderDate: new Date(8377146e5),
  ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
  ShipRegion: 'CJ', Mask: '4567', ShipPostalCode: '50739', ShipCountry:
'Germany', Freight: 55.09, Verified: !0
},
{
  OrderID: 10261, CustomerID: 'QUEDE', Role: 'Manager', EmployeeID: 4,
  OrderDate: new Date(8377146e5),
  ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
  ShipRegion: 'RJ', Mask: '5678', ShipPostalCode: '02389-673',
  ShipCountry: 'Brazil', Freight: 3.05, Verified: !1
},
{
  OrderID: 10262, CustomerID: 'RATTC', Role: 'Employee', EmployeeID: 8,
  OrderDate: new Date(8379738e5),
  ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
  ShipAddress: '2817 Milton Dr.',
  ShipRegion: 'NM', Mask: '6789', ShipPostalCode: '87110', ShipCountry:
'USA', Freight: 48.29, Verified: !0
}
]
};

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', Role: 'Admin', EmployeeID: 5,
    OrderDate: new Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', Mask: '1111', ShipPostalCode: '51100', ShipCountry:
'France', Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', Role: 'Employee', EmployeeID: 6,
    OrderDate: new Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', Mask: '2222', ShipPostalCode: '44087', ShipCountry:
'Germany', Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 4,
    OrderDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', Mask: '3333', ShipPostalCode: '05454-876',
    ShipCountry: 'Brazil', Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', Role: 'Manager', EmployeeID: 3,
    OrderDate: new Date(8367642e5),

```

```

      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', Mask: '4444', ShipPostalCode: '69004', ShipCountry:
'France', Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', Role: 'Manager', EmployeeID: 4,
OrderDate: new Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', Mask: '5555', ShipPostalCode: 'B-6000',
ShipCountry: 'Belgium', Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 3,
OrderDate: new Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', Mask: '6666', ShipPostalCode: '05454-876',
ShipCountry: 'Brazil', Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', Role: 'Employee', EmployeeID: 5,
OrderDate: new Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', Mask: '7777', ShipPostalCode: '3012', ShipCountry:
'Switzerland', Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', Role: 'Admin', EmployeeID: 9,
OrderDate: new Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', Mask: '8888', ShipPostalCode: '1204', ShipCountry:
'Switzerland', Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', Role: 'Employee', EmployeeID: 3,
OrderDate: new Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', Mask: '9999', ShipPostalCode: '08737-363',
ShipCountry: 'Brazil', Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', Role: 'Admin', EmployeeID: 4,
OrderDate: new Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', Mask: '1234', ShipPostalCode: '5022',
ShipCountry: 'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', Role: 'Manager', EmployeeID: 1,
OrderDate: new Date(8375418e5),

```

```

        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', Mask: '2345', ShipPostalCode: '8010', ShipCountry:
'Austria', Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', Role: 'Admin', EmployeeID: 4,
        OrderDate: new Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', Mask: '3456', ShipPostalCode: '05022', ShipCountry:
'Mexico', Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', Role: 'Admin', EmployeeID: 4,
        OrderDate: new Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', Mask: '4567', ShipPostalCode: '50739', ShipCountry:
'Germany', Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', Role: 'Manager', EmployeeID: 4,
        OrderDate: new Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', Mask: '5678', ShipPostalCode: '02389-673',
        ShipCountry: 'Brazil', Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', Role: 'Employee', EmployeeID: 8,
        OrderDate: new Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', Mask: '6789', ShipPostalCode: '87110', ShipCountry:
'USA', Freight: 48.29, Verified: !0
    }
    ]
};

```

Update boolean column value with a single click

The Syncfusion Grid allows you to update a boolean column value with a single click in the normal mode of editing. This feature streamlines the process of toggling boolean values within the grid, enhancing interaction and efficiency. This can be achieved through the use of the column template feature.

In the following sample, the `CheckBox` component is rendered as a template in the **Verified** column to make it editable with a single click.

APP.JSX

```

import { CheckBoxComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Edit, Inject, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {

```

```

const editOptions = { allowEditing: true, allowAdding: true, allowDeleting:
true };
const toolbarOptions = ['Add', 'Edit', 'Delete', 'Update', 'Cancel'];
const orderIDRules = { required: true, number: true };
const customerIDRules = { required: true };
const freightRules = { required: true, min: 1, max: 1000 };
const verifiedRules = { required: true };
const dateRules = { required: true };
const template = (props) => {
  return (<div>
    <CheckBoxComponent checked={props.Verified}></CheckBoxComponent>
    </div>)
}
return (<div>
  <GridComponent id='Grid' dataSource={data} editSettings={editOptions}
    toolbar={toolbarOptions} height={315}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID'
validationRules={orderIDRules} width='100' textAlign="Right"
isPrimaryKey={true} />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='120' validationRules={customerIDRules} />
      <ColumnDirective field='OrderDate' headerText='OrderDate' width='150'
format='yMd' editType='datepickeredit' validationRules={dateRules} />
      <ColumnDirective field='Freight' headerText='Freight' width='120'
format="C2" editType='numericedit' textAlign="Right"
validationRules={freightRules} />
      <ColumnDirective field='Verified' headerText='Verified'
width='150' validationRules={verifiedRules} template={template} />
    </ColumnsDirective>
    <Inject services={[Edit, Toolbar]} />
  </GridComponent></div>)
};
export default App;

```

APP.TSX

```

import { CheckBoxComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Edit, EditSettingsModel, Inject, Toolbar, ToolbarItems } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  const editOptions: EditSettingsModel = { allowEditing: true, allowAdding:
true, allowDeleting: true };
  const toolbarOptions: ToolbarItems[] = ['Add', 'Edit', 'Delete', 'Update',
'Cancel'];
  const orderIDRules: object = { required: true, number: true };
  const customerIDRules: object = { required: true };
  const freightRules: object = { required: true, min: 1, max: 1000 };
  const verifiedRules: object = { required: true };
  const dateRules: object = { required: true };
  const template = (props) => {
    return (<div>

```

```

    <CheckBoxComponent checked={props.Verified}></CheckBoxComponent>
  </div>)
}
return (<div>
  <GridComponent id='Grid' dataSource={data} editSettings={editOptions}
    toolbar={toolbarOptions} height={315}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID'
validationRules={orderIDRules} width='100' textAlign="Right"
isPrimaryKey={true} />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='120' validationRules={customerIDRules} />
      <ColumnDirective field='OrderDate' headerText='OrderDate' width='150'
format='yMd' editType='datepickeredit' validationRules={dateRules} />
      <ColumnDirective field='Freight' headerText='Freight' width='120'
format="C2" editType='numericedit' textAlign="Right"
validationRules={freightRules} />
      <ColumnDirective field='Verified' headerText='Verified' width='150'
validationRules={verifiedRules} template={template} />
    </ColumnsDirective>
    <Inject services={[Edit, Toolbar]} />
  </GridComponent></div>)
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', Role: 'Admin', EmployeeID: 5,
    OrderDate: new Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', Mask: '1111', ShipPostalCode: '51100', ShipCountry:
    'France', Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', Role: 'Employee', EmployeeID: 6,
    OrderDate: new Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', Mask: '2222', ShipPostalCode: '44087', ShipCountry:
    'Germany', Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 4,
    OrderDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', Mask: '3333', ShipPostalCode: '05454-876',
    ShipCountry: 'Brazil', Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', Role: 'Manager', EmployeeID: 3,
    OrderDate: new Date(8367642e5),

```

```

      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', Mask: '4444', ShipPostalCode: '69004', ShipCountry:
'France', Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', Role: 'Manager', EmployeeID: 4,
OrderDate: new Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', Mask: '5555', ShipPostalCode: 'B-6000',
ShipCountry: 'Belgium', Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 3,
OrderDate: new Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', Mask: '6666', ShipPostalCode: '05454-876',
ShipCountry: 'Brazil', Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', Role: 'Employee', EmployeeID: 5,
OrderDate: new Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', Mask: '7777', ShipPostalCode: '3012', ShipCountry:
'Switzerland', Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', Role: 'Admin', EmployeeID: 9,
OrderDate: new Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', Mask: '8888', ShipPostalCode: '1204', ShipCountry:
'Switzerland', Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', Role: 'Employee', EmployeeID: 3,
OrderDate: new Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', Mask: '9999', ShipPostalCode: '08737-363',
ShipCountry: 'Brazil', Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', Role: 'Admin', EmployeeID: 4,
OrderDate: new Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', Mask: '1234', ShipPostalCode: '5022',
ShipCountry: 'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', Role: 'Manager', EmployeeID: 1,
OrderDate: new Date(8375418e5),

```

```

        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', Mask: '2345', ShipPostalCode: '8010', ShipCountry:
'Austria', Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', Role: 'Admin', EmployeeID: 4,
        OrderDate: new Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', Mask: '3456', ShipPostalCode: '05022', ShipCountry:
'Mexico', Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', Role: 'Admin', EmployeeID: 4,
        OrderDate: new Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', Mask: '4567', ShipPostalCode: '50739', ShipCountry:
'Germany', Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', Role: 'Manager', EmployeeID: 4,
        OrderDate: new Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', Mask: '5678', ShipPostalCode: '02389-673',
        ShipCountry: 'Brazil', Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', Role: 'Employee', EmployeeID: 8,
        OrderDate: new Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', Mask: '6789', ShipPostalCode: '87110', ShipCountry:
'USA', Freight: 48.29, Verified: !0
    }
]
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', Role: 'Admin', EmployeeID: 5,
        OrderDate: new Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', Mask: '1111', ShipPostalCode: '51100', ShipCountry:
'France', Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', Role: 'Employee', EmployeeID: 6,
        OrderDate: new Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',

```



```

    ShipRegion: 'CJ', Mask: '2222', ShipPostalCode: '44087', ShipCountry:
    'Germany', Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 4,
    OrderDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', Mask: '3333', ShipPostalCode: '05454-876',
    ShipCountry: 'Brazil', Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', Role: 'Manager', EmployeeID: 3,
    OrderDate: new Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', Mask: '4444', ShipPostalCode: '69004', ShipCountry:
    'France', Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', Role: 'Manager', EmployeeID: 4,
    OrderDate: new Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', Mask: '5555', ShipPostalCode: 'B-6000',
    ShipCountry: 'Belgium', Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 3,
    OrderDate: new Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', Mask: '6666', ShipPostalCode: '05454-876',
    ShipCountry: 'Brazil', Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', Role: 'Employee', EmployeeID: 5,
    OrderDate: new Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', Mask: '7777', ShipPostalCode: '3012', ShipCountry:
    'Switzerland', Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', Role: 'Admin', EmployeeID: 9,
    OrderDate: new Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
    ShipRegion: 'CJ', Mask: '8888', ShipPostalCode: '1204', ShipCountry:
    'Switzerland', Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', Role: 'Employee', EmployeeID: 3,
    OrderDate: new Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',

```

```

        ShipRegion: 'SP', Mask: '9999', ShipPostalCode: '08737-363',
        ShipCountry: 'Brazil', Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', Role: 'Admin', EmployeeID: 4,
        OrderDate: new Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', Mask: '1234', ShipPostalCode: '5022',
        ShipCountry: 'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', Role: 'Manager', EmployeeID: 1,
        OrderDate: new Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', Mask: '2345', ShipPostalCode: '8010', ShipCountry:
        'Austria', Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', Role: 'Admin', EmployeeID: 4,
        OrderDate: new Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', Mask: '3456', ShipPostalCode: '05022', ShipCountry:
        'Mexico', Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', Role: 'Admin', EmployeeID: 4,
        OrderDate: new Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', Mask: '4567', ShipPostalCode: '50739', ShipCountry:
        'Germany', Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', Role: 'Manager', EmployeeID: 4,
        OrderDate: new Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', Mask: '5678', ShipPostalCode: '02389-673',
        ShipCountry: 'Brazil', Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', Role: 'Employee', EmployeeID: 8,
        OrderDate: new Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', Mask: '6789', ShipPostalCode: '87110', ShipCountry:
        'USA', Freight: 48.29, Verified: !0
    }
    ];

```

Edit enum column

The Syncfusion Grid provides a feature that allows you to edit enum type data in a grid column. This is particularly useful when you need to edit enumerated list data efficiently.

In the following example, the `DropDownList` component is rendered within the `editTemplate` for the Employee Feedback column using `template`. The enumerated list data can be bound to the Employee Feedback column using the two-way binding (`@bind-Value`).

APP.JSX

```
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { ColumnDirective, ColumnsDirective, GridComponent, SaveEventArgs }
from '@syncfusion/ej2-react-grids';
import { Edit, EditSettingsModel, Inject, Toolbar, ToolbarItems } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
    let details = data;
    let orderData;
    const editOptions = { allowEditing: true, allowAdding: true, allowDeleting:
true };
    const toolbarOptions = ['Add', 'Edit', 'Delete', 'Update', 'Cancel'];
    const orderIDRules = { required: true, number: true };
    const dropdownFields = { text: 'FeedbackDetails', value: 'FeedbackDetails'
};
    const dropDownEnumValue = Object.keys(Feedback).filter((key) =>
!isNaN(Number((Feedback)[key])));
    const actionBegin = (args) => {
        if (args.requestType === 'beginEdit' || args.requestType === 'add') {
            orderData = Object.assign({}, args.rowData);
        }
        if (args.requestType === 'save') {
            orderData['FeedbackDetails'] = args.data['FeedbackDetails'];
        }
    }
    const editTemplate = () => {
        return (
            <div>
                <DropDownListComponent id='FeedbackDetails'
dataSource={dropDownEnumValue} fields={dropdownFields}
value={orderData.FeedbackDetails} popupHeight={150}></DropDownListComponent>
            </div>
        )
    }
    return (<div>
        <GridComponent id='Grid' dataSource={details} editSettings={editOptions}
toolbar={toolbarOptions} height={315} actionBegin={actionBegin}>
            <ColumnsDirective>
                <ColumnDirective field='OrderID' headerText='Order ID'
validationRules={orderIDRules} width='100' textAlign="Right"
isPrimaryKey={true} />
                <ColumnDirective field='CustomerID' headerText='Employee Name'
width='120' />
                <ColumnDirective field='FeedbackDetails' headerText='Employee
Feedback' width='150' editTemplate={editTemplate} />
            </ColumnsDirective>
            <Inject services={[Edit, Toolbar]} />
        </GridComponent></div>
    );
};
export default App;
```

APP.TSX

```

import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { ColumnDirective, ColumnsDirective, GridComponent, SaveEventArgs }
from '@syncfusion/ej2-react-grids';
import { Edit, EditSettingsModel, Inject, Toolbar, ToolbarItems } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
export interface EmployeeDetails {
  OrderID: number;
  CustomerID: string;
  FeedbackDetails: Feedback;
}
export enum Feedback {
  Positive = 0,
  Negative = 1,
}
function App() {
  let details: EmployeeDetails[] = data as EmployeeDetails[];
  let orderData: EmployeeDetails;
  const editOptions: EditSettingsModel = { allowEditing: true, allowAdding:
true, allowDeleting: true };
  const toolbarOptions: ToolbarItems[] = ['Add', 'Edit', 'Delete', 'Update',
'Cancel'];
  const orderIDRules: object = { required: true, number: true };
  const dropdownFields: Object = { text: 'FeedbackDetails', value:
'FeedbackDetails' };
  const dropDownEnumValue: string[] = Object.keys(Feedback).filter((key:
string) => !isNaN(Number((Feedback)[key])));
  const actionBegin = (args: SaveEventArgs) => {
    if (args.requestType === 'beginEdit' || args.requestType === 'add') {
      orderData = Object.assign({}, args.rowData);
    }
    if (args.requestType === 'save') {
      orderData['FeedbackDetails'] = (args.data as
EmployeeDetails)['FeedbackDetails'];
    }
  }
  const editTemplate = () => {
    return (
      <div>
        <DropDownListComponent id='FeedbackDetails'
dataSource={dropDownEnumValue} fields={dropdownFields}
value={orderData.FeedbackDetails} popupHeight={150}></DropDownListComponent>
      </div>
    )
  }
  return (<div>
    <GridComponent id='Grid' dataSource={details} editSettings={editOptions}
toolbar={toolbarOptions} height={315} actionBegin={actionBegin}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID'
validationRules={orderIDRules} width='100' textAlign="Right"
isPrimaryKey={true} />

```

```

    <ColumnDirective field='CustomerID' headerText='Employee Name'
width='120' />
    <ColumnDirective field='FeedbackDetails' headerText='Employee
Feedback' width='150' editTemplate={editTemplate} />
  </ColumnsDirective>
  <Inject services={[Edit, Toolbar]} />
</GridComponent></div>
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', Role: 'Admin', EmployeeID: 5,
    OrderDate: new Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, FeedbackDetails: "Negative"
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', Role: 'Employee', EmployeeID: 6,
    OrderDate: new Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, FeedbackDetails: "Positive"
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 4,
    OrderDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, FeedbackDetails: "Negative"
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', Role: 'Manager', EmployeeID: 3,
    OrderDate: new Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, FeedbackDetails: "Negative"
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', Role: 'Manager', EmployeeID: 4,
    OrderDate: new Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, FeedbackDetails: "Negative"
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 3,
    OrderDate: new Date(836937e6),

```

```

      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, FeedbackDetails: "Negative"
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', Role: 'Employee', EmployeeID: 5,
      OrderDate: new Date(8370234e5),
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      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, FeedbackDetails: "Positive"
    },
    {
      OrderID: 10255, CustomerID: 'RICSU ', Role: 'Admin', EmployeeID: 9,
      OrderDate: new Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
      'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, FeedbackDetails: "Negative"
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', Role: 'Employee', EmployeeID: 3,
      OrderDate: new Date(837369e6),
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      'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, FeedbackDetails: "Positive"
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', Role: 'Admin', EmployeeID: 4,
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      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
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      OrderDate: new Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, FeedbackDetails: "Negative"
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', Role: 'Manager', EmployeeID: 4,
      OrderDate: new Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, FeedbackDetails: "Positive"
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', Role: 'Admin', EmployeeID: 4,
      OrderDate: new Date(8377146e5),

```

```

      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
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    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', Role: 'Manager', EmployeeID: 4,
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      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, FeedbackDetails: "Positive"
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', Role: 'Employee', EmployeeID: 8,
OrderDate: new Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, FeedbackDetails: "Negative"
    }
  ]];

```

DATASOURCE.TSX

```

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OrderDate: new Date(8364186e5),
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ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, FeedbackDetails: "Negative"
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', Role: 'Employee', EmployeeID: 6,
OrderDate: new Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, FeedbackDetails: "Positive"
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 4,
OrderDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
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    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, FeedbackDetails: "Negative"
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', Role: 'Manager', EmployeeID: 3,
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    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, FeedbackDetails: "Negative"
  }
];

```

```

    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', Role: 'Manager', EmployeeID: 4,
      OrderDate: new Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, FeedbackDetails: "Negative"
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 3,
      OrderDate: new Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, FeedbackDetails: "Negative"
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', Role: 'Employee', EmployeeID: 5,
      OrderDate: new Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, FeedbackDetails: "Positive"
    },
    {
      OrderID: 10255, CustomerID: 'RICSU ', Role: 'Admin', EmployeeID: 9,
      OrderDate: new Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
      'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, FeedbackDetails: "Negative"
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', Role: 'Employee', EmployeeID: 3,
      OrderDate: new Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
      'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, FeedbackDetails: "Positive"
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', Role: 'Admin', EmployeeID: 4,
      OrderDate: new Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
      'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
      'Venezuela', Freight: 81.91, FeedbackDetails: "Negative"
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', Role: 'Manager', EmployeeID: 1,
      OrderDate: new Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, FeedbackDetails: "Negative"
    },
  ],

```



```

{
  OrderID: 10259, CustomerID: 'CENTC', Role: 'Manager', EmployeeID: 4,
  OrderDate: new Date(8376282e5),
  ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
  ShipAddress: 'Sierras de Granada 9993',
  ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
  Freight: 3.25, FeedbackDetails: "Positive"
},
{
  OrderID: 10260, CustomerID: 'OTTIK', Role: 'Admin', EmployeeID: 4,
  OrderDate: new Date(8377146e5),
  ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
  'Mehrheimerstr. 369',
  ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
  Freight: 55.09, FeedbackDetails: "Negative"
},
{
  OrderID: 10261, CustomerID: 'QUEDE', Role: 'Manager', EmployeeID: 4,
  OrderDate: new Date(8377146e5),
  ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
  'Rua da Panificadora, 12',
  ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
  Freight: 3.05, FeedbackDetails: "Positive"
},
{
  OrderID: 10262, CustomerID: 'RATTC', Role: 'Employee', EmployeeID: 8,
  OrderDate: new Date(8379738e5),
  ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
  ShipAddress: '2817 Milton Dr.',
  ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
  Freight: 48.29, FeedbackDetails: "Negative"
}
];

```

Edit complex column

The edit template for complex column in Grid is used to customize the editing experience when dealing with complex data structures. This capability is particularly useful for handling nested data objects within grid columns. By default, the grid binds complex data to column fields using the dot (.) operator. However, when you render custom elements, such as input fields, in the edit template for a complex column, you must use the () underscore operator instead of the dot (.) operator to bind the complex object.

In the following sample, the input element is rendered in the edit template of the FirstName and LastName column. The edited changes can be saved using the `name` property of the input element. Since the complex data is bound to the FirstName and LastName column, The `name` property should be defined as **NameFirstName and NameLastName**, respectively, instead of using the dot notation (**Name.FirstName and Name.LastName**).

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Edit, Inject, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { complexData } from './datasource';

```

```
function App() {
  const editOptions = { allowEditing: true, allowAdding: true, allowDeleting: true };
  const toolbarOptions = ['Add', 'Edit', 'Delete', 'Update', 'Cancel'];
  const firstNameTemplate = (props) => {
    return (
      <div>
        <input className='e-input' name='Name__FirstName' type='text'
id='Name__FirstName' defaultValue={props.Name.FirstName} />
      </div>
    )
  }
  const lastNameTemplate = (props) => {
    return (
      <div>
        <input className='e-input' name='Name__LastName' type='text'
id='Name__LastName' defaultValue={props.Name.LastName} />
      </div>
    )
  }
  return (<div>
    <GridComponent id='Grid' dataSource={complexData}
editSettings={editOptions}
toolbar={toolbarOptions} height={315} >
      <ColumnsDirective>
        <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='100' textAlign="Right" isPrimaryKey={true} />
        <ColumnDirective field='Name.FirstName' headerText='First Name'
width='120' editTemplate={firstNameTemplate} />
        <ColumnDirective field='Name.LastName' headerText='Last Name'
width='150' editTemplate={lastNameTemplate} />
        <ColumnDirective field='Title' headerText='Title' width='120' />
      </ColumnsDirective>
      <Inject services={[Edit, Toolbar]} />
    </GridComponent></div>)
};
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Edit, EditSettingsModel, Inject, Toolbar, ToolbarItems } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { complexData } from './datasource';
function App() {
  const editOptions: EditSettingsModel = { allowEditing: true, allowAdding:
true, allowDeleting: true };
  const toolbarOptions: ToolbarItems[] = ['Add', 'Edit', 'Delete', 'Update',
'Cancel'];
  const firstNameTemplate = (props) =>{
    return(
      <div>
        <input className='e-input' name='Name__FirstName' type='text'
id='Name__FirstName' defaultValue={props.Name.FirstName} />

```

```

    </div>
  )
}
const lastNameTemplate = (props) =>{
  return(
    <div>
      <input className='e-input' name='Name__LastName' type='text'
id='Name__LastName' defaultValue={props.Name.LastName} />
    </div>
  )
}
return (<div>
  <GridComponent id='Grid' dataSource={complexData}
editSettings={editOptions}
toolbar={toolbarOptions} height={315} >
    <ColumnsDirective>
      <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='100' textAlign="Right" isPrimaryKey={true} />
      <ColumnDirective field='Name.FirstName' headerText='First Name'
width='120' editTemplate={firstNameTemplate} />
      <ColumnDirective field='Name.LastName' headerText='Last Name'
width='150' editTemplate={lastNameTemplate}/>
      <ColumnDirective field='Title' headerText='Title' width='120' />
    </ColumnsDirective>
    <Inject services={[Edit, Toolbar]} />
  </GridComponent></div>)
};
export default App;

```

DATASOURCE.JSX

```

export let complexData = [{
  'EmployeeID': 1,
  'Name': {
    'LastName': 'Davolio',
    'FirstName': 'Nancy'
  },
  'Names': [{
    'LastName': 'Davolio',
    'FirstName': 'Nancy'
  }],
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-664743600000),
  'HireDate': new Date(704692800000),
  'Address': '507 - 20th Ave. E.\r\nApt. 2A',
  'City': 'Seattle',
  'Region': 'WA',
  'PostalCode': '98122',
  'Country': 'USA',
  'HomePhone': '(206) 555-9857',
  'Extension': '5467',
  'Photo': { 'Length': 21626 },
  'Notes': 'Education includes a BA in psychology from Colorado State University in 1970. She also completed\

```

```

    \'The Art of the Cold Call.\' Nancy is a member of Toastmasters
International.',
    \'ReportsTo': 2,
    \'PhotoPath': \'http://accweb/emmployees/davolio.bmp\'
  },
  {
    \'EmployeeID': 2,
    \'Name': {
      \'LastName': \'Fuller\',
      \'FirstName': \'Andrew\'
    },
    \'Names': [{
      \'LastName': \'Fuller\',
      \'FirstName': \'Andrew\'
    }],
    \'Title': \'Vice President, Sales\',
    \'TitleOfCourtesy': \'Dr.\',
    \'BirthDate': new Date(-563828400000),
    \'HireDate': new Date(713764800000),
    \'Address': \'908 W. Capital Way\',
    \'City': \'Tacoma\',
    \'Region': \'WA\',
    \'PostalCode': \'98401\',
    \'Country': \'USA\',
    \'HomePhone': \'(206) 555-9482\',
    \'Extension': \'3457\',
    \'Photo': { \'Length': 21626 },
    \'Notes': \'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
Dallas in 1981. He is fluent in French and Italian and reads German. He
joined the company as a sales representative, \
was promoted to sales manager in January 1992 and to vice president of
sales in March 1993. Andrew is a member of the \
Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.\',
    \'ReportsTo': 0,
    \'PhotoPath': \'http://accweb/emmployees/fuller.bmp\'
  },
  {
    \'EmployeeID': 3,
    \'Name': {
      \'LastName': \'Leverling\',
      \'FirstName': \'Janet\'
    },
    \'Names': [{
      \'LastName': \'Leverling\',
      \'FirstName': \'Janet\'
    }],
    \'Title': \'Sales Representative\',
    \'TitleOfCourtesy': \'Ms.\',
    \'BirthDate': new Date(-200088000000),
    \'HireDate': new Date(702104400000),
    \'Address': \'722 Moss Bay Blvd.\',
    \'City': \'Kirkland\',
    \'Region': \'WA\',
    \'PostalCode': \'98033\',
    \'Country': \'USA\',

```

```

      'HomePhone': '(206) 555-3412',
      'Extension': '3355',
      'Photo': { 'Length': 21722 },
      'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
\
      She has also completed a certificate program in food retailing
management.\
      Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
    },
    {
      'EmployeeID': 4,
      'Name': {
        'LastName': 'Peacock',
        'FirstName': 'Margaret'
      },
      'Names': [{
        'LastName': 'Peacock',
        'FirstName': 'Margaret'
      }],
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mrs.',
      'BirthDate': new Date(-1018814400000),
      'HireDate': new Date(736401600000),
      'Address': '4110 Old Redmond Rd.',
      'City': 'Redmond',
      'Region': 'WA',
      'PostalCode': '98052',
      'Country': 'USA',
      'HomePhone': '(206) 555-8122',
      'Extension': '5176',
      'Photo': { 'Length': 21626 },
      'Notes': 'Margaret holds a BA in English literature from Concordia
College (1958) and an MA from the American \
Institute of Culinary Arts (1966). She was assigned to the London office
temporarily from July through November 1992.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
    },
    {
      'EmployeeID': 5,
      'Name': {
        'LastName': 'Buchanan',
        'FirstName': 'Steven'
      },
      'Names': [{
        'LastName': 'Buchanan',
        'FirstName': 'Steven'
      }],
      'Title': 'Sales Manager',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-468010800000),
      'HireDate': new Date(750830400000),
      'Address': '14 Garrett Hill',
      'City': 'London',

```

```

        'Region': null,
        'PostalCode': 'SW1 8JR',
        'Country': 'UK',
        'HomePhone': '(71) 555-4848',
        'Extension': '3453',
        'Photo': { 'Length': 21626 },
        'Notes': 'Steven Buchanan graduated from St. Andrews University,
Scotland, with a BSC degree in 1976. Upon joining the company as \
a sales representative in 1992, he spent 6 months in an orientation
program at the Seattle office and then returned to his permanent \
post in London. He was promoted to sales manager in March 1993. Mr.
Buchanan has completed the courses \'Successful \
Telemarketing\' and \'International Sales Management.\' He is fluent in
French.',
        'ReportsTo': 2,
        'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
    },
    {
        'EmployeeID': 6,
        'Name': {
            'LastName': 'Suyama',
            'FirstName': 'Michael'
        },
        'Names': [{
            'LastName': 'Leverling',
            'FirstName': 'Janet'
        }],
        'Title': 'Sales Representative',
        'TitleOfCourtesy': 'Mr.',
        'BirthDate': new Date(-205185600000),
        'HireDate': new Date(750830400000),
        'Address': 'Coventry House\r\nMiner Rd.',
        'City': 'London',
        'Region': null,
        'PostalCode': 'EC2 7JR',
        'Country': 'UK',
        'HomePhone': '(71) 555-7773',
        'Extension': '428',
        'Photo': { 'Length': 21626 },
        'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese, and
Spanish.',
        'ReportsTo': 5,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
        'EmployeeID': 7,
        'Name': {
            'LastName': 'King',
            'FirstName': 'Robert'
        },
        'Names': [{
            'LastName': 'Peacock',
            'FirstName': 'Margaret'
        }],

```

```

    ]],
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-302731200000),
    'HireDate': new Date(757486800000),
    'Address': 'Edgeham Hollow\r\nWinchester Way',
    'City': 'London',
    'Region': null,
    'PostalCode': 'RG1 9SP',
    'Country': 'UK',
    'HomePhone': '(71) 555-5598',
    'Extension': '465',
    'Photo': { 'Length': 21626 },
    'Notes': 'Robert King served in the Peace Corps and traveled extensively
before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 8,
    'Name': {
      'LastName': 'Callahan',
      'FirstName': 'Laura'
    },
    'Names': [{
      'LastName': 'Fuller',
      'FirstName': 'Andrew'
    }],
    'Title': 'Inside Sales Coordinator',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-377982000000),
    'HireDate': new Date(762843600000),
    'Address': '4726 - 11th Ave. N.E.',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98105',
    'Country': 'USA',
    'HomePhone': '(206) 555-1189',
    'Extension': '2344',
    'Photo': { 'Length': 21626 },
    'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 9,
    'Name': {
      'LastName': 'Dodsworth',
      'FirstName': 'Anne'
    },
    'Names': [{
      'LastName': 'Fuller',

```

```

      'FirstName': 'Andrew'
    }],
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-123966000000),
    'HireDate': new Date(784875600000),
    'Address': '7 Houndstooth Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'WG2 7LT',
    'Country': 'UK',
    'HomePhone': '(71) 555-4444',
    'Extension': '452',
    'Photo': { 'Length': 21626 },
    'Notes': 'Anne has a BA degree in English from St. Lawrence College. She
is fluent in French and German.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  }];

```

DATASOURCE.TSX

```

export let complexData: Object[] = [{
  'EmployeeID': 1,
  'Name': {
    'LastName': 'Davolio',
    'FirstName': 'Nancy'
  },
  'Names': [{
    'LastName': 'Davolio',
    'FirstName': 'Nancy'
  }],
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-664743600000),
  'HireDate': new Date(704692800000),
  'Address': '507 - 20th Ave. E.\r\nApt. 2A',
  'City': 'Seattle',
  'Region': 'WA',
  'PostalCode': '98122',
  'Country': 'USA',
  'HomePhone': '(206) 555-9857',
  'Extension': '5467',
  'Photo': { 'Length': 21626 },
  'Notes': 'Education includes a BA in psychology from Colorado State
University in 1970. She also completed\
\'The Art of the Cold Call.\' Nancy is a member of Toastmasters
International.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
  'EmployeeID': 2,
  'Name': {
    'LastName': 'Fuller',
    'FirstName': 'Andrew'
  }
}

```



```

    },
    'Names': [{
      'LastName': 'Fuller',
      'FirstName': 'Andrew'
    }],
    'Title': 'Vice President, Sales',
    'TitleOfCourtesy': 'Dr.',
    'BirthDate': new Date(-563828400000),
    'HireDate': new Date(713764800000),
    'Address': '908 W. Capital Way',
    'City': 'Tacoma',
    'Region': 'WA',
    'PostalCode': '98401',
    'Country': 'USA',
    'HomePhone': '(206) 555-9482',
    'Extension': '3457',
    'Photo': { 'Length': 21626 },
    'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in international marketing from the University of \
Dallas in 1981. He is fluent in French and Italian and reads German. He joined the company as a sales representative, \
was promoted to sales manager in January 1992 and to vice president of sales in March 1993. Andrew is a member of the \
Sales Management Roundtable, the Seattle Chamber of Commerce, and the Pacific Rim Importers Association.',
    'ReportsTo': 0,
    'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
  },
  {
    'EmployeeID': 3,
    'Name': {
      'LastName': 'Leverling',
      'FirstName': 'Janet'
    },
    'Names': [{
      'LastName': 'Leverling',
      'FirstName': 'Janet'
    }],
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-200088000000),
    'HireDate': new Date(702104400000),
    'Address': '722 Moss Bay Blvd.',
    'City': 'Kirkland',
    'Region': 'WA',
    'PostalCode': '98033',
    'Country': 'USA',
    'HomePhone': '(206) 555-3412',
    'Extension': '3355',
    'Photo': { 'Length': 21722 },
    'Notes': 'Janet has a BS degree in chemistry from Boston College (1984). \
\
She has also completed a certificate program in food retailing management.\
Janet was hired as a sales associate in 1991 and promoted to sales representative in February 1992.',
    'ReportsTo': 2,
  }

```

```

    'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
  },
  {
    'EmployeeID': 4,
    'Name': {
      'LastName': 'Peacock',
      'FirstName': 'Margaret'
    },
    'Names': [{
      'LastName': 'Peacock',
      'FirstName': 'Margaret'
    }],
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mrs.',
    'BirthDate': new Date(-1018814400000),
    'HireDate': new Date(736401600000),
    'Address': '4110 Old Redmond Rd.',
    'City': 'Redmond',
    'Region': 'WA',
    'PostalCode': '98052',
    'Country': 'USA',
    'HomePhone': '(206) 555-8122',
    'Extension': '5176',
    'Photo': { 'Length': 21626 },
    'Notes': 'Margaret holds a BA in English literature from Concordia College (1958) and an MA from the American \
    Institute of Culinary Arts (1966). She was assigned to the London office temporarily from July through November 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
  },
  {
    'EmployeeID': 5,
    'Name': {
      'LastName': 'Buchanan',
      'FirstName': 'Steven'
    },
    'Names': [{
      'LastName': 'Buchanan',
      'FirstName': 'Steven'
    }],
    'Title': 'Sales Manager',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-468010800000),
    'HireDate': new Date(750830400000),
    'Address': '14 Garrett Hill',
    'City': 'London',
    'Region': null,
    'PostalCode': 'SW1 8JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-4848',
    'Extension': '3453',
    'Photo': { 'Length': 21626 },
    'Notes': 'Steven Buchanan graduated from St. Andrews University, Scotland, with a BSC degree in 1976. Upon joining the company as \
    a sales representative in 1992, he spent 6 months in an orientation program at the Seattle office and then returned to his permanent \

```

```

    post in London. He was promoted to sales manager in March 1993. Mr.
    Buchanan has completed the courses \'Successful \
    Telemarketing\' and \'International Sales Management.\' He is fluent in
    French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
  },
  {
    'EmployeeID': 6,
    'Name': {
      'LastName': 'Suyama',
      'FirstName': 'Michael'
    },
    'Names': [{
      'LastName': 'Leverling',
      'FirstName': 'Janet'
    }],
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-205185600000),
    'HireDate': new Date(750830400000),
    'Address': 'Coventry House\r\nMiner Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'EC2 7JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-7773',
    'Extension': '428',
    'Photo': { 'Length': 21626 },
    'Notes': 'Michael is a graduate of Sussex University (MA, economics,
    1983) and the University of California at Los Angeles \
    (MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
    Selling\' and \'Time Management for the Sales Professional.\' \
    He is fluent in Japanese and can read and write French, Portuguese, and
    Spanish.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 7,
    'Name': {
      'LastName': 'King',
      'FirstName': 'Robert'
    },
    'Names': [{
      'LastName': 'Peacock',
      'FirstName': 'Margaret'
    }],
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-302731200000),
    'HireDate': new Date(757486800000),
    'Address': 'Edgeham Hollow\r\nWinchester Way',
    'City': 'London',
    'Region': null,
    'PostalCode': 'RG1 9SP',
    'Country': 'UK',

```

```

      'HomePhone': '(71) 555-5598',
      'Extension': '465',
      'Photo': { 'Length': 21626 },
      'Notes': 'Robert King served in the Peace Corps and traveled extensively
before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
      'ReportsTo': 5,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 8,
      'Name': {
        'LastName': 'Callahan',
        'FirstName': 'Laura'
      },
      'Names': [{
        'LastName': 'Fuller',
        'FirstName': 'Andrew'
      }],
      'Title': 'Inside Sales Coordinator',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-377982000000),
      'HireDate': new Date(762843600000),
      'Address': '4726 - 11th Ave. N.E.',
      'City': 'Seattle',
      'Region': 'WA',
      'PostalCode': '98105',
      'Country': 'USA',
      'HomePhone': '(206) 555-1189',
      'Extension': '2344',
      'Photo': { 'Length': 21626 },
      'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 9,
      'Name': {
        'LastName': 'Dodsworth',
        'FirstName': 'Anne'
      },
      'Names': [{
        'LastName': 'Fuller',
        'FirstName': 'Andrew'
      }],
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-123966000000),
      'HireDate': new Date(784875600000),
      'Address': '7 Houndstooth Rd.',
      'City': 'London',
      'Region': null,
      'PostalCode': 'WG2 7LT',

```

```

    'Country': 'UK',
    'HomePhone': ' (71) 555-4444',
    'Extension': '452',
    'Photo': { 'Length': 21626 },
    'Notes': 'Anne has a BA degree in English from St. Lawrence College. She
is fluent in French and German.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  }
};

```

Edit foreign key column

The Syncfusion Grid offers a powerful editing feature for foreign key columns, enhancing the default rendering of the DropDownList component during editing. This flexibility is particularly useful when you need to customize the editor for foreign key columns. By default, the Syncfusion Grid renders the DropDownList component as the editor for foreign key columns during editing. However, you can enhance and customize this behavior by leveraging the [editTemplate](#) property for the column using **template**. The `editTemplate` property allows you to specify a cell edit template that serves as an editor for a particular column, accepting either a template string or an HTML element ID.

In the following code example, the Employee Name is a foreign key column. When editing, the ComboBox component is rendered instead of DropDownList.

APP.JSX

```

import { ComboBoxComponent } from '@syncfusion/ej2-react-dropdowns';
import { ColumnDirective, ColumnsDirective, ForeignKey, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Edit, Inject, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data, employeeData } from './datasource';
function App() {
  let orderData;
  const editOptions = { allowEditing: true, allowAdding: true, allowDeleting:
true };
  const toolbarOptions = ['Add', 'Edit', 'Delete', 'Update', 'Cancel'];
  const orderIDRules = { required: true };
  const comboFields = { text: 'FirstName', value: 'EmployeeID' };
  const dropDownData = [
    { FirstName: 'Nancy', EmployeeID: 1 },
    { FirstName: 'Andrew', EmployeeID: 6 },
    { FirstName: 'Janet', EmployeeID: 3 },
    { FirstName: 'Margaret', EmployeeID: 4 },
    { FirstName: 'Steven', EmployeeID: 5 },
    { FirstName: 'Laura', EmployeeID: 8 }
  ];
  const actionBegin = (args) => {
    if (args.requestType === 'beginEdit' || args.requestType === 'add') {
      orderData = Object.assign({}, args.rowData);
    }
    if (args.requestType === 'save') {
      orderData['EmployeeID'] = args.data['EmployeeID'];
    }
  }
  const editTemplate = () => {
    return (

```

```

        <div>
            <ComboBoxComponent id='EmployeeID' dataSource={dropDownData}
fields={comboFields} value={orderData.EmployeeID}></ComboBoxComponent>
        </div>
    )
}
return (<div>
    <GridComponent id='Grid' dataSource={data} editSettings={editOptions}
    toolbar={toolbarOptions} height={315} actionBegin={actionBegin}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID'
validationRules={orderIDRules} width='100' textAlign="Right"
isPrimaryKey={true} />
            <ColumnDirective field='EmployeeID' headerText='Employee Name'
width='120' foreignKeyValue='FirstName' dataSource={employeeData}
editTemplate={editTemplate} />
            <ColumnDirective field='OrderDate' headerText='Order Date'
width='150' format='yMd' editType='datepickeredit' />
            <ColumnDirective field='Freight' headerText='Freight' width='150'
format='C2' />
        </ColumnsDirective>
        <Inject services={[Edit, Toolbar, ForeignKey]} />
    </GridComponent></div>)
};
export default App;

```

APP.TSX

```

import { ComboBoxComponent } from '@syncfusion/ej2-react-dropdowns';
import { ColumnDirective, ColumnsDirective, ForeignKey, GridComponent,
SaveEventArgs } from '@syncfusion/ej2-react-grids';
import { Edit, EditSettingsModel, Inject, Toolbar, ToolbarItems } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data, employeeData } from '../datasource';
export interface columnDataType {
    OrderID: number,
    Freight: number,
    ShipCity: string,
    EmployeeID: number,
    ShipCountry: string,
    ShipAddress: string,
    OrderDate: Date
}
function App() {
    let orderData: Object | any;
    const editOptions: EditSettingsModel = { allowEditing: true, allowAdding:
true, allowDeleting: true };
    const toolbarOptions: ToolbarItems[] = ['Add', 'Edit', 'Delete', 'Update',
'Cancel'];
    const orderIDRules: object = { required: true };
    const comboFields: Object = { text: 'FirstName', value: 'EmployeeID' };
    const dropDownData: { [key: string]: Object; }[] = [
        { FirstName: 'Nancy', EmployeeID: 1 },
        { FirstName: 'Andrew', EmployeeID: 6 },
        { FirstName: 'Janet', EmployeeID: 3 },
    ]
}

```

```

    { FirstName: 'Margaret', EmployeeID: 4 },
    { FirstName: 'Steven', EmployeeID: 5 },
    { FirstName: 'Laura', EmployeeID: 8 }
  ];
  const actionBegin = (args: SaveEventArgs) => {
    if (args.requestType === 'beginEdit' || args.requestType === 'add') {
      orderData = Object.assign({}, args.rowData);
    }
    if (args.requestType === 'save') {
      orderData['EmployeeID'] = (args.data as columnDataType)['EmployeeID'];
    }
  }
  const editTemplate = () => {
    return (
      <div>
        <ComboBoxComponent id='EmployeeID' dataSource={dropDownData}
fields={comboFields} value={orderData.EmployeeID}></ComboBoxComponent>
        </div>
      )
    }
    return <div>
      <GridComponent id='Grid' dataSource={data} editSettings={editOptions}
        toolbar={toolbarOptions} height={315} actionBegin={actionBegin}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID'
validationRules={orderIDRules} width='100' textAlign="Right"
isPrimaryKey={true} />
          <ColumnDirective field='EmployeeID' headerText='Employee Name'
width='120' foreignKeyValue='FirstName' dataSource={employeeData}
editTemplate={editTemplate} />
          <ColumnDirective field='OrderDate' headerText='Order Date'
width='150' format='yMd' editType='datepickeredit' />
          <ColumnDirective field='Freight' headerText='Freight' width='150'
format='C2' />
        </ColumnsDirective>
        <Inject services={[Edit, Toolbar, ForeignKey]} />
      </GridComponent></div>
    );
  };
  export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', Mask: '1111', ShipPostalCode: '51100', ShipCountry:
'France', Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',

```

```

        ShipRegion: 'CJ', Mask: '2222', ShipPostalCode: '44087', ShipCountry:
        'Germany', Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 6, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', Mask: '3333', ShipPostalCode: '05454-876',
        ShipCountry: 'Brazil', Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', Mask: '4444', ShipPostalCode: '69004',
        ShipCountry: 'France', Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', Mask: '5555', ShipPostalCode: 'B-6000',
        ShipCountry: 'Belgium', Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', Mask: '6666', ShipPostalCode: '05454-876',
        ShipCountry: 'Brazil', Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', Mask: '7777', ShipPostalCode: '3012', ShipCountry:
        'Switzerland', Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', Mask: '8888', ShipPostalCode: '1204', ShipCountry:
        'Switzerland', Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',

```



```
        ShipRegion: 'SP', Mask: '9999', ShipPostalCode: '08737-363',
        ShipCountry: 'Brazil', Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', Mask: '1234', ShipPostalCode: '5022',
        ShipCountry: 'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', Mask: '2345', ShipPostalCode: '8010', ShipCountry:
        'Austria', Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', Mask: '3456', ShipPostalCode: '05022', ShipCountry:
        'Mexico', Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', Mask: '4567', ShipPostalCode: '50739', ShipCountry:
        'Germany', Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', Mask: '5678', ShipPostalCode: '02389-673',
        ShipCountry: 'Brazil', Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', Mask: '6789', ShipPostalCode: '87110', ShipCountry:
        'USA', Freight: 48.29, Verified: !0
      }
    ];
    export let employeeData = [{
      'EmployeeID': 1,
      'LastName': 'Davolio',
      'FirstName': 'Nancy',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Ms.',
```

```

    'BirthDate': new Date(-664743600000),
    'HireDate': new Date(704692800000),
    'Address': '507 - 20th Ave. E.\r\nApt. 2A',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98122',
    'Country': 'USA',
    'HomePhone': '(206) 555-9857',
    'Extension': '5467',
    'Photo': { 'Length': 21626 },

    'Notes': 'Education includes a BA in psychology from Colorado State
University in 1970. She also completed\
\'The Art of the Cold Call.\' Nancy is a member of Toastmasters
International.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 2,
    'LastName': 'Fuller',
    'FirstName': 'Andrew',
    'Title': 'Vice President, Sales',
    'TitleOfCourtesy': 'Dr.',
    'BirthDate': new Date(-563828400000),
    'HireDate': new Date(713764800000),
    'Address': '908 W. Capital Way',
    'City': 'Tacoma',
    'Region': 'WA',
    'PostalCode': '98401',
    'Country': 'USA',
    'HomePhone': '(206) 555-9482',
    'Extension': '3457',
    'Photo': { 'Length': 21626 },

    'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
Dallas in 1981. He is fluent in French and Italian and reads German.
He joined the company as a sales representative, \
was promoted to sales manager in January 1992 and to vice president
of sales in March 1993. Andrew is a member of the \
Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.',
    'ReportsTo': 0,
    'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
  },
  {
    'EmployeeID': 3,
    'LastName': 'Leverling',
    'FirstName': 'Janet',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-200088000000),
    'HireDate': new Date(702104400000),
    'Address': '722 Moss Bay Blvd.',
    'City': 'Kirkland',
    'Region': 'WA',

```

```

        'PostalCode': '98033',
        'Country': 'USA',
        'HomePhone': '(206) 555-3412',
        'Extension': '3355',
        'Photo': { 'Length': 21722 },

        'Notes': 'Janet has a BS degree in chemistry from Boston College
(1984). \
        She has also completed a certificate program in food retailing
management.\
        Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
        'ReportsTo': 2,
        'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
    },
    {
        'EmployeeID': 4,
        'LastName': 'Peacock',
        'FirstName': 'Margaret',
        'Title': 'Sales Representative',
        'TitleOfCourtesy': 'Mrs.',
        'BirthDate': new Date(-1018814400000),
        'HireDate': new Date(736401600000),
        'Address': '4110 Old Redmond Rd.',
        'City': 'Redmond',
        'Region': 'WA',
        'PostalCode': '98052',
        'Country': 'USA',
        'HomePhone': '(206) 555-8122',
        'Extension': '5176',
        'Photo': { 'Length': 21626 },

        'Notes': 'Margaret holds a BA in English literature from Concordia
College (1958) and an MA from the American \
        Institute of Culinary Arts (1966). She was assigned to the London
office temporarily from July through November 1992.',
        'ReportsTo': 2,
        'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
    },
    {
        'EmployeeID': 5,
        'LastName': 'Buchanan',
        'FirstName': 'Steven',
        'Title': 'Sales Manager',
        'TitleOfCourtesy': 'Mr.',
        'BirthDate': new Date(-468010800000),
        'HireDate': new Date(750830400000),
        'Address': '14 Garrett Hill',
        'City': 'London',
        'Region': null,
        'PostalCode':
        'SW1 8JR',
        'Country': 'UK',
        'HomePhone': '(71) 555-4848',
        'Extension': '3453',
        'Photo': { 'Length': 21626 },

```

```

      'Notes': 'Steven Buchanan graduated from St. Andrews University,
Scotland, with a BSC degree in 1976. Upon joining the company as \
      a sales representative in 1992, he spent 6 months in an orientation
program at the Seattle office and then returned to his permanent \
      post in London. He was promoted to sales manager in March 1993. Mr.
Buchanan has completed the courses \'Successful \
      Telemarketing\' and \'International Sales Management.\' He is fluent
in French.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
    },
    {
      'EmployeeID': 6,
      'LastName': 'Suyama',
      'FirstName': 'Michael',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-205185600000),
      'HireDate': new Date(750830400000),
      'Address': 'Coventry House\r\nMiner Rd.',
      'City': 'London',
      'Region': null,
      'PostalCode': 'EC2 7JR',
      'Country': 'UK',
      'HomePhone': '(71) 555-7773',
      'Extension': '428',
      'Photo': { 'Length': 21626 },

      'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
      (MBA, marketing, 1986). He has also taken the courses \'Multi-
Cultural Selling\' and \'Time Management for the Sales Professional.\' \
      He is fluent in Japanese and can read and write French, Portuguese,
and Spanish.',
      'ReportsTo': 5,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 7,
      'LastName': 'King',
      'FirstName': 'Robert',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-302731200000),
      'HireDate': new Date(757486800000),
      'Address': 'Edgeham Hollow\r\nWinchester Way',
      'City': 'London',
      'Region': null,
      'PostalCode': 'RG1 9SP',
      'Country': 'UK',
      'HomePhone': '(71) 555-5598',
      'Extension': '465',
      'Photo': { 'Length': 21626 },

      'Notes': 'Robert King served in the Peace Corps and traveled
extensively before completing his degree in English at the \

```

```

    University of Michigan in 1992, the year he joined the company.
    After completing a course entitled \'Selling in Europe,\' \
    he was transferred to the London office in March 1993.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 8,
    'LastName': 'Callahan',
    'FirstName': 'Laura',
    'Title': 'Inside Sales Coordinator',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-377982000000),
    'HireDate': new Date(762843600000),
    'Address': '4726 - 11th Ave. N.E.',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98105',
    'Country': 'USA',
    'HomePhone': '(206) 555-1189',
    'Extension': '2344',
    'Photo': { 'Length': 21626 },

    'Notes': 'Laura received a BA in psychology from the University of
    Washington. She has also completed a course in business \
    French. She reads and writes French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 9,
    'LastName': 'Dodsworth',
    'FirstName': 'Anne',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-123966000000),
    'HireDate': new Date(784875600000),
    'Address': '7 Houndstooth Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'WG2 7LT',
    'Country': 'UK',
    'HomePhone': '(71) 555-4444',
    'Extension': '452',
    'Photo': { 'Length': 21626 },

    'Notes': 'Anne has a BA degree in English from St. Lawrence College.
    She is fluent in French and German.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {

```

```

    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', Mask: '1111', ShipPostalCode: '51100', ShipCountry:
'France', Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', Mask: '2222', ShipPostalCode: '44087', ShipCountry:
'Germany', Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 6, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', Mask: '3333', ShipPostalCode: '05454-876',
ShipCountry: 'Brazil', Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', Mask: '4444', ShipPostalCode: '69004',
ShipCountry: 'France', Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', Mask: '5555', ShipPostalCode: 'B-6000',
ShipCountry: 'Belgium', Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', Mask: '6666', ShipPostalCode: '05454-876',
ShipCountry: 'Brazil', Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', Mask: '7777', ShipPostalCode: '3012', ShipCountry:
'Switzerland', Freight: 22.98, Verified: !1
    },
    {

```

```

    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
    ShipRegion: 'CJ', Mask: '8888', ShipPostalCode: '1204', ShipCountry:
'Switzerland', Freight: 148.33, Verified: !0
},
{
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', Mask: '9999', ShipPostalCode: '08737-363',
ShipCountry: 'Brazil', Freight: 13.97, Verified: !1
},
{
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', Mask: '1234', ShipPostalCode: '5022',
ShipCountry: 'Venezuela', Freight: 81.91, Verified: !0
},
{
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', Mask: '2345', ShipPostalCode: '8010', ShipCountry:
'Austria', Freight: 140.51, Verified: !0
},
{
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', Mask: '3456', ShipPostalCode: '05022', ShipCountry:
'Mexico', Freight: 3.25, Verified: !1
},
{
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', Mask: '4567', ShipPostalCode: '50739', ShipCountry:
'Germany', Freight: 55.09, Verified: !0
},
{
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', Mask: '5678', ShipPostalCode: '02389-673',
ShipCountry: 'Brazil', Freight: 3.05, Verified: !1
},
{

```

```

    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', Mask: '6789', ShipPostalCode: '87110', ShipCountry:
'USA', Freight: 48.29, Verified: !0
  }];
  export let employeeData: Object[] = [{
    'EmployeeID': 1,
    'LastName': 'Davolio',
    'FirstName': 'Nancy',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-664743600000),
    'HireDate': new Date(704692800000),
    'Address': '507 - 20th Ave. E.\r\nApt. 2A',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98122',
    'Country': 'USA',
    'HomePhone': '(206) 555-9857',
    'Extension': '5467',
    'Photo': { 'Length': 21626 },

    'Notes': 'Education includes a BA in psychology from Colorado State
University in 1970. She also completed\
\'The Art of the Cold Call.\' Nancy is a member of Toastmasters
International.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 2,
    'LastName': 'Fuller',
    'FirstName': 'Andrew',
    'Title': 'Vice President, Sales',
    'TitleOfCourtesy': 'Dr.',
    'BirthDate': new Date(-563828400000),
    'HireDate': new Date(713764800000),
    'Address': '908 W. Capital Way',
    'City': 'Tacoma',
    'Region': 'WA',
    'PostalCode': '98401',
    'Country': 'USA',
    'HomePhone': '(206) 555-9482',
    'Extension': '3457',
    'Photo': { 'Length': 21626 },

    'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
Dallas in 1981. He is fluent in French and Italian and reads German.
He joined the company as a sales representative, \
was promoted to sales manager in January 1992 and to vice president
of sales in March 1993. Andrew is a member of the \
Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.',
    'ReportsTo': 0,
  }
];

```



```

    'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
  },
  {
    'EmployeeID': 3,
    'LastName': 'Leverling',
    'FirstName': 'Janet',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-200088000000),
    'HireDate': new Date(702104400000),
    'Address': '722 Moss Bay Blvd.',
    'City': 'Kirkland',
    'Region': 'WA',
    'PostalCode': '98033',
    'Country': 'USA',
    'HomePhone': '(206) 555-3412',
    'Extension': '3355',
    'Photo': { 'Length': 21722 },

    'Notes': 'Janet has a BS degree in chemistry from Boston College (1984). \n She has also completed a certificate program in food retailing management.\n Janet was hired as a sales associate in 1991 and promoted to sales representative in February 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
  },
  {
    'EmployeeID': 4,
    'LastName': 'Peacock',
    'FirstName': 'Margaret',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mrs.',
    'BirthDate': new Date(-1018814400000),
    'HireDate': new Date(736401600000),
    'Address': '4110 Old Redmond Rd.',
    'City': 'Redmond',
    'Region': 'WA',
    'PostalCode': '98052',
    'Country': 'USA',
    'HomePhone': '(206) 555-8122',
    'Extension': '5176',
    'Photo': { 'Length': 21626 },

    'Notes': 'Margaret holds a BA in English literature from Concordia College (1958) and an MA from the American \n Institute of Culinary Arts (1966). She was assigned to the London office temporarily from July through November 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
  },
  {
    'EmployeeID': 5,
    'LastName': 'Buchanan',
    'FirstName': 'Steven',
    'Title': 'Sales Manager',

```

```

        'TitleOfCourtesy': 'Mr.',
        'BirthDate': new Date(-468010800000),
        'HireDate': new Date(750830400000),
        'Address': '14 Garrett Hill',
        'City': 'London',
        'Region': null,
        'PostalCode':
        'SW1 8JR',
        'Country': 'UK',
        'HomePhone': '(71) 555-4848',
        'Extension': '3453',
        'Photo': { 'Length': 21626 },

        'Notes': 'Steven Buchanan graduated from St. Andrews University,
Scotland, with a BSC degree in 1976. Upon joining the company as \
a sales representative in 1992, he spent 6 months in an orientation
program at the Seattle office and then returned to his permanent \
post in London. He was promoted to sales manager in March 1993. Mr.
Buchanan has completed the courses \'Successful \
Telemarketing\' and \'International Sales Management.\' He is fluent
in French.',
        'ReportsTo': 2,
        'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
    },
    {
        'EmployeeID': 6,
        'LastName': 'Suyama',
        'FirstName': 'Michael',
        'Title': 'Sales Representative',
        'TitleOfCourtesy': 'Mr.',
        'BirthDate': new Date(-205185600000),
        'HireDate': new Date(750830400000),
        'Address': 'Coventry House\r\nMiner Rd.',
        'City': 'London',
        'Region': null,
        'PostalCode': 'EC2 7JR',
        'Country': 'UK',
        'HomePhone': '(71) 555-7773',
        'Extension': '428',
        'Photo': { 'Length': 21626 },

        'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-
Cultural Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese,
and Spanish.',
        'ReportsTo': 5,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
        'EmployeeID': 7,
        'LastName': 'King',
        'FirstName': 'Robert',
        'Title': 'Sales Representative',
        'TitleOfCourtesy': 'Mr.',
        'BirthDate': new Date(-302731200000),

```

```

      'HireDate': new Date(757486800000),
      'Address': 'Edgeham Hollow\r\nWinchester Way',
      'City': 'London',
      'Region': null,
      'PostalCode': 'RG1 9SP',
      'Country': 'UK',
      'HomePhone': '(71) 555-5598',
      'Extension': '465',
      'Photo': { 'Length': 21626 },

      'Notes': 'Robert King served in the Peace Corps and traveled
extensively before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company.
After completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
      'ReportsTo': 5,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 8,
      'LastName': 'Callahan',
      'FirstName': 'Laura',
      'Title': 'Inside Sales Coordinator',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-377982000000),
      'HireDate': new Date(762843600000),
      'Address': '4726 - 11th Ave. N.E.',
      'City': 'Seattle',
      'Region': 'WA',
      'PostalCode': '98105',
      'Country': 'USA',
      'HomePhone': '(206) 555-1189',
      'Extension': '2344',
      'Photo': { 'Length': 21626 },

      'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 9,
      'LastName': 'Dodsworth',
      'FirstName': 'Anne',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-123966000000),
      'HireDate': new Date(784875600000),
      'Address': '7 Houndstooth Rd.',
      'City': 'London',
      'Region': null,
      'PostalCode': 'WG2 7LT',
      'Country': 'UK',
      'HomePhone': '(71) 555-4444',
      'Extension': '452',
      'Photo': { 'Length': 21626 },

```

```

        'Notes': 'Anne has a BA degree in English from St. Lawrence College.
        She is fluent in French and German.',
        'ReportsTo': 5,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    }
};

```

How to perform CRUD action externally

Performing CRUD (Create, Read, Update, Delete) actions externally in the Syncfusion Grid allows you to manipulate grid data outside the grid itself. This can be useful in scenarios where you want to manage data operations programmatically.

Using separate toolbar

The Syncfusion Grid enables external CRUD operations, allowing you to efficiently manage data manipulation within the grid. This capability is particularly useful when you need to manage data operations using a separate toolbar.

To perform CRUD operations externally, the following methods are available:

[addRecord](#) - To add a new record. If no data is passed then add form will be shown.

[startEdit](#) - To edit the selected row.

[deleteRecord](#) - To delete a selected row.

[endEdit](#) - If the grid is in editable state, then you can save a record by invoking this method.

[closeEdit](#) - To cancel the edited state.

The following example demonstrates the integration of the Syncfusion Grid with a separate toolbar for external CRUD operations. The toolbar contains buttons for Add, Edit, Delete, Update, and Cancel.

APP.JSX

```

import { ItemDirective, ItemsDirective, ToolbarComponent } from
 '@syncfusion/ej2-react-navigations';
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Edit, Inject, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
    let grid;
    const editOptions = { allowEditing: true, allowAdding: true, allowDeleting:
true };
    const pageSettings = { pageSize: 5 };
    const orderIDRules = { required: true };
    const customerIDRules = { required: true };
    const freightRules = { required: true };
    const editparams = { params: { popupHeight: '300px' } };
    const ontoolbarClick = (args) => {
        switch (args.item.id) {
            case 'add':
                grid.addRecord();
                break;
            case 'edit':
                grid.startEdit();

```

```

        break;
      case 'delete':
        grid.deleteRecord();
        break;
      case 'update':
        grid.endEdit();
        break;
      case 'cancel':
        grid.closeEdit();
        break;
    }
  }
}
return (<div>
  <div>
    <ToolbarComponent clicked={ontoolbarClick}>
      <ItemsDirective>
        <ItemDirective text="Add" id="add"></ItemDirective>
        <ItemDirective text="Edit" id="edit"></ItemDirective>
        <ItemDirective text="Delete" id="delete"></ItemDirective>
        <ItemDirective text="Update" id="update"></ItemDirective>
        <ItemDirective text="Cancel" id="cancel"></ItemDirective>
      </ItemsDirective>
    </ToolbarComponent>
  </div>
  <GridComponent id='Grid' ref={g => grid = g} dataSource={data}
editSettings={editOptions}
  height={315} allowPaging={true} pageSettings={pageSettings}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID'
validationRules={orderIDRules} width='100' textAlign="Right"
isPrimaryKey={true} />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='120' validationRules={customerIDRules} />
      <ColumnDirective field='Freight' headerText='Freight' width='150'
format='C2' editType='numericedit' validationRules={freightRules} />
      <ColumnDirective field='OrderDate' headerText='Order Date'
width='150' format='yMd' editType='datepickeredit' />
      <ColumnDirective field='ShipCountry' headerText='Order Date'
width='150' format='yMd' editType='dropdownedit' edit={editparams} />
    </ColumnsDirective>
    <Inject services={[Edit, Toolbar]} />
  </GridComponent></div>
);
export default App;

```

APP.TSX

```

import { ClickEventArgs, ItemDirective, ItemsDirective, ToolbarComponent }
from '@syncfusion/ej2-react-navigations';
import { ColumnDirective, ColumnsDirective, GridComponent, PageSettingsModel }
from '@syncfusion/ej2-react-grids';
import { Edit, EditSettingsModel, Inject, Toolbar } from '@syncfusion/ej2-
react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {

```

```

let grid: GridComponent | null;
const editOptions: EditSettingsModel = { allowEditing: true, allowAdding:
true, allowDeleting: true };
const pageSettings: PageSettingsModel = { pageSize: 5 };
const orderIDRules: object = { required: true, };
const customerIDRules: object = { required: true };
const freightRules: object = { required: true };
const editparams: object = { params: { popupHeight: '300px' } };
const ontoolbarClick = (args: ClickEventArgs) => {
  switch (args.item.id) {
    case 'add':
      (grid as GridComponent).addRecord();
      break;
    case 'edit':
      (grid as GridComponent).startEdit();
      break;
    case 'delete':
      (grid as GridComponent).deleteRecord();
      break;
    case 'update':
      (grid as GridComponent).endEdit();
      break;
    case 'cancel':
      (grid as GridComponent).closeEdit();
      break;
  }
}
return (<div>
  <div>
    <ToolbarComponent clicked={toolbarClick}>
      <ItemsDirective>
        <ItemDirective text="Add" id="add"></ItemDirective>
        <ItemDirective text="Edit" id="edit"></ItemDirective>
        <ItemDirective text="Delete" id="delete"></ItemDirective>
        <ItemDirective text="Update" id="update"></ItemDirective>
        <ItemDirective text="Cancel" id="cancel"></ItemDirective>
      </ItemsDirective>
    </ToolbarComponent>
  </div>
  <GridComponent id='Grid' ref={g => grid = g} dataSource={data}
editSettings={editOptions}
  height={315} allowPaging={true} pageSettings={pageSettings}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID'
validationRules={orderIDRules} width='100' textAlign="Right"
isPrimaryKey={true} />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='120' validationRules={customerIDRules} />
      <ColumnDirective field='Freight' headerText='Freight' width='150'
format='C2' editType='numericedit' validationRules={freightRules} />
      <ColumnDirective field='OrderDate' headerText='Order Date'
width='150' format='yMd' editType='datepickeredit' />
      <ColumnDirective field='ShipCountry' headerText='Order Date'
width='150' format='yMd' editType='dropdownedit' edit={editparams} />
    </ColumnsDirective>
    <Inject services={[Edit, Toolbar]} />
  </GridComponent></div>)

```

```
};  
export default App;
```

DATASOURCE.JSX

```
export let data = [  
  {  
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new  
Date(8364186e5),  
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',  
ShipAddress: '59 rue de l Abbaye',  
    ShipRegion: 'CJ', Mask: '1111', ShipPostalCode: '51100', ShipCountry:  
'France', Freight: 32.38, Verified: !0  
  },  
  {  
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new  
Date(836505e6),  
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:  
'Luisenstr. 48',  
    ShipRegion: 'CJ', Mask: '2222', ShipPostalCode: '44087', ShipCountry:  
'Germany', Freight: 11.61, Verified: !1  
  },  
  {  
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 6, OrderDate: new  
Date(8367642e5),  
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:  
'Rua do Paço, 67',  
    ShipRegion: 'RJ', Mask: '3333', ShipPostalCode: '05454-876',  
ShipCountry: 'Brazil', Freight: 65.83, Verified: !0  
  },  
  {  
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new  
Date(8367642e5),  
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,  
rue du Commerce',  
    ShipRegion: 'CJ', Mask: '4444', ShipPostalCode: '69004',  
ShipCountry: 'France', Freight: 41.34, Verified: !0  
  },  
  {  
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new  
Date(8368506e5),  
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:  
'Boulevard Tirou, 255',  
    ShipRegion: 'CJ', Mask: '5555', ShipPostalCode: 'B-6000',  
ShipCountry: 'Belgium', Freight: 51.3, Verified: !0  
  },  
  {  
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new  
Date(836937e6),  
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:  
'Rua do Paço, 67',  
    ShipRegion: 'RJ', Mask: '6666', ShipPostalCode: '05454-876',  
ShipCountry: 'Brazil', Freight: 58.17, Verified: !0  
  },  
  {  

```

```

    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
    ShipRegion: 'CJ', Mask: '7777', ShipPostalCode: '3012', ShipCountry:
'Switzerland', Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
    ShipRegion: 'CJ', Mask: '8888', ShipPostalCode: '1204', ShipCountry:
'Switzerland', Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', Mask: '9999', ShipPostalCode: '08737-363',
ShipCountry: 'Brazil', Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', Mask: '1234', ShipPostalCode: '5022',
ShipCountry: 'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', Mask: '2345', ShipPostalCode: '8010', ShipCountry:
'Austria', Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', Mask: '3456', ShipPostalCode: '05022', ShipCountry:
'Mexico', Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', Mask: '4567', ShipPostalCode: '50739', ShipCountry:
'Germany', Freight: 55.09, Verified: !0
  },
  {

```



```

    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', Mask: '5678', ShipPostalCode: '02389-673',
ShipCountry: 'Brazil', Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', Mask: '6789', ShipPostalCode: '87110', ShipCountry:
'USA', Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', Mask: '1111', ShipPostalCode: '51100', ShipCountry:
'France', Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', Mask: '2222', ShipPostalCode: '44087', ShipCountry:
'Germany', Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 6, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', Mask: '3333', ShipPostalCode: '05454-876',
ShipCountry: 'Brazil', Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', Mask: '4444', ShipPostalCode: '69004',
ShipCountry: 'France', Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',

```

```

    ShipRegion: 'CJ', Mask: '5555', ShipPostalCode: 'B-6000',
    ShipCountry: 'Belgium', Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', Mask: '6666', ShipPostalCode: '05454-876',
    ShipCountry: 'Brazil', Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', Mask: '7777', ShipPostalCode: '3012', ShipCountry:
    'Switzerland', Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
    Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
    ShipRegion: 'CJ', Mask: '8888', ShipPostalCode: '1204', ShipCountry:
    'Switzerland', Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
    Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', Mask: '9999', ShipPostalCode: '08737-363',
    ShipCountry: 'Brazil', Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
    Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
    'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', Mask: '1234', ShipPostalCode: '5022',
    ShipCountry: 'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
    Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
    6',
    ShipRegion: 'CJ', Mask: '2345', ShipPostalCode: '8010', ShipCountry:
    'Austria', Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
    Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
    ShipAddress: 'Sierras de Granada 9993',

```

```

        ShipRegion: 'CJ', Mask: '3456', ShipPostalCode: '05022', ShipCountry:
'Mexico', Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', Mask: '4567', ShipPostalCode: '50739', ShipCountry:
'Germany', Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', Mask: '5678', ShipPostalCode: '02389-673',
ShipCountry: 'Brazil', Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', Mask: '6789', ShipPostalCode: '87110', ShipCountry:
'USA', Freight: 48.29, Verified: !0
    }
  ]];

```

Using external form

Performing the edit operation in a custom external form in the Syncfusion Grid is a valuable feature when you need to customize the edit operation within a separate form rather than the default in-grid editing.

To enable the use of an external form for editing in Syncfusion Grid, you can make use of the **RowSelected** property. This property specifies whether the edit operation should be triggered when a row is selected.

In the following example, it demonstrates how to edit the form using an external form by utilizing the **RowSelected** property:

APP.JSX

```

import { NumericTextBoxComponent, TextBoxComponent } from '@syncfusion/ej2-react-inputs';
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, ForeignKey, GridComponent,
RowSelectEventArgs } from '@syncfusion/ej2-react-grids';
import { Edit, EditSettingsModel, Inject, Toolbar } from '@syncfusion/ej2-react-grids';
import React, { useState } from 'react';
import { data } from './datasource';
function App() {
    let grid;
    const editOptions = { allowEditing: true };
    const [selectedProduct, setSelectedProduct] = useState(new Order());

```

```

const dropdown= [
  { shipCountry: 'Germany' },
  { shipCountry: 'Brazil' },
  { shipCountry: 'France' },
  { shipCountry: 'Belgium' },
  { shipCountry: 'Switzerland' },
  { shipCountry: 'Venezuela' },
  { shipCountry: 'USA' },
  { shipCountry: 'Mexico' },
  { shipCountry: 'Italy' },
  { shipCountry: 'Sweden' },
  { shipCountry: 'Finland' },
  { shipCountry: 'Spain' },
  { shipCountry: 'Canada' },
  { shipCountry: 'Portugal' },
  { shipCountry: 'Denmark' },
  { shipCountry: 'Austria' },
  { shipCountry: 'UK' },
  { shipCountry: 'Ireland' },
  { shipCountry: 'Norway' },
  { shipCountry: 'Argentina' },
];
const dropdownFields = { text: 'shipCountry', value: 'shipCountry' };
const handleInputChange = (field, value) => {
  setSelectedProduct((prevProduct) => ({ ...prevProduct, [field]: value
}));
};
const save = () => {
  const index = grid.getSelectedRowIndex() [0];
  grid.updateRow(index, selectedProduct);
}
const rowSelected = (args) => {
  setSelectedProduct(args.data);
}
return (<div className='row'>
  <div className="col-xs-6 col-md-3">
    <div>
      <div className="form-row">
        <div className="form-group col-md-12">
          <label >OrderID</label>
          <input className="form-control"
defaultValue={selectedProduct.OrderID || ''} type="number" onChange={(e) =>
handleInputChange('OrderID', e.target.value)} />
        </div>
      </div>
      <div className="form-row">
        <div className="form-group col-md-12">
          <label >CustomerID</label>
          <TextBoxComponent value={selectedProduct.CustomerID || ''}
change={(e) => handleInputChange('CustomerID', e.value)} ></TextBoxComponent>
        </div>
      </div>
      <div className="form-row">
        <div className="form-group col-md-12">
          <label >Frieght</label>

```

```

        <NumericTextBoxComponent value={selectedProduct.Freight || ''}
change={ (e) => handleInputChange('Freight',
e.value) }></NumericTextBoxComponent>
    </div>
</div>
<div className="form-row">
    <div className="form-group col-md-12">
        <label>ShipCountry</label>
        <DropDownListComponent value={selectedProduct.ShipCountry || ''}
dataSource={dropdown} fields={dropdownFields} change={ (e) =>
handleInputChange('ShipCountry', e.value) }></DropDownListComponent>
    </div>
</div>
<div>
    <ButtonComponent id='btn' onClick={save}>Save</ButtonComponent>
</div>
<div className="col-xs-6 col-md-9">
    <GridComponent id='Grid' ref={g => grid = g} dataSource={data}
editSettings={editOptions}
    height={315} rowSelected={rowSelected}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" isPrimaryKey={true} />
            <ColumnDirective field='CustomerID' headerText='Customer ID'
width='120' />
            <ColumnDirective field='Freight' headerText='Freight' width='150'
format='C2' />
            <ColumnDirective field='ShipCountry' headerText='Order Date'
width='150' />
        </ColumnsDirective>
        <Inject services={[Edit, Toolbar, ForeignKey]} />
    </GridComponent></div></div>
);
export default App;

```

APP.TSX

```

import { NumericTextBoxComponent, TextBoxComponent } from '@syncfusion/ej2-react-inputs';
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, ForeignKey, GridComponent, RowSelectEventArgs } from '@syncfusion/ej2-react-grids';
import { Edit, EditSettingsModel, Inject, Toolbar } from '@syncfusion/ej2-react-grids';
import React, { useState } from 'react';
import { data } from '../datasource';
// export class Order {
//   OrderID: number;
//   CustomerID: string;
//   Freight: number;
//   ShipCountry: string;
// }
function App() {
    let grid: GridComponent | null;
    const editOptions: EditSettingsModel = { allowEditing: true };

```

```

const [selectedProduct, setSelectedProduct] = useState([]);
const dropdown: { [key: string]: Object; }[] = [
  { shipCountry: 'Germany' },
  { shipCountry: 'Brazil' },
  { shipCountry: 'France' },
  { shipCountry: 'Belgium' },
  { shipCountry: 'Switzerland' },
  { shipCountry: 'Venezuela' },
  { shipCountry: 'USA' },
  { shipCountry: 'Mexico' },
  { shipCountry: 'Italy' },
  { shipCountry: 'Sweden' },
  { shipCountry: 'Finland' },
  { shipCountry: 'Spain' },
  { shipCountry: 'Canada' },
  { shipCountry: 'Portugal' },
  { shipCountry: 'Denmark' },
  { shipCountry: 'Austria' },
  { shipCountry: 'UK' },
  { shipCountry: 'Ireland' },
  { shipCountry: 'Norway' },
  { shipCountry: 'Argentina' },
];
const dropdownFields: Object = { text: 'shipCountry', value: 'shipCountry' };
const handleInputChange = (field: string, value: string | number) => {
  setSelectedProduct((prevProduct) => ({ ...prevProduct, [field]: value }));
};
const save = () => {
  const index = (grid as GridComponent).getSelectedRowIndex()[0];
  (grid as GridComponent).updateRow(index, selectedProduct);
}
const rowSelected = (args: RowSelectEventArgs) => {
  setSelectedProduct(args.data);
}
return (
  <div className='row'>
    <div className="col-xs-6 col-md-3">
      <div>
        <div className="form-row">
          <div className="form-group col-md-12">
            <label>OrderID</label>
            <input className="form-control"
              defaultValue={selectedProduct.OrderID || ''} type="number" onChange={e =>
                handleInputChange('OrderID', e.target.value)} />
          </div>
        </div>
        <div className="form-row">
          <div className="form-group col-md-12">
            <label>CustomerID</label>
            <TextBoxComponent value={selectedProduct.CustomerID || ''}
              change={e => handleInputChange('CustomerID', e.value)} />
          </div>
        </div>
        <div className="form-row">
          <div className="form-group col-md-12">
            <label>Frieght</label>

```

```

        <NumericTextBoxComponent value={selectedProduct.Freight || ''}
change={ (e) => handleInputChange('Freight',
e.value) }></NumericTextBoxComponent>
    </div>
</div>
<div className="form-row">
    <div className="form-group col-md-12">
        <label>ShipCountry</label>
        <DropDownListComponent value={ (selectedProduct as
any).ShipCountry || '' } dataSource={dropdown} fields={dropdownFields}
change={ (e) => handleInputChange('ShipCountry',
e.value) }></DropDownListComponent>
    </div>
</div>
<div>
    <ButtonComponent id='btn' onClick={save}>Save</ButtonComponent>
</div>
<div className="col-xs-6 col-md-9">
    <GridComponent id='Grid' ref={g => grid = g} dataSource={data}
editSettings={editOptions}
    height={315} rowSelected={rowSelected}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" isPrimaryKey={true} />
            <ColumnDirective field='CustomerID' headerText='Customer ID'
width='120' />
            <ColumnDirective field='Freight' headerText='Freight' width='150'
format='C2' />
            <ColumnDirective field='ShipCountry' headerText='Order Date'
width='150' />
        </ColumnsDirective>
        <Inject services={[Edit, Toolbar, ForeignKey]} />
    </GridComponent></div></div>
);
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', Mask: '1111', ShipPostalCode: '51100', ShipCountry:
'France', Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', Mask: '2222', ShipPostalCode: '44087', ShipCountry:
'Germany', Freight: 11.61, Verified: !1
    },
    {

```

```

    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 6, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', Mask: '3333', ShipPostalCode: '05454-876',
ShipCountry: 'Brazil', Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', Mask: '4444', ShipPostalCode: '69004',
ShipCountry: 'France', Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', Mask: '5555', ShipPostalCode: 'B-6000',
ShipCountry: 'Belgium', Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', Mask: '6666', ShipPostalCode: '05454-876',
ShipCountry: 'Brazil', Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', Mask: '7777', ShipPostalCode: '3012', ShipCountry:
'Switzerland', Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', Mask: '8888', ShipPostalCode: '1204', ShipCountry:
'Switzerland', Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', Mask: '9999', ShipPostalCode: '08737-363',
ShipCountry: 'Brazil', Freight: 13.97, Verified: !1
    },
    {

```



```

    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', Mask: '1234', ShipPostalCode: '5022',
ShipCountry: 'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', Mask: '2345', ShipPostalCode: '8010', ShipCountry:
'Austria', Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', Mask: '3456', ShipPostalCode: '05022', ShipCountry:
'Mexico', Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', Mask: '4567', ShipPostalCode: '50739', ShipCountry:
'Germany', Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', Mask: '5678', ShipPostalCode: '02389-673',
ShipCountry: 'Brazil', Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', Mask: '6789', ShipPostalCode: '87110', ShipCountry:
'USA', Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',

```

```

        ShipRegion: 'CJ', Mask: '1111', ShipPostalCode: '51100', ShipCountry:
        'France', Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', Mask: '2222', ShipPostalCode: '44087', ShipCountry:
        'Germany', Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 6, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', Mask: '3333', ShipPostalCode: '05454-876',
        ShipCountry: 'Brazil', Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', Mask: '4444', ShipPostalCode: '69004',
        ShipCountry: 'France', Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', Mask: '5555', ShipPostalCode: 'B-6000',
        ShipCountry: 'Belgium', Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', Mask: '6666', ShipPostalCode: '05454-876',
        ShipCountry: 'Brazil', Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', Mask: '7777', ShipPostalCode: '3012', ShipCountry:
        'Switzerland', Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',

```

```

        ShipRegion: 'CJ', Mask: '8888', ShipPostalCode: '1204', ShipCountry:
        'Switzerland', Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', Mask: '9999', ShipPostalCode: '08737-363',
        ShipCountry: 'Brazil', Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', Mask: '1234', ShipPostalCode: '5022',
        ShipCountry: 'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', Mask: '2345', ShipPostalCode: '8010', ShipCountry:
        'Austria', Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', Mask: '3456', ShipPostalCode: '05022', ShipCountry:
        'Mexico', Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', Mask: '4567', ShipPostalCode: '50739', ShipCountry:
        'Germany', Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', Mask: '5678', ShipPostalCode: '02389-673',
        ShipCountry: 'Brazil', Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',

```

```

    ShipRegion: 'NM', Mask: '6789', ShipPostalCode: '87110', ShipCountry:
    'USA', Freight: 48.29, Verified: !0
  }];

```

Troubleshoot editing works only for first row

The Editing functionalities can be performed based upon the primary key value of the selected row. If [isPrimaryKey](#) property is not defined in the grid, then edit or delete action take places the first row. To overcome this, ensure that you establish the [isPrimaryKey](#) property as **true** for the relevant column responsible for holding the unique identifier for each row.

How to make a Grid column always editable

To make a Grid column always editable, you can utilize the column template feature of the Grid. This feature is useful when you want to edit a particular column's values directly within the grid.

In the following example, the textbox is rendered in the **Freight** column using a column template. The keyup event for the Grid is bound using the [created](#) event of the Grid, and the edited changes are saved in the data source using the [updateRow](#) method of the Grid.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, parentsUntil }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  const gridTemplate = (props) => {
    return (<div>
      <input id={props.OrderID} defaultValue={props.Freight}
      className='custemp' type='text' />
    </div>);
  };
  const created = (args) => {
    grid.element.addEventListener('keyup', function (e) {
      if (e.target.classList.contains('custemp')) { // Based on
        condition, you can find whether the target is an input element or not.
        let row = parentsUntil(e.target, 'e-row');
        let rowIndex = row.rowIndex; // Get the row index.
        let uid = row.getAttribute('data-uid');
        let grid = document.getElementsByClassName('e-
        grid')[0].ej2_instances[0];
        let rowData = grid.getRowObjectFromUID(uid).data; // Get the
        row data.
        rowData.Freight = e.target.value; // Update the new value for
        the corresponding column.
        grid.updateRow(rowIndex, rowData); // Update the modified
        value in the row data.
      }
    });
  };
  return <GridComponent dataSource={data} ref={g => grid = g} height={315}
  created={created}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='120'
      textAlign="Right" isPrimaryKey={true} />

```

```

        <ColumnDirective field='OrderDate' headerText='Order Date' width='130'
textAlign="Right" format='yMd' />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='140' />
        <ColumnDirective field='Freight' headerText='Receipt Amount'
width='140' template={gridTemplate} />
    </ColumnsDirective>
</GridComponent>;
}
;
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, parentsUntil }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
    let grid: GridComponent | null;
    const gridTemplate = (props: any): any => {
        return (<div>
            <input id={props.OrderID} defaultValue={props.Freight}
className='custemp' type='text' />
        </div>);
    }
    const created = (args): void => {
        grid.element.addEventListener('keyup', function (e) { // Bind the keyup
event for the grid.
            if ((e.target as any).classList.contains('custemp')) { // Based on
condition, you can find whether the target is an input element or not.
                let row = parentsUntil(e.target as any, 'e-row');
                let rowIndex = (row as any).rowIndex; // Get the row index.
                let uid = row.getAttribute('data-uid');
                let grid = (document.getElementsByClassName('e-grid')[0] as
any).ej2_instances[0];
                let rowData = grid.getRowObjectFromUID(uid).data; // Get the row
data.
                (rowData as any).Freight = (e.target as any).value; // Update the new
value for the corresponding column.
                grid.updateRow(rowIndex, rowData); // Update the modified value in
the row data.
            }
        });
    }
    return <GridComponent dataSource={data} ref={g => grid = g} height={315}
created={created}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" isPrimaryKey={true} />
            <ColumnDirective field='OrderDate' headerText='Order Date' width='130'
textAlign="Right" format='yMd' />
            <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='140' />
            <ColumnDirective field='Freight' headerText='Receipt Amount'
width='140' template={gridTemplate} />

```

```
    </ColumnsDirective>
  </GridComponent>
};
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', Role: 'Admin', EmployeeID: 5,
    OrderDate: new Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', Mask: '1111', ShipPostalCode: '51100', ShipCountry:
    'France', Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', Role: 'Employee', EmployeeID: 6,
    OrderDate: new Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', Mask: '2222', ShipPostalCode: '44087', ShipCountry:
    'Germany', Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 4,
    OrderDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', Mask: '3333', ShipPostalCode: '05454-876',
    ShipCountry: 'Brazil', Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', Role: 'Manager', EmployeeID: 3,
    OrderDate: new Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', Mask: '4444', ShipPostalCode: '69004', ShipCountry:
    'France', Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', Role: 'Manager', EmployeeID: 4,
    OrderDate: new Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', Mask: '5555', ShipPostalCode: 'B-6000',
    ShipCountry: 'Belgium', Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 3,
    OrderDate: new Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', Mask: '6666', ShipPostalCode: '05454-876',
    ShipCountry: 'Brazil', Freight: 58.17, Verified: !0
  },
]
```

```

{
  OrderID: 10254, CustomerID: 'CHOPS', Role: 'Employee', EmployeeID: 5,
  OrderDate: new Date(8370234e5),
  ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
  'Hauptstr. 31',
  ShipRegion: 'CJ', Mask: '7777', ShipPostalCode: '3012', ShipCountry:
  'Switzerland', Freight: 22.98, Verified: !1
},
{
  OrderID: 10255, CustomerID: 'RICSU', Role: 'Admin', EmployeeID: 9,
  OrderDate: new Date(8371098e5),
  ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
  'Starenweg 5',
  ShipRegion: 'CJ', Mask: '8888', ShipPostalCode: '1204', ShipCountry:
  'Switzerland', Freight: 148.33, Verified: !0
},
{
  OrderID: 10256, CustomerID: 'WELLI', Role: 'Employee', EmployeeID: 3,
  OrderDate: new Date(837369e6),
  ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
  'Rua do Mercado, 12',
  ShipRegion: 'SP', Mask: '9999', ShipPostalCode: '08737-363',
  ShipCountry: 'Brazil', Freight: 13.97, Verified: !1
},
{
  OrderID: 10257, CustomerID: 'HILAA', Role: 'Admin', EmployeeID: 4,
  OrderDate: new Date(8374554e5),
  ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
  'Carrera 22 con Ave. Carlos Soublette #8-35',
  ShipRegion: 'Táchira', Mask: '1234', ShipPostalCode: '5022',
  ShipCountry: 'Venezuela', Freight: 81.91, Verified: !0
},
{
  OrderID: 10258, CustomerID: 'ERNSH', Role: 'Manager', EmployeeID: 1,
  OrderDate: new Date(8375418e5),
  ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
  6',
  ShipRegion: 'CJ', Mask: '2345', ShipPostalCode: '8010', ShipCountry:
  'Austria', Freight: 140.51, Verified: !0
},
{
  OrderID: 10259, CustomerID: 'CENTC', Role: 'Admin', EmployeeID: 4,
  OrderDate: new Date(8376282e5),
  ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
  ShipAddress: 'Sierras de Granada 9993',
  ShipRegion: 'CJ', Mask: '3456', ShipPostalCode: '05022', ShipCountry:
  'Mexico', Freight: 3.25, Verified: !1
},
{
  OrderID: 10260, CustomerID: 'OTTIK', Role: 'Admin', EmployeeID: 4,
  OrderDate: new Date(8377146e5),
  ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
  'Mehrheimerstr. 369',
  ShipRegion: 'CJ', Mask: '4567', ShipPostalCode: '50739', ShipCountry:
  'Germany', Freight: 55.09, Verified: !0
},
{

```

```

    OrderID: 10261, CustomerID: 'QUEDE', Role: 'Manager', EmployeeID: 4,
    OrderDate: new Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua da Panificadora, 12',
    ShipRegion: 'RJ', Mask: '5678', ShipPostalCode: '02389-673',
    ShipCountry: 'Brazil', Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', Role: 'Employee', EmployeeID: 8,
    OrderDate: new Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
    ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', Mask: '6789', ShipPostalCode: '87110', ShipCountry:
    'USA', Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', Role: 'Admin', EmployeeID: 5,
    OrderDate: new Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', Mask: '1111', ShipPostalCode: '51100', ShipCountry:
    'France', Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', Role: 'Employee', EmployeeID: 6,
    OrderDate: new Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', Mask: '2222', ShipPostalCode: '44087', ShipCountry:
    'Germany', Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 4,
    OrderDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', Mask: '3333', ShipPostalCode: '05454-876',
    ShipCountry: 'Brazil', Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', Role: 'Manager', EmployeeID: 3,
    OrderDate: new Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', Mask: '4444', ShipPostalCode: '69004', ShipCountry:
    'France', Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', Role: 'Manager', EmployeeID: 4,
    OrderDate: new Date(8368506e5),

```



```

      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', Mask: '5555', ShipPostalCode: 'B-6000',
ShipCountry: 'Belgium', Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 3,
OrderDate: new Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', Mask: '6666', ShipPostalCode: '05454-876',
ShipCountry: 'Brazil', Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', Role: 'Employee', EmployeeID: 5,
OrderDate: new Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', Mask: '7777', ShipPostalCode: '3012', ShipCountry:
'Switzerland', Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', Role: 'Admin', EmployeeID: 9,
OrderDate: new Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', Mask: '8888', ShipPostalCode: '1204', ShipCountry:
'Switzerland', Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', Role: 'Employee', EmployeeID: 3,
OrderDate: new Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', Mask: '9999', ShipPostalCode: '08737-363',
ShipCountry: 'Brazil', Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', Role: 'Admin', EmployeeID: 4,
OrderDate: new Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', Mask: '1234', ShipPostalCode: '5022',
ShipCountry: 'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', Role: 'Manager', EmployeeID: 1,
OrderDate: new Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', Mask: '2345', ShipPostalCode: '8010', ShipCountry:
'Austria', Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', Role: 'Admin', EmployeeID: 4,
OrderDate: new Date(8376282e5),

```

```

      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', Mask: '3456', ShipPostalCode: '05022', ShipCountry:
      'Mexico', Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', Role: 'Admin', EmployeeID: 4,
      OrderDate: new Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
      'Mehrheimerstr. 369',
      ShipRegion: 'CJ', Mask: '4567', ShipPostalCode: '50739', ShipCountry:
      'Germany', Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', Role: 'Manager', EmployeeID: 4,
      OrderDate: new Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', Mask: '5678', ShipPostalCode: '02389-673',
      ShipCountry: 'Brazil', Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', Role: 'Employee', EmployeeID: 8,
      OrderDate: new Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', Mask: '6789', ShipPostalCode: '87110', ShipCountry:
      'USA', Freight: 48.29, Verified: !0
    }
  ]];

```

* If a template column has a corresponding `field` property defined, the value entered in the template column's input field will be stored in the associated edit column of the row's data object.

See also

- [Cascading DropDownList with Grid Editing](#)
- [Tab Inside the Dialog Editing](#)

Sorting in React Grid component

The Grid component provides built-in support for sorting data-bound columns in ascending or descending order. To enable sorting in the grid, set the `allowSorting` property to `true`.

To sort a particular column in the grid, click on its column header. Each time you click the header, the order of the column will switch between **Ascending** and **Descending**.

To use the sorting feature, you need to inject the **Sort** module in the grid.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Sort }
  from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  return <GridComponent dataSource={data} allowSorting={true} height={315}>

```

```

    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
      <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
textAlign="Right" />
      <ColumnDirective field='ShipName' headerText='Ship Name' width='100' />
    </ColumnsDirective>
    <Inject services={[Sort]} />
  </GridComponent>;
};
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Sort }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  return <GridComponent dataSource={data} allowSorting={true} height={300}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
      <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
textAlign="Right" />
      <ColumnDirective field='ShipName' headerText='Ship Name' width='100' />
    </ColumnsDirective>
    <Inject services={[Sort]} />
  </GridComponent>
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {

```

```

    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {

```

```

    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),

```

```

        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),

```

```

        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),

```

```

    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
    ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
    Freight: 48.29, Verified: !0
  }];

```

* Grid column sorted in **Ascending** order. If you click on an already sorted column, then toggles the sort direction.

* You can apply and clear sorting by using the [sortColumn](#) and [clearSorting](#) methods.

* To disable sorting for a specific column, set the [allowSorting](#) property to **false**.

Initial sorting

By default, the grid component does not apply any sorting to its records at initial rendering. However, you can apply initial sorting by setting the [sortSettings.columns](#) property to the desired [field](#) and sort [direction](#). This feature is helpful when you want to display your data in a specific order when the grid is first loaded.

The following example demonstrates how to set [sortSettings.columns](#) for **OrderID** and **ShipCity** columns with a specified [direction](#).

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Sort }
  from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const sortingOptions = {
    columns: [{ field: 'OrderID', direction: 'Ascending' }, { field:
    'ShipCity', direction: 'Descending' }]
  };
  return <GridComponent dataSource={data} allowSorting={true}
  sortSettings={sortingOptions} height={315}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
      textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
      width='100' />
      <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
      textAlign="Right" />
      <ColumnDirective field='ShipName' headerText='Ship Name' width='100' />
    </ColumnsDirective>
    <Inject services={[Sort]} />
  </GridComponent>;
}
;
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Sort,
  SortSettingsModel } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';

```



```
function App() {
  const sortingOptions: SortSettingsModel = {
    columns: [{ field: 'OrderID', direction: 'Ascending' }, { field:
'ShipCity', direction: 'Descending' }]
  };
  return <GridComponent dataSource={data} allowSorting={true}
sortSettings={sortingOptions} height={315}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
      <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
textAlign="Right" />
      <ColumnDirective field='ShipName' headerText='Ship Name' width='100' />
    </ColumnsDirective>
    <Inject services={[Sort]} />
  </GridComponent>
};
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
]
```

```

{
  OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
  ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
  ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
},
{
  OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
  ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
  ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
},
{
  OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
  ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
  ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
},
{
  OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
  ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
  ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
},
{
  OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
  ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
  ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
},
{
  OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
  ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
  ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
},
{
  OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
  ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
  ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
},
{

```

```

    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),

```

```

      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
      Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
      'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
      Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
      'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
      Date(8374554e5),

```

```

      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
      'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
      'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
      Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
      Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
      'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
      Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }
  ]];

```

The initial sorting defined in [sortSettings.columns](#) will override any sorting applied through user interaction.

Multi-column sorting

The Grid component allows to sort more than one column at a time using multi-column sorting. To enable multi-column sorting in the grid, set the [allowSorting](#) property to **true**, and set the [allowMultiSorting](#) property to **true** which enable the user to sort multiple columns by hold the **CTRL** key and click on the column headers. This feature is useful when you want to sort your data based on multiple criteria to analyze it in various ways.

To clear multi-column sorting for a particular column, press the "Shift + mouse left click".

* The [allowSorting](#) must be true while enabling multi-column sort.

* Set [allowMultiSorting](#) property as **false** to disable multi-column sorting.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Sort }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    return <GridComponent dataSource={data} allowSorting={true}
allowMultiSorting={true} height={315}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
            <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
            <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
textAlign="Right" />
            <ColumnDirective field='ShipName' headerText='Ship Name' width='100' />
        </ColumnsDirective>
        <Inject services={[Sort]} />
    </GridComponent>;
}
;
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Sort }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    return <GridComponent dataSource={data} allowSorting={true}
allowMultiSorting={true} height={315}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
            <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
            <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
textAlign="Right" />
            <ColumnDirective field='ShipName' headerText='Ship Name' width='100' />
        </ColumnsDirective>
        <Inject services={[Sort]} />
    </GridComponent>
};
export default App;
```

DATASOURCE.JSX

```
export let data = [
    {
```

```

    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {

```

```

    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {

```



```

    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),

```

```

    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
    Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
    Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
    Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
    'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
    'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
    Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
    6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
    Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
    Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
    ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
    Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
    Date(8377146e5),

```

```

      ShipName: 'Ottillies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
  ]];

```

Prevent sorting for particular column

The Grid component provides the ability to prevent sorting for a particular column. This can be useful when you have certain columns that you do not want to be included in the sorting process.

It can be achieved by setting the [allowSorting](#) property of the particular column to **false**.

The following example demonstrates, how to disable sorting for **CustomerID** column.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Sort }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  return <GridComponent dataSource={data} allowSorting={true} height={315}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' allowSorting={false}/>
      <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
textAlign="Right" />
      <ColumnDirective field='ShipName' headerText='Ship Name' width='100' />
    </ColumnsDirective>
    <Inject services=[[Sort]]/>
  </GridComponent>;
};
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Sort }
from '@syncfusion/ej2-react-grids';

```

```
import * as React from 'react';
import { data } from './datasource';
function App() {
  return <GridComponent dataSource={data} allowSorting={true} height={300}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' allowSorting={false} />
      <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
textAlign="Right" />
      <ColumnDirective field='ShipName' headerText='Ship Name' width='100' />
    </ColumnsDirective>
    <Inject services={[Sort]} />
  </GridComponent>
};
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
```

```

      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
      'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
      Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
      'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
      Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
      'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
      'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
      Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
      Date(8376282e5),

```

```

        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
        Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',

```

```

        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',

```

```

        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ];

```

Sort order

By default, the sorting order will be as **ascending -> descending -> none**.

When you click on a column header for the first time, it sorts the column in ascending order. Clicking the same column header again will sort the column in descending order. A repetitive third click on the same column header will clear the sorting.

Custom sorting

The Grid component provides a way to customize the default sort action for a column by defining the [sortComparer](#) property. The sort comparer function works similar to the [Array.sort](#) comparer function, and allows to define custom sorting logic for a specific column.

The following example demonstrates how to define custom sort comparer function for the **Customer ID** column.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Sort }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    const sortComparer = (reference, comparer) => {
        if (reference < comparer) {
            return -1;
        }
        if (reference > comparer) {
            return 1;
        }
        return 0;
    };
    return <GridComponent dataSource={data} height={315} allowSorting={true}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID' width='100'
                textAlign="Right"/>
            <ColumnDirective field='CustomerID' sortComparer={sortComparer}
                headerText='Customer ID' width='150' />
            <ColumnDirective field='Freight' headerText='Freight' width='80'
                textAlign="Right" format='C2' />
            <ColumnDirective field='ShipCountry' headerText='Ship Country'
                width='100' />
        </ColumnsDirective>
        <Inject services={[Sort]} />
    </GridComponent>;
}
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Sort }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    const sortComparer = (reference: string, comparer: string) => {
        if (reference < comparer) {
            return -1;
        }
        if (reference > comparer) {
            return 1;
        }
        return 0;
    };
    return <GridComponent dataSource={data} height={315} allowSorting={true}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID' width='100'
                textAlign="Right" />
        </ColumnsDirective>
    </GridComponent>;
}
```

```

    <ColumnDirective field='CustomerID' sortComparer={sortComparer}
    headerText='Customer ID' width='150' />
    <ColumnDirective field='Freight' headerText='Freight' width='80'
    textAlign="Right" format='C2' />
    <ColumnDirective field='ShipCountry' headerText='Ship Country'
    width='100' />
  </ColumnsDirective>
  <Inject services={[Sort]} />
</GridComponent>
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {

```

```

    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {

```

```

    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),

```

```

        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),

```

```

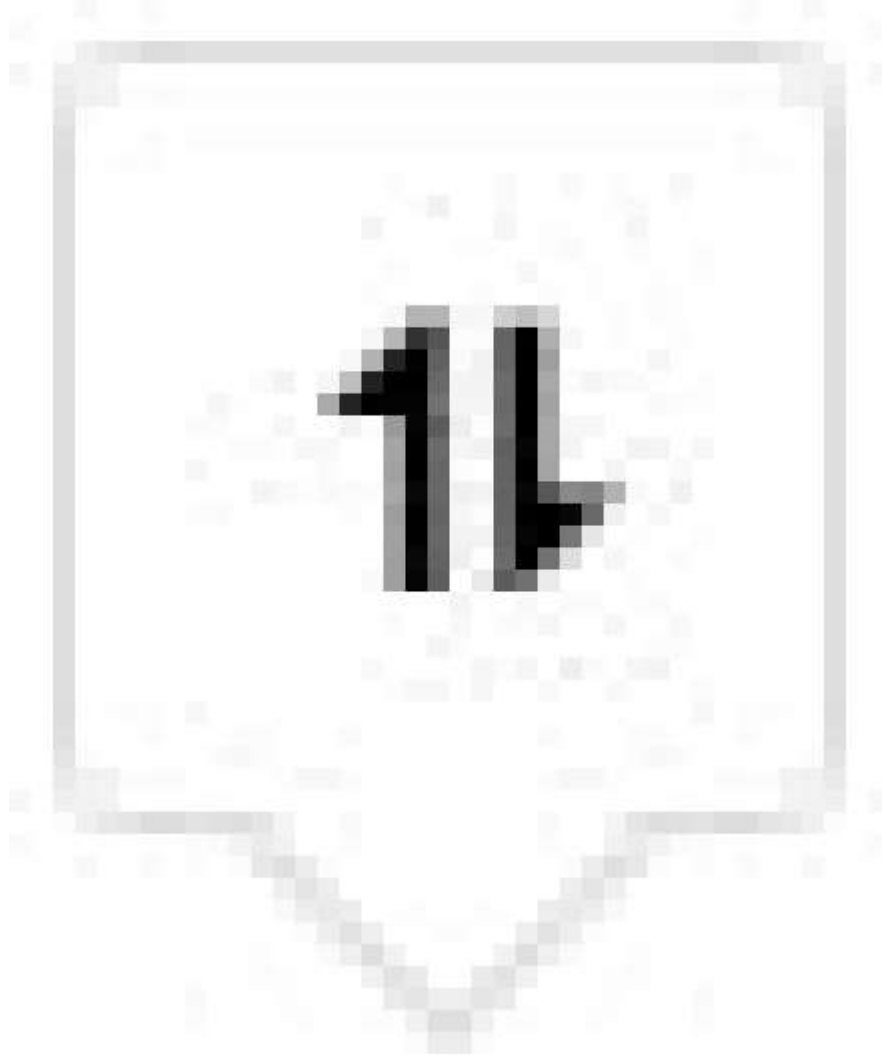
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]];

```

The customSortComparer function takes two parameters: a and b. The a and b parameters are the values to be compared. The function returns -1, 0, or 1, depending on the comparison result.

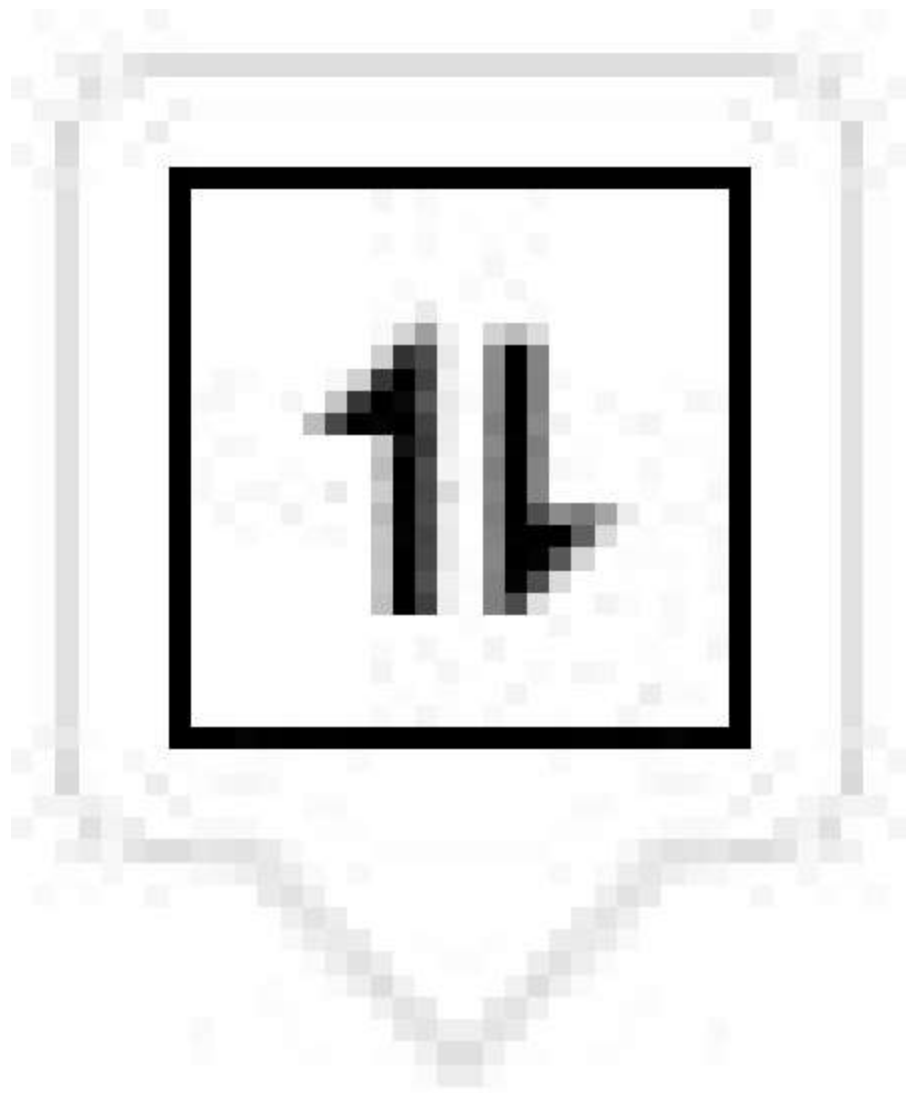
Touch interaction

When you tap grid header on touch screen devices, then the selected column header is sorted and



display a popup
column sorting, tap on the popup to sort multiple columns

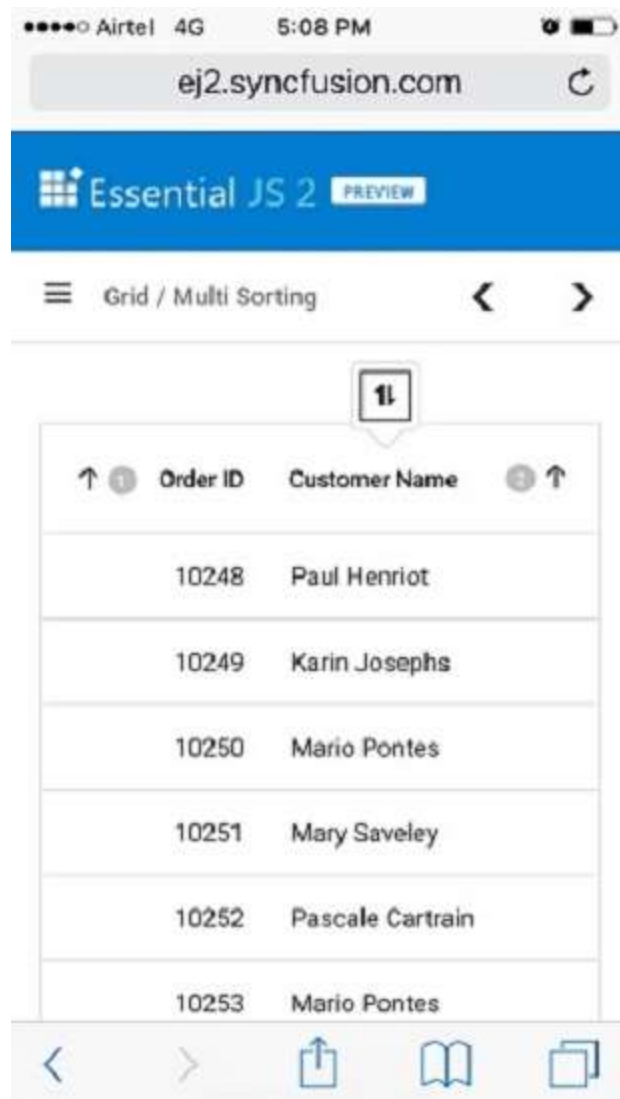
for multi-



and then tap the desired grid headers.

The [allowMultiSorting](#) and [allowSorting](#) should be **true** then only the popup will be shown.

The following screenshot represents a grid touch sorting in the device.



Sort foreign key column based on text

To perform sorting based on foreign key column, the foreign key column can be enabled by using [dataSource](#), [foreignKeyField](#) and [foreignKeyValue](#) properties.

Sort foreign key column based on text for local data

In the case of local data in the grid, the sorting operation will be performed based on the [foreignKeyValue](#) property of the column. The [foreignKeyValue](#) property should be defined in the column definition with the corresponding foreign key value for each row. The grid will sort the foreign key column based on the text representation of the [foreignKeyValue](#) property.

The following example demonstrates how to perform sorting by enabling a foreign key column, where the **CustomerID** column acts as a foreign column displaying the **ContactName** column from foreign data.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Sort,
ForeignKey } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data, customerData } from './datasource';
```

```
function App() {
  return <GridComponent dataSource={data} allowSorting={true} height={300}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
foreignKeyValue='ContactName' foreignKeyField='CustomerID'
dataSource={customerData} width='100' />
      <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
textAlign="Right" />
      <ColumnDirective field='ShipName' headerText='Ship Name' width='100' />
    </ColumnsDirective>
    <Inject services={[Sort, ForeignKey]} />
  </GridComponent>
};
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Sort,
ForeignKey } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data, customerData } from './datasource';
function App() {
  return <GridComponent dataSource={data} allowSorting={true} height={300}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
foreignKeyValue='ContactName' foreignKeyField='CustomerID'
dataSource={customerData} width='100' />
      <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
textAlign="Right" />
      <ColumnDirective field='ShipName' headerText='Ship Name' width='100' />
    </ColumnsDirective>
    <Inject services={[Sort, ForeignKey]} />
  </GridComponent>
};
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
```

```

        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
      },
      {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',

```

```

        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ];
    export const customerData = [
      {
        "CustomerID": "ALFKI",
        "ContactName": "Maria ",
        "CompanyName": "Alfreds Futterkiste",

```

```
    "Address": "Obere Str. 57",
    "Country": "Germany"
  },
  {
    "CustomerID": "ANATR",
    "ContactName": "Ana Trujillo",
    "CompanyName": "Ana Trujillo Emparedados y helados",
    "Address": "Avda. de la Constitución 2222",
    "Country": "Mexico"
  },
  {
    "CustomerID": "ANTON",
    "ContactName": "Antonio Moreno",
    "CompanyName": "Antonio Moreno Taquería",
    "Address": "Mataderos  2312",
    "Country": "Mexico"
  },
  {
    "CustomerID": "AROUT",
    "ContactName": "Thomas Hardy",
    "CompanyName": "Around the Horn",
    "Address": "120 Hanover Sq.",
    "Country": "UK"
  },
  {
    "CustomerID": "BERGS",
    "ContactName": "Christina Berglund",
    "CompanyName": "Berglunds snabbköp",
    "Address": "Berguvsvägen  8",
    "Country": "Sweden"
  },
  {
    "CustomerID": "BLAUS",
    "ContactName": "Hanna Moos",
    "CompanyName": "Blauer See Delikatessen",
    "Address": "Forsterstr. 57",
    "Country": "Germany"
  },
  {
    "CustomerID": "BLONP",
    "ContactName": "Frédérique Citeaux",
    "CompanyName": "Blondesddsl père et fils",
    "Address": "24, place Kléber",
    "Country": "France"
  },
  {
    "CustomerID": "BOLID",
    "ContactName": "Martín Sommer",
    "CompanyName": "Bólido Comidas preparadas",
    "Address": "C/ Araquil, 67",
    "Country": "Spain"
  },
  {
    "CustomerID": "BONAP",
    "ContactName": "Laurence Lebihan",
    "CompanyName": "Bon app'",
    "Address": "12, rue des Bouchers",
```

```
    "Country": "France"
  },
  {
    "CustomerID": "BOTTM",
    "ContactName": "Elizabeth Lincoln",
    "CompanyName": "Bottom-Dollar Markets",
    "Address": "23 Tsawassen Blvd.",
    "Country": "Canada"
  },
  {
    "CustomerID": "BSBEV",
    "ContactName": "Victoria Ashworth",
    "CompanyName": "B's Beverages",
    "Address": "Fauntleroy Circus",
    "Country": "UK"
  },
  {
    "CustomerID": "CACTU",
    "ContactName": "Patricio Simpson",
    "CompanyName": "Cactus Comidas para llevar",
    "Address": "Cerrito 333",
    "Country": "Argentina"
  },
  {
    "CustomerID": "CENTC",
    "ContactName": "Francisco Chang",
    "CompanyName": "Centro comercial Moctezuma",
    "Address": "Sierras de Granada 9993",
    "Country": "Mexico"
  },
  {
    "CustomerID": "CHOPS",
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      "Address": "35 King George",
      "Country": "UK"
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      "ContactName": "Diego Roel",
      "CompanyName": "FISSA Fabrica Inter. Salchichas S.A.",
      "Address": "C/ Moralzarzal, 86",
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      "CompanyName": "Folies gourmandes",
      "Address": "184, chaussée de Tournai",
      "Country": "France"
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      "CompanyName": "Folk och fä HB",
      "Address": "Åkergatan 24",
      "Country": "Sweden"
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  "Country": "Brazil"
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    "Country": "Argentina"
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    "CompanyName": "Old World Delicatessen",
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    "Country": "USA"
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      "Country": "Germany"
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      "CompanyName": "Tortuga Restaurante",
      "Address": "Avda. Azteca 123",
      "Country": "Mexico"
    },
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      "CompanyName": "Tradição Hipermercados",
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      "Country": "Brazil"
    },
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      "CompanyName": "Trail's Head Gourmet Provisioners",
      "Address": "722 DaVinci Blvd.",
      "Country": "USA"
    }
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  "ContactName": "Mary Saveley",
  "CompanyName": "Victuailles en stock",
  "Address": "2, rue du Commerce",
  "Country": "France"
},
{
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  "ContactName": "Paul Henriot",
  "CompanyName": "Vins et alcools Chevalier",
  "Address": "59 rue de l'Abbaye",
  "Country": "France"
},
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  "CompanyName": "Die Wandernde Kuh",
  "Address": "Adenauerallee 900",
  "Country": "Germany"
},
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  "Address": "Torikatu 38",
  "Country": "Finland"
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  "CompanyName": "Wellington Importadora",
  "Address": "Rua do Mercado, 12",
  "Country": "Brazil"
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  "CompanyName": "White Clover Markets",
  "Address": "305 - 14th Ave. S. Suite 3B",
  "Country": "USA"
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    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,  
rue du Commerce',  
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',  
Freight: 41.34, Verified: !0  
  },  
  {  
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new  
Date(8368506e5),  
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:  
'Boulevard Tirou, 255',  
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',  
Freight: 51.3, Verified: !0  
  },  
  {  
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new  
Date(836937e6),  
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:  
'Rua do Paço, 67',
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    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
    Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
    Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
    Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
    'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
    'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
    Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
    6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
    Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
    Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
    ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
    Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
    Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
    'Mehrheimerstr. 369',

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        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]];
export const customerData: Object[] = [
  {
    "CustomerID": "ALFKI",
    "ContactName": "Maria ",
    "CompanyName": "Alfreds Futterkiste",
    "Address": "Obere Str. 57",
    "Country": "Germany"
  },
  {
    "CustomerID": "ANATR",
    "ContactName": "Ana Trujillo",
    "CompanyName": "Ana Trujillo Emparedados y helados",
    "Address": "Avda. de la Constitución 2222",
    "Country": "Mexico"
  },
  {
    "CustomerID": "ANTON",
    "ContactName": "Antonio Moreno",
    "CompanyName": "Antonio Moreno Taquería",
    "Address": "Mataderos 2312",
    "Country": "Mexico"
  },
  {
    "CustomerID": "AROUT",
    "ContactName": "Thomas Hardy",
    "CompanyName": "Around the Horn",
    "Address": "120 Hanover Sq.",
    "Country": "UK"
  },
  {
    "CustomerID": "BERGS",
    "ContactName": "Christina Berglund",
    "CompanyName": "Berglunds snabbköp",
    "Address": "Berguvsvägen 8",
    "Country": "Sweden"
  },
  {
    "CustomerID": "BLAUS",

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    "ContactName": "Hanna Moos",
    "CompanyName": "Blauer See Delikatessen",
    "Address": "Forsterstr. 57",
    "Country": "Germany"
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  {
    "CustomerID": "BLONP",
    "ContactName": "Frédérique Citeaux",
    "CompanyName": "Blondesddsl père et fils",
    "Address": "24, place Kléber",
    "Country": "France"
  },
  {
    "CustomerID": "BOLID",
    "ContactName": "Martín Sommer",
    "CompanyName": "Bólido Comidas preparadas",
    "Address": "C/ Araquil, 67",
    "Country": "Spain"
  },
  {
    "CustomerID": "BONAP",
    "ContactName": "Laurence Lebihan",
    "CompanyName": "Bon app'",
    "Address": "12, rue des Bouchers",
    "Country": "France"
  },
  {
    "CustomerID": "BOTTM",
    "ContactName": "Elizabeth Lincoln",
    "CompanyName": "Bottom-Dollar Markets",
    "Address": "23 Tsawassen Blvd.",
    "Country": "Canada"
  },
  {
    "CustomerID": "BSBEV",
    "ContactName": "Victoria Ashworth",
    "CompanyName": "B's Beverages",
    "Address": "Fauntleroy Circus",
    "Country": "UK"
  },
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    "CustomerID": "CACTU",
    "ContactName": "Patricio Simpson",
    "CompanyName": "Cactus Comidas para llevar",
    "Address": "Cerrito 333",
    "Country": "Argentina"
  },
  {
    "CustomerID": "CENTC",
    "ContactName": "Francisco Chang",
    "CompanyName": "Centro comercial Moctezuma",
    "Address": "Sierras de Granada 9993",
    "Country": "Mexico"
  },
  {
    "CustomerID": "CHOPS",
    "ContactName": "Yang Wang",
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    "CompanyName": "Chop-suey Chinese",
    "Address": "Hauptstr. 29",
    "Country": "Switzerland"
  },
  {
    "CustomerID": "COMMI",
    "ContactName": "Pedro Afonso",
    "CompanyName": "Comércio Mineiro",
    "Address": "Av. dos Lusíadas, 23",
    "Country": "Brazil"
  },
  {
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    "ContactName": "Elizabeth Brown",
    "CompanyName": "Consolidated Holdings",
    "Address": "Berkeley Gardens 12 Brewery",
    "Country": "UK"
  },
  {
    "CustomerID": "DRACD",
    "ContactName": "Sven Ottlieb",
    "CompanyName": "Drachenblut Delikatessen",
    "Address": "Walserweg 21",
    "Country": "Germany"
  },
  {
    "CustomerID": "DUMON",
    "ContactName": "Janine Labrune",
    "CompanyName": "Du monde entier",
    "Address": "67, rue des Cinquante Otages",
    "Country": "France"
  },
  {
    "CustomerID": "EASTC",
    "ContactName": "Ann Devon",
    "CompanyName": "Eastern Connection",
    "Address": "35 King George",
    "Country": "UK"
  },
  {
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    "ContactName": "Roland Mendel",
    "CompanyName": "Ernst Handel",
    "Address": "Kirchgasse 6",
    "Country": "Austria"
  },
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    "ContactName": "Aria Cruz",
    "CompanyName": "Familia Arquibaldo",
    "Address": "Rua Orós, 92",
    "Country": "Brazil"
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  {
    "CustomerID": "FISSA",
    "ContactName": "Diego Roel",
    "CompanyName": "FISSA Fabrica Inter. Salchichas S.A.",
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      "Country": "Spain"
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    {
      "CustomerID": "FOLIG",
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      "CompanyName": "Folies gourmandes",
      "Address": "184, chaussée de Tournai",
      "Country": "France"
    },
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      "CustomerID": "FOLKO",
      "ContactName": "Maria Larsson",
      "CompanyName": "Folk och få HB",
      "Address": "Åkergatan 24",
      "Country": "Sweden"
    },
    {
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      "ContactName": "Peter Franken",
      "CompanyName": "Frankenversand",
      "Address": "Berliner Platz 43",
      "Country": "Germany"
    },
    {
      "CustomerID": "FRANR",
      "ContactName": "Carine Schmitt",
      "CompanyName": "France restauration",
      "Address": "54, rue Royale",
      "Country": "France"
    },
    {
      "CustomerID": "FRANS",
      "ContactName": "Paolo Accorti",
      "CompanyName": "Franchi S.p.A.",
      "Address": "Via Monte Bianco 34",
      "Country": "Italy"
    },
    {
      "CustomerID": "FURIB",
      "ContactName": "Lino Rodriguez",
      "CompanyName": "Furia Bacalhau e Frutos do Mar",
      "Address": "Jardim das rosas n. 32",
      "Country": "Portugal"
    },
    {
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      "ContactName": "Eduardo Saavedra",
      "CompanyName": "Galería del gastrónomo",
      "Address": "Rambla de Cataluña, 23",
      "Country": "Spain"
    },
    {
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      "ContactName": "José Pedro Freyre",
      "CompanyName": "Godos Cocina Típica",
      "Address": "C/ Romero, 33",
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  },
  {
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    "CompanyName": "Gourmet Lanchonetes",
    "Address": "Av. Brasil, 442",
    "Country": "Brazil"
  },
  {
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    "ContactName": "Howard Snyder",
    "CompanyName": "Great Lakes Food Market",
    "Address": "2732 Baker Blvd.",
    "Country": "USA"
  },
  {
    "CustomerID": "GROSR",
    "ContactName": "Manuel Pereira",
    "CompanyName": "GROSELLA-Restaurante",
    "Address": "5ª Ave. Los Palos Grandes",
    "Country": "Venezuela"
  },
  {
    "CustomerID": "HANAR",
    "ContactName": "Mario Pontes",
    "CompanyName": "Hanari Carnes",
    "Address": "Rua do Paço, 67",
    "Country": "Brazil"
  },
  {
    "CustomerID": "HILAA",
    "ContactName": "Carlos Hernández",
    "CompanyName": "HILARION-Abastos",
    "Address": "Carrera 22 con Ave. Carlos Soublette #8-35",
    "Country": "Venezuela"
  },
  {
    "CustomerID": "HUNGC",
    "ContactName": "Yoshi Latimer",
    "CompanyName": "Hungry Coyote Import Store",
    "Address": "City Center Plaza 516 Main St.",
    "Country": "USA"
  },
  {
    "CustomerID": "HUNGO",
    "ContactName": "Patricia McKenna",
    "CompanyName": "Hungry Owl All-Night Grocers",
    "Address": "8 Johnstown Road",
    "Country": "Ireland"
  },
  {
    "CustomerID": "ISLAT",
    "ContactName": "Helen Bennett",
    "CompanyName": "Island Trading",
    "Address": "Garden House Crowther Way",
    "Country": "UK"
  }
]
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      "CustomerID": "KOENE",
      "ContactName": "Philip Cramer",
      "CompanyName": "Königlich Essen",
      "Address": "Maubelstr. 90",
      "Country": "Germany"
    },
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      "ContactName": "Daniel Tonini",
      "CompanyName": "La corne d'abondance",
      "Address": "67, avenue de l'Europe",
      "Country": "France"
    },
    {
      "CustomerID": "LAMAI",
      "ContactName": "Annette Roulet",
      "CompanyName": "La maison d'Asie",
      "Address": "1 rue Alsace-Lorraine",
      "Country": "France"
    },
    {
      "CustomerID": "LAUGB",
      "ContactName": "Yoshi Tannamuri",
      "CompanyName": "Laughing Bacchus Wine Cellars",
      "Address": "1900 Oak St.",
      "Country": "Canada"
    },
    {
      "CustomerID": "LAZYK",
      "ContactName": "John Steel",
      "CompanyName": "Lazy K Kountry Store",
      "Address": "12 Orchestra Terrace",
      "Country": "USA"
    },
    {
      "CustomerID": "LEHMS",
      "ContactName": "Renate Messner",
      "CompanyName": "Lehmanns Marktstand",
      "Address": "Magazinweg 7",
      "Country": "Germany"
    },
    {
      "CustomerID": "LETSS",
      "ContactName": "Jaime Yorres",
      "CompanyName": "Let's Stop N Shop",
      "Address": "87 Polk St. Suite 5",
      "Country": "USA"
    },
    {
      "CustomerID": "LILAS",
      "ContactName": "Carlos González",
      "CompanyName": "LILA-Supermercado",
      "Address": "Carrera 52 con Ave. Bolívar #65-98 Llano Largo",
      "Country": "Venezuela"
    }
  ],
```

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{
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  "ContactName": "Felipe Izquierdo",
  "CompanyName": "LINO-Delicateses",
  "Address": "Ave. 5 de Mayo Porlamar",
  "Country": "Venezuela"
},
{
  "CustomerID": "LONEP",
  "ContactName": "Fran Wilson",
  "CompanyName": "Lonesome Pine Restaurant",
  "Address": "89 Chiaroscuro Rd.",
  "Country": "USA"
},
{
  "CustomerID": "MAGAA",
  "ContactName": "Giovanni Rovelli",
  "CompanyName": "Magazzini Alimentari Riuniti",
  "Address": "Via Ludovico il Moro 22",
  "Country": "Italy"
},
{
  "CustomerID": "MAISD",
  "ContactName": "Catherine Dewey",
  "CompanyName": "Maison Dewey",
  "Address": "Rue Joseph-Bens 532",
  "Country": "Belgium"
},
{
  "CustomerID": "MEREP",
  "ContactName": "Jean Fresnière",
  "CompanyName": "Mère Paillarde",
  "Address": "43 rue St. Laurent",
  "Country": "Canada"
},
{
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  "ContactName": "Alexander Feuer",
  "CompanyName": "Morgenstern Gesundkost",
  "Address": "Heerstr. 22",
  "Country": "Germany"
},
{
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  "ContactName": "Simon Crowther",
  "CompanyName": "North/South",
  "Address": "South House 300 Queensbridge",
  "Country": "UK"
},
{
  "CustomerID": "OCEAN",
  "ContactName": "Yvonne Moncada",
  "CompanyName": "Océano Atlántico Ltda.",
  "Address": "Ing. Gustavo Moncada 8585 Piso 20-A",
  "Country": "Argentina"
},
{
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    "CompanyName": "Old World Delicatessen",
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    "Country": "USA"
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    "ContactName": "Henriette Pfalzheim",
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    "Address": "Mehrheimerstr. 369",
    "Country": "Germany"
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    "ContactName": "Marie Bertrand",
    "CompanyName": "Paris spécialités",
    "Address": "265, boulevard Charonne",
    "Country": "France"
  },
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    "ContactName": "Guillermo Fernández",
    "CompanyName": "Pericles Comidas clásicas",
    "Address": "Calle Dr. Jorge Cash 321",
    "Country": "Mexico"
  },
  {
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    "ContactName": "Georg Pipps",
    "CompanyName": "Piccolo und mehr",
    "Address": "Geislweg 14",
    "Country": "Austria"
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    "ContactName": "Isabel de Castro",
    "CompanyName": "Princesa Isabel Vinhos",
    "Address": "Estrada da saúde n. 58",
    "Country": "Portugal"
  },
  {
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    "ContactName": "Bernardo Batista",
    "CompanyName": "Que Delícia",
    "Address": "Rua da Panificadora, 12",
    "Country": "Brazil"
  },
  {
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    "ContactName": "Lúcia Carvalho",
    "CompanyName": "Queen Cozinha",
    "Address": "Alameda dos Canários, 891",
    "Country": "Brazil"
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    "CompanyName": "QUICK-Stop",
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    "Country": "Germany"
  },
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    "ContactName": "Sergio Gutiérrez",
    "CompanyName": "Rancho grande",
    "Address": "Av. del Libertador 900",
    "Country": "Argentina"
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  {
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    "ContactName": "Paula Wilson",
    "CompanyName": "Rattlesnake Canyon Grocery",
    "Address": "2817 Milton Dr.",
    "Country": "USA"
  },
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    "ContactName": "Maurizio Moroni",
    "CompanyName": "Reggiani Caseifici",
    "Address": "Strada Provinciale 124",
    "Country": "Italy"
  },
  {
    "CustomerID": "RICAR",
    "ContactName": "Janete Limeira",
    "CompanyName": "Ricardo Adocicados",
    "Address": "Av. Copacabana, 267",
    "Country": "Brazil"
  },
  {
    "CustomerID": "RICSU",
    "ContactName": "Michael Holz",
    "CompanyName": "Richter Supermarkt",
    "Address": "Grenzacherweg 237",
    "Country": "Switzerland"
  },
  {
    "CustomerID": "ROMEY",
    "ContactName": "Alejandra Camino",
    "CompanyName": "Romero y tomillo",
    "Address": "Gran Vía, 1",
    "Country": "Spain"
  },
  {
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    "ContactName": "Jonas Bergulfsen",
    "CompanyName": "Santé Gourmet",
    "Address": "Erling Skakkes gate 78",
    "Country": "Norway"
  },
  {
    "CustomerID": "SAVEA",
    "ContactName": "Jose Pavarotti",
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  },
  {
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    "CompanyName": "Seven Seas Imports",
    "Address": "90 Wadhurst Rd.",
    "Country": "UK"
  },
  {
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    "ContactName": "Jytte Petersen",
    "CompanyName": "Simons bistro",
    "Address": "Vinbæltet 34",
    "Country": "Denmark"
  },
  {
    "CustomerID": "SPECB",
    "ContactName": "Dominique Perrier",
    "CompanyName": "Spécialités du monde",
    "Address": "25, rue Lauriston",
    "Country": "France"
  },
  {
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    "ContactName": "Art Braunschweiger",
    "CompanyName": "Split Rail Beer & Ale",
    "Address": "P.O. Box 555",
    "Country": "USA"
  },
  {
    "CustomerID": "SUPRD",
    "ContactName": "Pascale Cartrain",
    "CompanyName": "Suprêmes délices",
    "Address": "Boulevard Tirou, 255",
    "Country": "Belgium"
  },
  {
    "CustomerID": "THEBI",
    "ContactName": "Liz Nixon",
    "CompanyName": "The Big Cheese",
    "Address": "89 Jefferson Way Suite 2",
    "Country": "USA"
  },
  {
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    "ContactName": "Liu Wong",
    "CompanyName": "The Cracker Box",
    "Address": "55 Grizzly Peak Rd.",
    "Country": "USA"
  },
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    "CompanyName": "Toms Spezialitäten",
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    "Address": "Avda. Azteca 123",
    "Country": "Mexico"
  },
  {
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    "ContactName": "Anabela Domingues",
    "CompanyName": "Tradição Hipermercados",
    "Address": "Av. Inês de Castro, 414",
    "Country": "Brazil"
  },
  {
    "CustomerID": "TRAIH",
    "ContactName": "Helvetius Nagy",
    "CompanyName": "Trail's Head Gourmet Provisioners",
    "Address": "722 DaVinci Blvd.",
    "Country": "USA"
  },
  {
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    "ContactName": "Palle Ibsen",
    "CompanyName": "Vaffeljernet",
    "Address": "Smagsloget 45",
    "Country": "Denmark"
  },
  {
    "CustomerID": "VICTE",
    "ContactName": "Mary Saveley",
    "CompanyName": "Victuailles en stock",
    "Address": "2, rue du Commerce",
    "Country": "France"
  },
  {
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    "ContactName": "Paul Henriot",
    "CompanyName": "Vins et alcools Chevalier",
    "Address": "59 rue de l'Abbaye",
    "Country": "France"
  },
  {
    "CustomerID": "WANDK",
    "ContactName": "Rita Müller",
    "CompanyName": "Die Wandernde Kuh",
    "Address": "Adenauerallee 900",
    "Country": "Germany"
  },
  {
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    "ContactName": "Pirkko Koskitalo",
    "CompanyName": "Wartian Herkku",
    "Address": "Torikatu 38",
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    "Country": "Finland"
  },
  {
    "CustomerID": "WELLI",
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    "CompanyName": "Wellington Importadora",
    "Address": "Rua do Mercado, 12",
    "Country": "Brazil"
  },
  {
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    "ContactName": "Karl Jablonski",
    "CompanyName": "White Clover Markets",
    "Address": "305 - 14th Ave. S. Suite 3B",
    "Country": "USA"
  },
  {
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    "ContactName": "Matti Karttunen",
    "CompanyName": "Wilman Kala",
    "Address": "Keskuskatu 45",
    "Country": "Finland"
  },
  {
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    "ContactName": "Zbyszek Piestrzeniewicz",
    "CompanyName": "Wolski Zajazd",
    "Address": "ul. Filtrowa 68",
    "Country": "Poland"
  }
];

```

Make sure to inject the **ForeignKey** module in the grid to ensure its availability throughout your application.

Sort foreign key column based on text for remote data

In the case of remote data in the grid, the sorting operation will be performed based on the [foreignKeyField](#) property of the column. The `foreignKeyField` property should be defined in the column definition with the corresponding foreign key field name for each row. The grid will send a request to the server-side with the `foreignKeyField` name, and the server-side should handle the sorting operation and return the sorted data to the grid.

```
`typescript
```

```

import { DataManager, ODataV4Adaptor } from '@syncfusion/ej2-data';
import { ColumnDirective, ColumnsDirective, ForeignKey, GridComponent, Inject, Sort } from '@syncfusion/ej2-react-grids';
import * as React from 'react';

function App() {
  const data = new DataManager({
    adaptor: new ODataV4Adaptor,

```

```

url: '/OData/Items'
});
const employeeData = new DataManager({
  adaptor: new ODataV4Adaptor,
  url: '/OData/Brands'
});
return <GridComponent dataSource={data} height={315}>
  <ColumnsDirective>
    <ColumnDirective field='OrderID' headerText='Order ID' width='100' textAlign="Right" />
    <ColumnDirective field='EmployeeID' foreignKeyValue='FirstName' foreignKeyField='EmployeeID'
      dataSource={employeeData} headerText='Employee Name' width='150' />
    <ColumnDirective field='Freight' headerText='Freight' width='80' textAlign="Right" format='C2' />
    <ColumnDirective field='ShipCity' headerText='Ship City' width='100' />
  </ColumnsDirective>
  <Inject services={[ForeignKey, Sort]} />
</GridComponent>
};
export default App;
`

```

The following code example describes the handling of sorting operation at the server side.

```

`cs
public class ItemsController : ODataController
{
  [EnableQuery]
  public IQueryable<Item> Get()
  {
    List<Item> GridData =
      JsonConvert.DeserializeObject<Item[]>(Properties.Resources.ItemsJson).AsQueryable().ToList();
    List<Brand> empData =
      JsonConvert.DeserializeObject<Brand[]>(Properties.Resources.BrandsJson).AsQueryable().ToList();
    let queryString = HttpContext.Current.Request.QueryString;
    let allUrlKeyValues = ControllerContext.Request.GetQueryNameValuePairs();
    string key = allUrlKeyValues.LastOrDefault(x => x.Key == "$orderby").Value;
    if (key != null)

```

```
{
  if (key == "EmployeeID") {
    GridData = SortFor(key); //Only for foreignKey Column ascending
  }
  else if(key == "EmployeeID desc") {
    GridData = SortFor(key); //Only for foreignKey Column descending
  }
}

let count = GridData.Count();
let data = GridData.AsQueryable();
return data;
}

public List<Item> SortFor(String Sorted)
{
  List<Item> GridData =
  JsonConvert.DeserializeObject<Item[]>(Properties.Resources.ItemsJson).AsQueryable().ToList();

  List<Brand> empData =
  JsonConvert.DeserializeObject<Brand[]>(Properties.Resources.BrandsJson).AsQueryable().ToList();

  if (Sorted == "EmployeeID") //check whether ascending or descending
    empData = empData.OrderBy(e => e.FirstName).ToList();
  else if(Sorted == "EmployeeID desc")
    empData = empData.OrderByDescending(e => e.FirstName).ToList();

  List<Item> or = new List<Item>();
  for (int i = 0; i < empData.Count(); i++) {
    //Select the Field matching records
    IEnumerable<Item> list = GridData.Where(pred => pred.EmployeeID ==
    empData[i].EmployeeID).ToList();
    or.AddRange(list);
  }
  return or;
}
}
```

Perform sorting based on its culture

Perform sorting based on culture in the Grid can be achieved by utilizing the [locale](#) property. By setting the `locale` property to the desired culture code, you enable sorting based on that specific culture. This allows you to apply locale-specific sorting rules and ensure accurate ordering for different languages and regions.

In the following example, sorting is performed based on the “ar” locale using the [sortComparer](#) property.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Sort }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
import { loadCldr, setCulture, setCurrencyCode } from '@syncfusion/ej2-base';
import * as cagregorian from './ca-gregorian.json';
import * as currencies from './currencies.json';
import * as numbers from './numbers.json';
import * as timeZoneNames from './timeZoneNames.json';
import * as numberingSystems from './numberingSystems.json';
function App() {
  const formatOption = { type: 'date', format: 'yyyy-MMM-dd' };
  const locale = 'ar';
  setCulture('ar');
  setCurrencyCode('QAR');
  loadCldr(
    cagregorian,
    currencies,
    numbers,
    timeZoneNames,
    numberingSystems
  );
  const sortComparer = (reference, comparer, sortOrder) => {
    const referenceDate = new Date(reference);
    const comparerDate = new Date(comparer);
    if (typeof reference === 'number' && typeof comparer === 'number') {
      // Numeric column sorting
      return sortOrder === 'Ascending' ? comparer - reference : reference -
comparer;
    } else if (!isNaN(referenceDate.getTime()) &&
!isNaN(comparerDate.getTime())) {
      // Date column sorting
      return sortOrder === 'Ascending' ? comparerDate.getTime() -
referenceDate.getTime() : referenceDate.getTime() - comparerDate.getTime();
    }
    else {
      // Default sorting for other types
      const intlCollator = new Intl.Collator(undefined, { sensitivity:
'variant', usage: 'sort' });
      const comparisonResult = intlCollator.compare(reference, comparer);
      return sortOrder === 'Ascending' ? -comparisonResult :
comparisonResult;
    }
  };
};
```



```

    return <GridComponent dataSource={data} allowSorting={true} locale={locale}
height={300}>
    <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" sortComparer={sortComparer}/>
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' sortComparer={sortComparer}/>
        <ColumnDirective field='Freight' headerText='Freight' width='100'
textAlign="Right" format='C2' sortComparer={sortComparer}/>
        <ColumnDirective field='OrderDate' headerText='Order Date' width='100'
format={formatOption} sortComparer={sortComparer}/>
    </ColumnsDirective>
    <Inject services={[Sort]} />
</GridComponent>
};
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Sort }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
import { loadCldr, setCulture, setCurrencyCode } from '@syncfusion/ej2-base';
import * as cagregorian from './ca-gregorian.json';
import * as currencies from './currencies.json';
import * as numbers from './numbers.json';
import * as timeZoneNames from './timeZoneNames.json';
import * as numberingSystems from './numberingSystems.json';
function App() {
    const formatOption: object = { type: 'date', format: 'yyyy-MMM-dd' };
    const locale: string = 'ar';
    setCulture('ar');
    setCurrencyCode('QAR');
    loadCldr(
        cagregorian,
        currencies,
        numbers,
        timeZoneNames,
        numberingSystems
    );
    const sortComparer = (reference: string, comparer: string, sortOrder:
string) => {
        const referenceDate = new Date(reference);
        const comparerDate = new Date(comparer);
        if (typeof reference === 'number' && typeof comparer === 'number') {
            // Numeric column sorting
            return sortOrder === 'Ascending' ? comparer - reference : reference -
comparer;
        } else if (!isNaN(referenceDate.getTime()) &&
!isNaN(comparerDate.getTime())) {
            // Date column sorting
            return sortOrder === 'Ascending' ? comparerDate.getTime() -
referenceDate.getTime() : referenceDate.getTime() - comparerDate.getTime();
        }
        else {

```

```

    // Default sorting for other types
    const intlCollator = new Intl.Collator(undefined, { sensitivity:
'variant', usage: 'sort' });
    const comparisonResult = intlCollator.compare(reference, comparer);
    return sortOrder === 'Ascending' ? -comparisonResult :
comparisonResult;
  }
};
return <GridComponent dataSource={data} allowSorting={true} locale={locale}
height={300}>
  <ColumnsDirective>
    <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" sortComparer={sortComparer}/>
    <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' sortComparer={sortComparer}/>
    <ColumnDirective field='Freight' headerText='Freight' width='100'
textAlign="Right" format='C2' sortComparer={sortComparer}/>
    <ColumnDirective field='OrderDate' headerText='Order Date' width='100'
format={formatOption} sortComparer={sortComparer}/>
  </ColumnsDirective>
  <Inject services={[Sort]} />
</GridComponent>
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),

```

```

        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),

```

```

        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
      },
      {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',

```

```

        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ];

```

How to customize sort icon

To customize the sort icon in the Grid, you can override the default grid classes **.e-icon-ascending** and **.e-icon-descending** with custom content using CSS. Simply specify the desired icons or symbols using the **content** property as mentioned below

```
`css
.e-grid .e-icon-ascending::before {
content: '\e306';
}
.e-grid .e-icon-descending::before {
content: '\e304';
}
`
```

In the below sample, grid is rendered with a customized sort icon.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Sort }
  from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const sortingOptions = {
    columns: [{ field: 'CustomerID', direction: 'Descending' }, { field:
'ShipCity', direction: 'Ascending' }]
  };
  return <GridComponent dataSource={data} allowSorting={true}
sortSettings={sortingOptions} height={315}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
      <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
textAlign="Right" />
      <ColumnDirective field='ShipName' headerText='Ship Name' width='100' />
    </ColumnsDirective>
    <Inject services={[Sort]} />
  </GridComponent>
};
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Sort,
SortSettingsModel } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const sortingOptions: SortSettingsModel = {
```

```

    columns: [{ field: 'CustomerID', direction: 'Descending' }, { field:
'ShipCity', direction: 'Ascending' }]
  };
  return <GridComponent dataSource={data} allowSorting={true}
sortSettings={sortingOptions} height={315}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
      <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
textAlign="Right" />
      <ColumnDirective field='ShipName' headerText='Ship Name' width='100' />
    </ColumnsDirective>
    <Inject services={[Sort]} />
  </GridComponent>
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {

```



```

    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {

```

```

    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),

```

```

      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
      Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
      'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
      Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
      'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
      Date(8374554e5),

```

```

      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
      'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
      'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
      Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
      Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
      'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
      Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }
  ]];

```

Sort columns externally

The Grid component in Syncfusion's React suite allows you to customize the sorting of columns and provides flexibility in sorting based on external interactions. You can sort columns, remove a sort column, and clear sorting using an external button click.

Add sort columns

To sort a column externally, you can utilize the [sortColumn](#) method with parameters **columnName**, **direction** and **isMultiSort** provided by the Grid component. This method allows you to programmatically sort a specific column based on your requirements.

The following example demonstrates how to add sort columns to a grid. It utilizes the **DropDownList** component to select the column and sort direction. When an external button is clicked, the [sortColumn](#) method is called with the specified **columnName**, **direction**, and **isMultiSort** parameters.

APP.JSX

```
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Sort,
SortDirection, SortSettingsModel } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  let dropColumn;
  let dropdirection;
  const columns = [
    { text: 'Order ID', value: 'OrderID' },
    { text: 'Customer ID', value: 'CustomerID' },
    { text: 'Freight', value: 'Freight' },
  ];
  const direction = [
    { text: 'Ascending', value: 'Ascending' },
    { text: 'Descending', value: 'Descending' },
  ];
  const field = { text: 'text', value: 'value' };
  const sortingOptions = {
    columns: [{ field: 'ShipName', direction: 'Ascending' }]
  };
  const addSortColumn = () => {
    grid.sortColumn(dropColumn.value, dropdirection.value, true);
  }
  return (
    <div>
      <div>
        <label style={{ padding: "30px 20px 0 0" }}> Column name :</label>
        <DropDownListComponent ref={dc => dropColumn = dc} index={0}
width='120' dataSource={columns}
fields={field}></DropDownListComponent></div>
        <div>
          <label style={{ padding: "30px 20px 0 0" }}> Sort direction :</label>
          <DropDownListComponent ref={dd => dropdirection = dd} index={0}
width='120' dataSource={direction}
fields={field}></DropDownListComponent></div>
        <ButtonComponent style={{ marginTop: "10px" }} cssClass='e-outline'
onClick={addSortColumn}>Add Sort Column</ButtonComponent>
        <GridComponent ref={g => grid = g} dataSource={data} allowSorting={true}
sortSettings={sortingOptions} height={315}>
          <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
            <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
            <ColumnDirective field='Freight' headerText='Freight' width='100'
textAlign="Right" format='C'/>
            <ColumnDirective field='ShipName' headerText='Ship Name' width='100'
/>
          </ColumnsDirective>
        </div>
      </div>
    </div>
  );
}
```

```

    <Inject services={[Sort]} />
  </GridComponent></div>
);
export default App;

```

APP.TSX

```

import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Sort,
SortDirection, SortSettingsModel } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid: GridComponent | null;
  let dropColumn: DropDownListComponent | null;
  let dropdirection: DropDownListComponent | null;
  const columns: { [key: string]: Object; }[] = [
    { text: 'Order ID', value: 'OrderID' },
    { text: 'Customer ID', value: 'CustomerID' },
    { text: 'Freight', value: 'Freight' },
  ];
  const direction: { [key: string]: Object; }[] = [
    { text: 'Ascending', value: 'Ascending' },
    { text: 'Descending', value: 'Descending' },
  ];
  const field: Object = { text: 'text', value: 'value' };
  const sortingOptions: SortSettingsModel = {
    columns: [{ field: 'ShipName', direction: 'Ascending' }]
  };
  const addSortColumn = () => {
    (grid as GridComponent).sortColumn(((dropColumn as
DropDownListComponent).value as string), ((dropdirection as
DropDownListComponent).value as SortDirection), true);
  }
  return (<div>
    <div>
      <label style={{ padding: "30px 20px 0 0" }}> Column name :</label>
      <DropDownListComponent ref={dc => dropColumn = dc} index={0}
width='120' dataSource={columns}>
    </DropDownListComponent></div>
    <div>
      <label style={{ padding: "30px 20px 0 0" }}> Sort direction :</label>
      <DropDownListComponent ref={dd => dropdirection = dd} index={0}
width='120' dataSource={direction}>
    </DropDownListComponent></div>
    <ButtonComponent style={{ marginTop: "10px" }} cssClass='e-outline'
onClick={addSortColumn}>Add Sort Column</ButtonComponent>
    <GridComponent ref={g => grid = g} dataSource={data} allowSorting={true}
sortSettings={sortingOptions} height={315}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />

```

```

        <ColumnDirective field='Freight' headerText='Freight' width='100'
format='C' textAlign="Right" />
        <ColumnDirective field='ShipName' headerText='Ship Name' width='100'
/>
    </ColumnsDirective>
    <Inject services={[Sort]} />
</GridComponent></div>
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),

```

```

    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
    Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
    Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
    Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
    'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
    'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
    Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
    6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
    Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
    Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
    ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
    Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
    Date(8377146e5),

```



```

      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
  ]
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]
  };

```

Remove sort columns

To remove a sort column externally, you can use the `removeSortColumn` method provided by the Grid component. This method allows you to remove the sorting applied to a specific column.

The following example demonstrates how to remove sort columns. It utilizes the **DropDownList** component to select the column. When an external button is clicked, the `removeSortColumn` method is called to remove the selected sort column.

APP.JSX

```

import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Sort,
SortSettingsModel } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  let dropColumn;
  const columns = [

```

```

    { text: 'Order ID', value: 'OrderID' },
    { text: 'Customer ID', value: 'CustomerID' },
    { text: 'ShipCity', value: 'ShipCity' },
    { text: 'ShipName', value: 'ShipName' }
  ];
  const field = { text: 'text', value: 'value' };
  const sortingOptions = {
    columns: [{ field: 'CustomerID', direction: 'Ascending' }, { field:
'ShipName', direction: 'Descending' }]
  };
  const addSortColumn = () => {
    grid.removeSortColumn(dropColumn.value);
  }
  return (<div>
    <div>
      <label style={{ padding: "30px 20px 0 0" }}> Column name :</label>
      <DropDownListComponent ref={dc => dropColumn = dc} index={0}
width='120' dataSource={columns}
fields={field}></DropDownListComponent></div>
      <ButtonComponent style={{ marginTop: "10px" }} cssClass='e-outline'
onClick={addSortColumn}>Remove Sort Column</ButtonComponent>
      <GridComponent ref={g => grid = g} dataSource={data} allowSorting={true}
sortSettings={sortingOptions} height={315}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
          <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
textAlign="Right" />
          <ColumnDirective field='ShipName' headerText='Ship Name' width='100'
/>>
        </ColumnsDirective>
        <Inject services={[Sort]} />
      </GridComponent></div>
    </div>
  );
};
export default App;

```

APP.TSX

```

import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Sort,
SortSettingsModel } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid: GridComponent | null;
  let dropColumn: DropDownListComponent | null;
  const columns: { [key: string]: Object; }[] = [
    { text: 'Order ID', value: 'OrderID' },
    { text: 'Customer ID', value: 'CustomerID' },
    { text: 'ShipCity', value: 'ShipCity' },
    { text: 'ShipName', value: 'ShipName' }
  ];
  const field: Object = { text: 'text', value: 'value' };

```

```

const sortingOptions: SortSettingsModel = {
  columns: [{ field: 'CustomerID', direction: 'Ascending' }, { field:
'ShipName', direction: 'Descending' }]
};
const removeSortColumn = () => {
  (grid as GridComponent).removeSortColumn(((dropColumn as
DropDownListComponent).value as string));
}
return (<div>
  <div>
    <label style={{ padding: "30px 20px 0 0" }}> Column name :</label>
    <DropDownListComponent ref={dc => dropColumn = dc} index={0}
width='120' dataSource={columns}
fields={field}></DropDownListComponent></div>
    <ButtonComponent style={{ marginTop: "10px" }} cssClass='e-outline'
onClick={removeSortColumn}>Remove Sort Column</ButtonComponent>
    <GridComponent ref={g => grid = g} dataSource={data} allowSorting={true}
sortSettings={sortingOptions} height={315}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
        <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
textAlign="Right" />
        <ColumnDirective field='ShipName' headerText='Ship Name' width='100'
/>
      </ColumnsDirective>
      <Inject services={[Sort]} />
    </GridComponent></div>)
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),

```

```

      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
      Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
      'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
      Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
      'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
      Date(8374554e5),

```

```

      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
      'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
      'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
      Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
      Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
      'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
      Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }
  ]
};

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
      },
      {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
      },
      {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',

```



```

    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
    Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
    Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
    'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
    'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
    Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
    6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
    Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
    Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
    ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
    Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
    Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
    'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
    Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
    Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
    Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
    Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
    ShipAddress: '2817 Milton Dr.',

```

```

        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
  ];

```

Clear sorting

To clear the sorting on an external button click, you can use the [clearSorting](#) method provided by the Grid component. This method clears the sorting applied to all columns in the grid.

The following example demonstrates how to clear the sorting using `clearSorting` method in the external button click.

APP.JSX

```

import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Sort,
SortSettingsModel } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    let grid;
    const sortingOptions = {
        columns: [{ field: 'CustomerID', direction: 'Ascending' }, { field:
'ShipName', direction: 'Descending' }]
    };
    const clearSorting = () => {
        grid.clearSorting();
    }
    return (
        <div>
            <ButtonComponent style={{ marginTop: "10px" }} cssClass='e-outline'
onClick={clearSorting}>Clear Sorting</ButtonComponent>
            <GridComponent ref={g => grid = g} dataSource={data} allowSorting={true}
sortSettings={sortingOptions} height={315}>
                <ColumnsDirective>
                    <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
                    <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
                    <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
textAlign="Right" />
                    <ColumnDirective field='ShipName' headerText='Ship Name' width='100'
/>>
                </ColumnsDirective>
                <Inject services={[Sort]} />
            </GridComponent></div>
        );
    };
export default App;

```

APP.TSX

```

import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Sort,
SortSettingsModel } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {

```

```

let grid: GridComponent | null;
const sortingOptions: SortSettingsModel = {
  columns: [{ field: 'CustomerID', direction: 'Ascending' }, { field:
'ShipName', direction: 'Descending' }]
};
const clearSorting = () => {
  (grid as GridComponent).clearSorting();
}
return (<div>
  <ButtonComponent style={{ marginTop: "10px" }} cssClass='e-outline'
onClick={clearSorting}>Clear Sorting</ButtonComponent>
  <GridComponent ref={g => grid = g} dataSource={data} allowSorting={true}
sortSettings={sortingOptions} height={315}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
      <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
textAlign="Right" />
      <ColumnDirective field='ShipName' headerText='Ship Name' width='100'
/>
    </ColumnsDirective>
    <Inject services={[Sort]} />
  </GridComponent></div>
);
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {

```

```

    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {

```

```

    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),

```

```

        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),

```

```

        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]];

```

Sorting events

The Grid component provides two events that are triggered during the sorting action such as [actionBegin](#) and [actionComplete](#). These events can be used to perform any custom actions before and after the sorting action is completed.

1. **actionBegin:** [actionBegin](#) event is triggered before the sorting action begins. It provides a way to perform any necessary operations before the sorting action takes place. This event provides a parameter that contains the current grid state, including the current sorting column, direction, and data.
2. **actionComplete:** [actionComplete](#) event is triggered after the sorting action is completed. It provides a way to perform any necessary operations after the sorting action has taken place. This event provides a parameter that contains the current grid state, including the sorted data and column information.

The following example demonstrates how the [actionBegin](#) and [actionComplete](#) events work when sorting is performed. The `actionBegin` event is used to cancel the sorting of the OrderID column. The `actionComplete` event is used to display a message.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Sort }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { useState } from 'react';
import { data } from './datasource';
function App() {
  const [message, setMessage] = useState('');
  const actionBegin = (args) => {
    if (args.requestType === 'sorting' && args.columnName === 'OrderID') {
      args.cancel = true;
    }
  }
  const actionComplete = (args) => {
    setMessage(args.requestType + ' action completed for ' + args.columnName + ' column');
  }
  return (
    <div>
      <div style={{ marginLeft: "100px" }}><p style={{ color: "red" }} id="message">{message}</p></div>
      <GridComponent dataSource={data} allowSorting={true} height={315} actionBegin={actionBegin} actionComplete={actionComplete}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='100' textAlign="Right" />
          <ColumnDirective field='CustomerID' headerText='Customer ID' width='100' />
          <ColumnDirective field='ShipCity' headerText='Ship City' width='100' textAlign="Right" />
          <ColumnDirective field='ShipName' headerText='Ship Name' width='100' />
        </ColumnsDirective>
        <Inject services={[Sort]} />
      </GridComponent></div>
    );
};
```



```
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Sort,
SortEventArgs } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { useState } from 'react';
import { data } from './datasource';
function App() {
  const [message, setMessage] = useState('');
  const actionBegin = (args: SortEventArgs) => {
    if (args.requestType === 'sorting' && args.columnName === 'OrderID') {
      args.cancel = true;
    }
  }
  const actionComplete = (args: SortEventArgs) => {
    setMessage(args.requestType + ' action completed for ' + args.columnName
+ ' column');
  }
  return (<div>
    <div style={{ marginLeft: "100px" }}><p style={{ color: "red" }}
id="message">{message}</p></div>
    <GridComponent dataSource={data} allowSorting={true} height={315}
actionBegin={actionBegin} actionComplete={actionComplete}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
        <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
textAlign="Right" />
        <ColumnDirective field='ShipName' headerText='Ship Name' width='100'
/>>
      </ColumnsDirective>
      <Inject services={[Sort]} />
    </GridComponent></div>
  );
  export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
```

```

        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
      },
      {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',

```

```

        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]
  };

```

DATASOURCE.TSX

```
export let data: Object[] = [
```

```

    {
      OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
      ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
      ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
      OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
      ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {

```

```

    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {

```

```

    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
    Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
    ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
    Freight: 48.29, Verified: !0
  }];

```

[args.requestType](#) refers to the current action being performed. For example in sorting, the `args.requestType` value is **sorting**.

See also

- [How to change loading indicator in React Grid](#)

Grouping in React Grid component

The grouping feature in the Syncfusion React Grid allows you to organize data into a hierarchical structure, making it easier to expand and collapse records. You can group the columns by simply dragging and dropping the column header to the group drop area. To enable grouping in the grid, you need to set the [allowGrouping](#) property to **true**. Additionally, you can customize the grouping options using the [groupSettings](#) property.

To use the Grouping feature, need to inject **Group** module in the grid.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Group, Inject }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  return <GridComponent dataSource={data} allowGrouping={true}
  height={267}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='120'
      textAlign="Right"/>
      <ColumnDirective field='CustomerID' headerText='Customer ID'
      width='150' />
      <ColumnDirective field='ShipCity' headerText='Ship City' width='150' />
      <ColumnDirective field='ShipName' headerText='Ship Name' width='150' />
    </ColumnsDirective>
    <Inject services={[Group]} />
  </GridComponent>;
}
;
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Group, Inject }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {

```

```

return <GridComponent dataSource={data} allowGrouping={true} height={267}>
  <ColumnsDirective>
    <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
    <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
    <ColumnDirective field='ShipCity' headerText='Ship City' width='150' />
    <ColumnDirective field='ShipName' headerText='Ship Name' width='150' />
  </ColumnsDirective>
  <Inject services={[Group]} />
</GridComponent >
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  }
]

```

```

    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
  ],

```



```

    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
  ]
};

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),

```

```

        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),

```

```

        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]
};

```

* You can group and ungroup columns in the Grid by using the [groupColumn](#) and [ungroupColumn](#) methods respectively.

* To disable grouping for a specific column, set the [allowGrouping](#) to **false**.

Initial group

To enable initial grouping in the Grid, you can use the [groupSettings](#) property and set the [groupSettings.columns](#) property to an array of column names(field of the column) that you want to group by. This feature is particularly useful when working with large datasets, as it allows you to quickly organize and analyze the data based on specific criteria.

The following example demonstrates how to set an initial grouping for the **CustomerID** and **ShipCity** columns during the initial rendering grid, by using the `groupSettings.columns` property.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Group, Inject }
from '@syncfusion/ej2-react-grids';

```

```
import * as React from 'react';
import { data } from './datasource';
function App() {
  const groupOptions = {
    columns: ['CustomerID', 'ShipCity']
  };
  return <GridComponent dataSource={data} allowGrouping={true}
groupSettings={groupOptions} height={267}>>
  <ColumnsDirective>
    <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right"/>
    <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
    <ColumnDirective field='ShipCity' headerText='Ship City' width='150' />
    <ColumnDirective field='ShipName' headerText='Ship Name' width='150' />
  </ColumnsDirective>
  <Inject services={[Group]} />
</GridComponent>;
}
;
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Group,
GroupSettingsModel, Inject } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const groupOptions: GroupSettingsModel = {
    columns: ['CustomerID', 'ShipCity']
  };
  return <GridComponent dataSource={data} allowGrouping={true}
groupSettings={groupOptions} height={267}>>
  <ColumnsDirective>
    <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
    <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
    <ColumnDirective field='ShipCity' headerText='Ship City' width='150' />
    <ColumnDirective field='ShipName' headerText='Ship Name' width='150' />
  </ColumnsDirective>
  <Inject services={[Group]} />
</GridComponent >
};
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
```

```

        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
      },
      {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
      },
      {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',

```

```

        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
        Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
];

```

```

    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {

```



```

    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

You can group by multiple columns by specifying an array of column names in the columns property of the `groupSettings`.

Prevent grouping for particular column

The Grid component provides the ability to prevent grouping for a particular column. This can be useful when you have certain columns that you do not want to be included in the grouping process. It can be achieved by setting the `allowGrouping` property of the particular `ColumnDirective` to `false`. The following example demonstrates, how to disable grouping for **CustomerID** column.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Group, Inject }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  return <GridComponent dataSource={data} allowGrouping={true}
height={267}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right"/>
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' allowGrouping={false}/>
      <ColumnDirective field='ShipCity' headerText='Ship City' width='150' />
      <ColumnDirective field='ShipName' headerText='Ship Name' width='150' />
    </ColumnsDirective>
    <Inject services={[Group]} />
  </GridComponent>;
}
;
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Group, Inject }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {

```

```

return <GridComponent dataSource={data} allowGrouping={true} height={267}>
  <ColumnsDirective>
    <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
    <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' allowGrouping={false}/>
    <ColumnDirective field='ShipCity' headerText='Ship City' width='150' />
    <ColumnDirective field='ShipName' headerText='Ship Name' width='150' />
  </ColumnsDirective>
  <Inject services={[Group]} />
</GridComponent >
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  }
]

```

```

    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
  ],

```

```

    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
  ]
};

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),

```

```

        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),

```

```

        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]
};

```

Hide drop area

By default, the Grid provides a drop area for grouping columns. This drop area allows you to drag and drop columns to group and ungroup them. However, in some cases, you may want to prevent ungrouping or further grouping a column after initial grouping.

To hide the drop area in the Syncfusion React Grid, you can set the [groupSettings.showDropArea](#) property to **false**.

In the following example, the [EJ2 Toggle Switch Button](#) component is added to hide or show the drop area. When the switch is toggled, the [change](#) event is triggered and the `groupSettings.showDropArea` property of the grid is updated accordingly.

APP.JSX

```

import { ChangeEventArgs, SwitchComponent } from '@syncfusion/ej2-react-
buttons';
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Group,
GroupSettingsModel } from '@syncfusion/ej2-react-grids';

```

```

import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  const groupOptions = {
    columns: ['CustomerID', 'ShipCity'],
    showDropArea: false
  };
  const onSwitchChange = (args) => {
    if (args.checked) {
      grid.groupSettings.showDropArea = true;
    }
    else {
      grid.groupSettings.showDropArea = false;
    }
  }
  return (
    <div><label style={{ padding: "10px 10px" }}>Hide or show drop
    area</label>
    <SwitchComponent change={onSwitchChange}></SwitchComponent>
    <GridComponent ref={g => grid = g} dataSource={data}
    allowGrouping={true} groupSettings={groupOptions} height={315}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='120'
      textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
      width='150' />
      <ColumnDirective field='ShipCity' headerText='Ship City'
      width='150' />
      <ColumnDirective field='ShipName' headerText='Ship Name'
      width='150' />
    </ColumnsDirective>
    <Inject services={[Group]} />
    </GridComponent ></div>
  );
}
export default App;

```

APP.TSX

```

import { ChangeEventArgs, SwitchComponent } from '@syncfusion/ej2-react-
buttons';
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Group,
GroupSettingsModel } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid: GridComponent | null;
  const groupOptions: GroupSettingsModel = {
    columns: ['CustomerID', 'ShipCity'],
    showDropArea: false
  };
  const onSwitchChange = (args: ChangeEventArgs) => {
    if (args.checked) {
      (grid as GridComponent).groupSettings.showDropArea = true;
    }
    else {

```

```

        (grid as GridComponent).groupSettings.showDropArea = false;
    }
}
return (
    <div><label style={{ padding: "10px 10px" }}>Hide or show drop
    area</label>
    <SwitchComponent change={onSwitchChange}></SwitchComponent>
    <GridComponent ref={g => grid = g} dataSource={data}
    allowGrouping={true} groupSettings={groupOptions} height={315}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID' width='120'
            textAlign="Right" />
            <ColumnDirective field='CustomerID' headerText='Customer ID'
            width='150' />
            <ColumnDirective field='ShipCity' headerText='Ship City'
            width='150' />
            <ColumnDirective field='ShipName' headerText='Ship Name'
            width='150' />
        </ColumnsDirective>
        <Inject services={[Group]} />
    </GridComponent ></div>)
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
        Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
    }
]

```



```

        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]
  ];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },

```

```

    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {

```

```

    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

By default, the group drop area will be shown only if there is at least one column available to group.

Show the grouped column

The Syncfusion React Grid has a default behavior where the grouped column is hidden, to provide a cleaner and more focused view of your data. However, if you prefer to show the grouped column in the grid, you can achieve this by setting the [groupSettings.showGroupedColumn](#) property to **true**.

In the following example, the [EJ2 Toggle Switch Button](#) component is added to hide or show the grouped columns. When the switch is toggled, the [change](#) event is triggered and the `groupSettings.showGroupedColumn` property of the grid is updated accordingly.

APP.JSX

```
import { ChangeEventArgs, SwitchComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Group, GroupSettingsModel } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';

function App() {
  let grid;
  const groupOptions = {
    columns: ['CustomerID', 'ShipCity'],
    showGroupedColumn: true
  };
  const onSwitchChange = (args) => {
    if (args.checked) {
      grid.groupSettings.showGroupedColumn = false;
    }
    else {
      grid.groupSettings.showGroupedColumn = true;
    }
  }
  return (
    <div><label style={{ padding: "10px 10px" }}>Hide or show grouped columns</label>
    <SwitchComponent change={onSwitchChange}></SwitchComponent>
    <GridComponent ref={g => grid = g} dataSource={data}
    allowGrouping={true} groupSettings={groupOptions} height={315}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='120'
        textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
        width='150' />
        <ColumnDirective field='ShipCity' headerText='Ship City'
        width='150' />
        <ColumnDirective field='ShipName' headerText='Ship Name'
        width='150' />
      </ColumnsDirective>
      <Inject services={[Group]} />
    </GridComponent ></div>
  );
};
export default App;
```

APP.TSX

```
import { ChangeEventArgs, SwitchComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Group, GroupSettingsModel } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';

function App() {
```

```

let grid: GridComponent | null;
const groupOptions: GroupSettingsModel = {
  columns: ['CustomerID', 'ShipCity'],
  showGroupedColumn: true
};
const onSwitchChange = (args: ChangeEventArgs) => {
  if (args.checked) {
    (grid as GridComponent).groupSettings.showGroupedColumn = false;
  }
  else {
    (grid as GridComponent).groupSettings.showGroupedColumn = true;
  }
}
return (
  <div><label style={{ padding: "10px 10px" }}>Hide or show grouped
column</label>
    <SwitchComponent change={onSwitchChange}></SwitchComponent>
    <GridComponent ref={g => grid = g} dataSource={data}
allowGrouping={true} groupSettings={groupOptions} height={315}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
        <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
        <ColumnDirective field='ShipName' headerText='Ship Name'
width='150' />
      </ColumnsDirective>
      <Inject services={[Group]} />
    </GridComponent ></div>)
);
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),

```

```

      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
      Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
      'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
      Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
      'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
      Date(8374554e5),

```

```

      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
      'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
      'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
      Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
      Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
      'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
      Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }
  ]
};

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',

```



```

        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
      },
      {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
      },
      {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',

```

```

        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }];

```

Reordering on grouped columns

The Syncfusion React Grid allows you to easily reorder the grouped columns by dragging and dropping the grouped header cells in the group drag area. By changing the order of the grouped columns, the corresponding changes are automatically reflected in the grouping hierarchy of the grid. The grid dynamically adjusts the grouping based on the reordered columns in the group drag area. Additionally, you can also drop new columns into specific positions within the group drag area.

To enable this feature, you have to set the [groupSettings.allowReordering](#) property as **true**. This is demonstrated in the sample below.

APP.JSX

```

import { ColumnDirective, ColumnsDirective } from '@syncfusion/ej2-react-grids';
import { GridComponent, Group, Inject } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    let grid;
    const groupOptions = {
        columns: ['CustomerID'],
        allowReordering: true
    };
    return (
        <div>
            <GridComponent dataSource={data} allowGrouping={true}
            groupSettings={groupOptions} height={240} ref={g => grid = g}>
                <ColumnsDirective>
                    <ColumnDirective field='OrderID' headerText='Order ID' width='120'
                    textAlign="Right"/>
                    <ColumnDirective field='CustomerID' headerText='Customer ID'
                    width='150'/>
                    <ColumnDirective field='ShipCity' headerText='Ship City'
                    width='150'/>
                    <ColumnDirective field='ShipName' headerText='Ship Name'
                    width='150'/>
                </ColumnsDirective>
                <Inject services={[Group]}/>
            </GridComponent></div>
        );
    }
}
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective } from '@syncfusion/ej2-react-grids';
import { Grid, GridComponent, Group, GroupSettingsModel, Inject } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {

```

```

let grid: Grid | null;
const groupOptions: GroupSettingsModel = {
  columns: ['CustomerID'],
  allowReordering: true
};
return (<div>
  <GridComponent dataSource={data} allowGrouping={true}
groupSettings={groupOptions}
  height={240} ref={g => grid = g}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
      <ColumnDirective field='ShipCity' headerText='Ship City' width='150'
/>
      <ColumnDirective field='ShipName' headerText='Ship Name' width='150'
/>
    </ColumnsDirective>
    <Inject services={[Group]} />
  </GridComponent ></div>)
);
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]
  ];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },

```

```

    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
  ]
}

```

```

    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

Sort grouped columns in descending order during initial grouping

By default, grouped columns are sorted in ascending order. However, you can sort them in descending order during initial grouping by setting the [field](#) and [direction](#) in the [sortSettings.columns](#) property.

The following example demonstrates how to sort the **CustomerID** column by setting the `sortSettings.columns` property to **Descending** during the initial grouping of the grid.

APP.JSX


```
import { ColumnDirective, ColumnsDirective, GridComponent, Group, Inject,
Sort } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const sortingOptions = {
    columns: [{ field: 'CustomerID', direction: 'Descending' }]
  };
  const groupOptions = {
    columns: ['CustomerID']
  };
  return <GridComponent dataSource={data} allowGrouping={true}
allowSorting={true} height={267} sortSettings={sortingOptions}
groupSettings={groupOptions}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right"/>
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150'/>
      <ColumnDirective field='ShipCity' headerText='Ship City' width='150'/>
      <ColumnDirective field='ShipName' headerText='Ship Name' width='150'/>
    </ColumnsDirective>
    <Inject services={[Group, Sort]}/>
  </GridComponent>;
}
;
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Group, Inject,
Sort } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const sortingOptions = {
    columns: [{ field: 'CustomerID', direction: 'Descending' }]
  };
  const groupOptions = {
    columns: ['CustomerID']
  };
  return <GridComponent dataSource={data} allowGrouping={true}
allowSorting={true} height={267} sortSettings={sortingOptions}
groupSettings={groupOptions}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right"/>
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150'/>
      <ColumnDirective field='ShipCity' headerText='Ship City' width='150'/>
      <ColumnDirective field='ShipName' headerText='Ship Name' width='150'/>
    </ColumnsDirective>
    <Inject services={[Group, Sort]}/>
  </GridComponent >
};
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
```

```

      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),

```

```

      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }
  ];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',

```

```

        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]
  };

```

Group with paging

The Grid component supports grouping columns with paging feature. When grouping is applied, the grid displays aggregated information and total items based on the current page. However, by default, the group footer and group caption footer does not consider the aggregated information and total items from other pages. To get additional details from other pages, set the [groupSettings.disablePageWiseAggregates](#) property to **false**.

If remote data is bound to grid dataSource, two requests will be sent when performing grouping action one for getting the grouped data and another for getting aggregate details and total items count.

Group by format

By default, columns are grouped by the data or value present for the particular row. However, you can also group numeric or datetime columns based on the specified format. To enable this feature, you need to set the [enableGroupByFormat](#) property of the corresponding grid column. This feature allows you to group numeric or datetime columns based on a specific format.

The following example demonstrates how to perform a group action using the `enableGroupByFormat` property for the **OrderDate** and **Freight** columns of the grid.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Group, Inject }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const groupOptions = {

```

```

        columns: ['OrderDate', 'Freight'],
        showDropArea: false
    };
    return <GridComponent dataSource={data} allowGrouping={true}
groupSettings={groupOptions} height={315}>
    <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right"/>
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
        <ColumnDirective field='OrderDate' headerText='Order Date'
format='yMMM' enableGroupByFormat={true} width='150' />
        <ColumnDirective field='Freight' headerText='Freight' format='C2'
enableGroupByFormat={true} width='150' />
    </ColumnsDirective>
    <Inject services={[Group]} />
</GridComponent>;
}
;
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Group,
GroupSettingsModel, Inject } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    const groupOptions: GroupSettingsModel = {
        columns: ['OrderDate', 'Freight'],
        showDropArea: false
    };
    return <GridComponent dataSource={data} allowGrouping={true}
groupSettings={groupOptions} height={315}>
    <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
        <ColumnDirective field='OrderDate' headerText='Order Date'
format='yMMM' enableGroupByFormat={true} width='150' />
        <ColumnDirective field='Freight' headerText='Freight' format='C2'
enableGroupByFormat={true} width='150' />
    </ColumnsDirective>
    <Inject services={[Group]} />
</GridComponent >
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),

```

```

      ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
      ShipAddress: '59 rue de l Abbaye',
      ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
      Freight: 32.38, Verified: !0
    },
    {
      OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
      Date(836505e6),
      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
      'Luisenstr. 48',
      ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
      Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
      Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
      Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),

```



```

      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),

```

```

        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
        Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',

```

```

    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
    Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
    Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
    Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
    'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
    'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
    Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
    6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
    Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
    Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
    ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
    Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
    Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
    'Mehrheimerstr. 369',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]];

```

Numeric columns can be grouped based on formats such as currency or percentage, while datetime columns can be grouped based on specific date or time formats.

Show grouped rows based on page size

Showing grouped column rows based on the page size in Syncfusion React Grid is useful when you have grouped data and want to control the number of grouped rows displayed per page.

The Grid component allows you to display the number of records based on the [pageSize](#). However, by default, the `pageSize` applies to individual grid rows, not to grouped rows. If you want to show grouped column rows based on the `pageSize`, you can achieve it by using a custom implementation.

Customizing the `generateQuery` method of the **Data prototype** allows you to modify the query used for data retrieval. By doing so, you can achieve the display of grouped rows based on the page size according to your specific requirements. This can be achieved in the below example.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject } from
 '@syncfusion/ej2-react-grids';
import { Data, Group, Page } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
const oldGenerateQuery = Data.prototype.generateQuery;
Data.prototype.generateQuery = function() {
  const query = oldGenerateQuery.call(this, true);
  // Check if 'pageQuery' is available in the prototype chain
  if (Data.prototype.hasOwnProperty('pageQuery')) {
    const pageQueryFn = Data.prototype['pageQuery'];
    pageQueryFn.call(this, query);
  }
  return query;
};
function App() {
  let grid;

```

```

const groupOptions = { showGroupedColumn: false, columns: ['ShipCountry']
};
const pageSettings = { pageSize: 5 };
return <GridComponent ref={g => grid = g} allowGrouping={true}
  groupSettings={groupOptions} allowPaging={true}
pageSettings={pageSettings}
  dataSource={data}>
  <ColumnsDirective>
    <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
    <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='100' />
    <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
    <ColumnDirective field='ShipName' headerText='Ship Name' width='100' />
    <ColumnDirective field='Freight' headerText='Freight' width='100'
format="C2" />
  </ColumnsDirective>
  <Inject services={[Group, Page]} />
</GridComponent>
};
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject,
GroupSettingsModel, PageSettingsModel } from '@syncfusion/ej2-react-grids';
import { Data, Group, Page } from '@syncfusion/ej2-react-grids';
import { Query } from '@syncfusion/ej2-data';
import * as React from 'react';
import { data } from './datasource';
const oldGenerateQuery = Data.prototype.generateQuery;
Data.prototype.generateQuery = function() {
  const query = oldGenerateQuery.call(this, true);
  // Check if 'pageQuery' is available in the prototype chain
  if (Data.prototype.hasOwnProperty('pageQuery')) {
    const pageQueryFn = Data.prototype['pageQuery'] as (query: Query) =>
void;
    pageQueryFn.call(this, query);
  }
  return query;
};
function App() {
  let grid: GridComponent | null;
  const groupOptions: GroupSettingsModel = { showGroupedColumn: false,
columns: ['ShipCountry'] };
  const pageSettings: PageSettingsModel = { pageSize: 5 };
  return <GridComponent ref={g => grid = g} allowGrouping={true}
    groupSettings={groupOptions} allowPaging={true}
pageSettings={pageSettings}
  dataSource={data}>
  <ColumnsDirective>
    <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
    <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='100' />

```

```

    <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
    <ColumnDirective field='ShipName' headerText='Ship Name' width='100' />
    <ColumnDirective field='Freight' headerText='Freight' width='100'
format="C2" />
  </ColumnsDirective>
  <Inject services={[Group, Page]} />
</GridComponent>
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {

```

```

    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {

```

```

    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),

```



```

        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),

```

```

        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]];

```

Collapse all grouped rows at initial rendering

The Syncfusion React Grid offers a convenient feature to expand or collapse grouped rows, allowing you to control the visibility of grouped data. The option is useful when dealing with a large dataset that contains many groups, and there is a need to provide a summarized view by initially hiding the details.

To collapse all grouped rows at the initial rendering of the Grid using the [dataBound](#) event along with the [collapseAll](#) method.

The following example demonstrates how to collapse all grouped rows at the initial rendering.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject } from
'@syncfusion/ej2-react-grids';
import { Group } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {

```

```

let initial = true;
const groupOptions = { columns: ['ShipCity'] };
let gridObj;
const dataBound = () => {
  if (gridObj && initial === true) {
    gridObj.groupModule.collapseAll();
    initial = false;
  }
};
return <GridComponent dataSource={data} ref={grid => gridObj = grid}
dataBound={dataBound} allowGrouping={true} groupSettings={groupOptions}
height={267}>
  <ColumnsDirective>
    <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right"/>
    <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
    <ColumnDirective field='ShipCity' headerText='Ship City' width='150' />
    <ColumnDirective field='ShipName' headerText='Ship Name' width='150' />
  </ColumnsDirective>
  <Inject services={[Group]} />
</GridComponent>;
}
;
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject } from
'@syncfusion/ej2-react-grids';
import { Grid, Group, GroupSettingsModel } from '@syncfusion/ej2-react-
grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let initial = true;
  const groupOptions: GroupSettingsModel = { columns: ['ShipCity'] };
  let gridObj: Grid | null;
  const dataBound = (): void => {
    if (gridObj && initial === true) {
      gridObj.groupModule.collapseAll();
      initial = false;
    }
  }
  return <GridComponent dataSource={data} ref={grid => gridObj = grid}
dataBound={dataBound}
  allowGrouping={true} groupSettings={groupOptions} height={267}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
      <ColumnDirective field='ShipCity' headerText='Ship City' width='150' />
      <ColumnDirective field='ShipName' headerText='Ship Name' width='150' />
    </ColumnsDirective>
    <Inject services={[Group]} />
  </GridComponent>

```

```
</GridComponent >  
};  
export default App;
```

DATASOURCE.JSX

```
export let data = [  
  {  
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new  
Date(8364186e5),  
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',  
ShipAddress: '59 rue de l Abbaye',  
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',  
Freight: 32.38, Verified: !0  
  },  
  {  
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new  
Date(836505e6),  
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:  
'Luisenstr. 48',  
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',  
Freight: 11.61, Verified: !1  
  },  
  {  
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new  
Date(8367642e5),  
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:  
'Rua do Paço, 67',  
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',  
Freight: 65.83, Verified: !0  
  },  
  {  
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new  
Date(8367642e5),  
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,  
rue du Commerce',  
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',  
Freight: 41.34, Verified: !0  
  },  
  {  
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new  
Date(8368506e5),  
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:  
'Boulevard Tirou, 255',  
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',  
Freight: 51.3, Verified: !0  
  },  
  {  
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new  
Date(836937e6),  
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:  
'Rua do Paço, 67',  
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',  
Freight: 58.17, Verified: !0  
  },  
  {  

```

```

    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {

```

```

    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),

```

```

        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),

```

```

        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]];

```

You can also collapse all the grouped rows at the initial rendering using the [groupCollapseAll](#) method inside the [dataBound](#) event. This is demonstrated in the below code snippet,

```

`typescript
const dataBound = () => {
  if (initial === true) {
    (grid as GridComponent).groupCollapseAll();
    initial = false;
  }
}
`

```

The collapse all approach is suggested for a limited number of records since collapsing every grouped record takes some time. If you have a large dataset, it is recommended to use [lazy-load grouping](#). This approach is also applicable for the [groupExpandAll](#) method.

Group or ungroup column externally

By default, the Syncfusion Grid supports interaction-oriented column grouping, where users manually group columns by dragging and dropping them into the grouping area of the grid. Grid provides an

ability to group and ungroup a column using [groupColumn](#) and [ungroupColumn](#) methods. These methods provide a programmatic approach to perform column grouping and ungrouping.

The following example demonstrates how to group and upgroup the columns in a grid. It utilizes the [DropDownList](#) component to select the column. When an external button is clicked, the [groupColumn](#) and [ungroupColumn](#) methods are called to group or ungroup the selected column.

APP.JSX

```
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Group,
GroupSettingsModel } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  let dropColumn;
  const columns = [
    { text: 'CustomerID', value: 'CustomerID' },
    { text: 'OrderID', value: 'OrderID' },
    { text: 'Ship City', value: 'ShipCity' },
    { text: 'Ship Name', value: 'ShipName' },
  ];
  const field = { text: 'text', value: 'value' };
  const groupOptions = {
    columns: ['CustomerID', 'ShipCity'],
    showDropArea: false
  };
  const groupColumn = () => {
    grid.groupColumn(dropColumn.value);
  }
  const unGroupColumn = () => {
    grid.ungroupColumn(dropColumn.value);
  }
  return (
    <div>
      <label style={{ padding: "30px 20px 0 0" }}> Column name :</label>
      <DropDownListComponent ref={drop => dropColumn = drop} index={0}
width={120} dataSource={columns} fields={field}></DropDownListComponent><br
/>
      <ButtonComponent style={{ marginTop: "10px" }} id="group" cssClass="e-
outline" onClick={groupColumn}>GroupColumn</ButtonComponent>
      <ButtonComponent style={{ marginTop: "10px" }} id="ungroup"
cssClass="e-outline" onClick={unGroupColumn}>UnGroupColumn</ButtonComponent>
      <GridComponent ref={g => grid = g} dataSource={data}
allowGrouping={true} groupSettings={groupOptions} height={267}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
          <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
          <ColumnDirective field='ShipName' headerText='Ship Name'
width='150' />
        </ColumnsDirective>
      </GridComponent>
    </div>
  );
}
```

```

        <Inject services={[Group]} />
      </GridComponent ></div>
    );
  };
  export default App;

```

APP.TSX

```

import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Group,
GroupSettingsModel } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';

function App() {
  let grid: GridComponent | null;
  let dropColumn: DropDownListComponent | null;
  const columns: { [key: string]: Object; }[] = [
    { text: 'CustomerID', value: 'CustomerID' },
    { text: 'OrderID', value: 'OrderID' },
    { text: 'Ship City', value: 'ShipCity' },
    { text: 'Ship Name', value: 'ShipName' },
  ];
  const field: object = { text: 'text', value: 'value' };
  const groupOptions: GroupSettingsModel = {
    columns: ['CustomerID', 'ShipCity'],
    showDropArea: false
  };
  const groupColumn = () => {
    (grid as GridComponent).groupColumn(((dropColumn as
DropDownListComponent).value as string));
  }
  const unGroupColumn = () => {
    (grid as GridComponent).ungroupColumn(((dropColumn as
DropDownListComponent).value as string));
  }
  return (
    <div>
      <label style={{ padding: "30px 20px 0 0" }}> Column name :</label>
      <DropDownListComponent ref={drop => dropColumn = drop} index={0}
width={120} dataSource={columns} fields={field}></DropDownListComponent><br
/>
      <ButtonComponent style={{ marginTop: "10px" }} id="group" cssClass="e-
outline" onClick={groupColumn}>GroupColumn</ButtonComponent>
      <ButtonComponent style={{ marginTop: "10px" }} id="ungroup"
cssClass="e-outline" onClick={unGroupColumn}>UnGroupColumn</ButtonComponent>
      <GridComponent ref={g => grid = g} dataSource={data}
allowGrouping={true} groupSettings={groupOptions} height={267}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
          <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
          <ColumnDirective field='ShipName' headerText='Ship Name'
width='150' />

```

```

    </ColumnsDirective>
    <Inject services={[Group]} />
  </GridComponent ></div>)
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  }
]

```

```

    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
  ],

```

```

    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
  ]
};

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),

```

```

      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
      'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
      Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
      'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
      Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
      'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
      'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
      Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
      Date(8376282e5),

```

```

      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
      'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
      Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }
  ]];

```

Expand or collapse externally

The Syncfusion React Grid offers a convenient feature to expand or collapse grouped rows, allowing you to control the visibility of grouped data. This section will provide guidance on enabling this functionality and integrating it into your application using the Grid properties and methods.

Expand or collapse all grouped rows

Grid provides an ability to expand or collapse grouped rows using [groupExpandAll](#) and [groupCollapseAll](#) methods respectively.

In the following example, the [EJ2 Toggle Switch Button](#) component is added to expand or collapse grouped rows. When the switch is toggled, the [change](#) event is triggered and the [groupExpandAll](#) and [groupCollapseAll](#) methods are called to expand or collapse grouped rows.

APP.JSX

```

import { ChangeEventArgs, SwitchComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Group,
GroupSettingsModel } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  let grid;
  const groupOptions = {
    columns: ['CustomerID', 'ShipCity'],

```

```

    showDropArea: false
  };
  const onSwitchChange = (args) => {
    if (args.checked) {
      grid.groupCollapseAll();
    }
    else {
      grid.groupExpandAll();
    }
  }
  return (
    <div><label style={{ padding: "10px 10px" }}>Expand or collapse
rows</label>
    <SwitchComponent change={onSwitchChange}></SwitchComponent>
    <GridComponent ref={g => grid = g} dataSource={data}
allowGrouping={true} groupSettings={groupOptions} height={315}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
      <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
      <ColumnDirective field='ShipName' headerText='Ship Name'
width='150' />
    </ColumnsDirective>
    <Inject services={[Group]} />
    </GridComponent ></div>)
  };
export default App;

```

APP.TSX

```

import { ChangeEventArgs, SwitchComponent } from '@syncfusion/ej2-react-
buttons';
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Group,
GroupSettingsModel } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  let grid: GridComponent | null;
  const groupOptions: GroupSettingsModel = {
    columns: ['CustomerID', 'ShipCity'],
    showDropArea: false
  };
  const onSwitchChange = (args: ChangeEventArgs) => {
    if (args.checked) {
      (grid as GridComponent).groupCollapseAll();
    }
    else {
      (grid as GridComponent).groupExpandAll();
    }
  }
  return (
    <div><label style={{ padding: "10px 10px" }}>Expand or collapse
rows</label>

```



```

    <SwitchComponent change={onSwitchChange}></SwitchComponent>
    <GridComponent ref={g => grid = g} dataSource={data}
allowGrouping={true} groupSettings={groupOptions} height={315}>
    <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
        <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
        <ColumnDirective field='ShipName' headerText='Ship Name'
width='150' />
    </ColumnsDirective>
    <Inject services={[Group]} />
    </GridComponent ></div>
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),

```

```

      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),

```

```

      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
      'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
      Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }
  ]
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',

```

```

    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
    Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
    Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
    Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
    'Carrera 22 con Ave. Carlos Soublette #8-35',

```

```

        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ];

```

Expand or collapse selected grouped row

Expanding or collapsing selected grouped rows in a Syncfusion React Grid involves implementing the functionality to expand or collapse grouped records programmatically.

To enable the expand and collapse functionality for grouped rows in a grid, you can utilize the [expandCollapseRows](#) method. This method is designed to handle two scenarios such as expanding collapsed grouped records and collapsing expanded grouped records.

To implement this functionality, follow these steps:

1. Include an `input` element to capture the grouped row index.

2. Add a `button` element with a `click` event binding to trigger the `onExpandCollapseButtonClick` method. This method retrieve the grouped rows from the grid's content table using the `querySelectorAll` method.
3. Check if there are any grouped rows available.
4. If grouped rows exist, locate the group caption element based on the entered row index.
5. Call the `expandCollapseRows` method of the grid's group module, passing the group caption element to toggle its expand/collapse state.

The following example demonstrates the function that collapses the selected row using an external button click.

APP.JSX

```
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Group }
from '@syncfusion/ej2-react-grids';
import { TextBoxComponent } from '@syncfusion/ej2-react-inputs';
import React, { useState } from 'react';
import { data } from './datasource';
function App() {
  let grid;
  let textbox;
  const [message, setMessage] = useState('');
  const groupOptions = {
    columns: ['CustomerID'],
    showDropArea: false
  };
  const onExpandCollapseButtonClick = () => {
    const groupedRows =
Array.from(grid.getContentTable().querySelectorAll('.e-recordplusexpend, .e-
recordpluscollapse'));
    const groupedRowIndex = parseInt(textbox.value);
    if (groupedRows.length >= 0 && groupedRowIndex < groupedRows.length) {
      setMessage('');
      const groupCaptionElement = groupedRows[groupedRowIndex];
      grid.groupModule.expandCollapseRows(groupCaptionElement);
    } else {
      setMessage('The entered index exceeds the total number of grouped rows.
Please enter a valid grouped index.');
```

```

        <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
        <ColumnDirective field='ShipName' headerText='Ship Name'
width='150' />
    </ColumnsDirective>
    <Inject services={[Group]} />
    </GridComponent ></div>
};
export default App;

```

APP.TSX

```

import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Group,
GroupSettingsModel } from '@syncfusion/ej2-react-grids';
import { TextBoxComponent } from '@syncfusion/ej2-react-inputs';
import * as React from 'react';
import { useState } from 'react';
import { data } from '../datasource';
function App() {
    let grid: GridComponent | null;
    let textbox: TextBoxComponent | null;
    const [message, setMessage] = useState('');
    const groupOptions: GroupSettingsModel = {
        columns: ['CustomerID'],
        showDropArea: false
    };
    const onExpandCollapseButtonClick = () => {
        const groupedRows = Array.from((grid as
GridComponent).getContentTable().querySelectorAll('.e-recordplusexpend, .e-
recordpluscollapse'));
        const groupedRowIndex: number = parseInt((textbox as
TextBoxComponent).value);
        if (groupedRows.length >= 0 && groupedRowIndex < groupedRows.length) {
            setMessage('');
            const groupCaptionElement = groupedRows[groupedRowIndex];
            (grid as
GridComponent).groupModule.expandCollapseRows(groupCaptionElement);
        } else {
            setMessage('The entered index exceeds the total number of grouped rows.
Please enter a valid groupedindex.');
```

```

        <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
        <ColumnDirective field='ShipName' headerText='Ship Name'
width='150' />
    </ColumnsDirective>
    <Inject services={[Group]} />
    </GridComponent ></div>
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),

```



```

      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
      'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
      Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
      'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
      Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
      'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
      'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
      Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
      Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
      Date(8377146e5),

```

```

      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
  ]
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]
  };

```

Clear grouping

The clear grouping feature in the Syncfusion React Grid allows you to removing all the grouped columns from the grid. This feature provides a convenient way to clear the grouping of columns in your application.

To clear all the grouped columns in the Grid, you can utilize the [clearGrouping](#) method of the grid.

The following example demonstrates how to clear the grouping using `clearGroup` method in the external button click.

APP.JSX

```

import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Group,
GroupSettingsModel } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  const groupOptions = {

```

```

    columns: ['CustomerID', 'ShipCity'],
  };
  const clearGroup = () => {
    grid.clearGrouping();
  }
  return (
    <div>
      <ButtonComponent onClick={clearGroup}>Clear Grouping</ButtonComponent>
      <GridComponent ref={g => grid = g} dataSource={data}
allowGrouping={true} groupSettings={groupOptions} height={315}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
          <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
          <ColumnDirective field='ShipName' headerText='Ship Name'
width='150' />
        </ColumnsDirective>
        <Inject services={[Group]} />
      </GridComponent ></div>
    );
  };
  export default App;

```

APP.TSX

```

import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Group,
GroupSettingsModel } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  let grid: GridComponent | null;
  const groupOptions: GroupSettingsModel = {
    columns: ['CustomerID', 'ShipCity'],
  };
  const clearGroup = () => {
    (grid as GridComponent).clearGrouping();
  }
  return (
    <div>
      <ButtonComponent onClick={clearGroup}>Clear Grouping</ButtonComponent>
      <GridComponent ref={g => grid = g} dataSource={data}
allowGrouping={true} groupSettings={groupOptions} height={315}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
          <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
          <ColumnDirective field='ShipName' headerText='Ship Name'
width='150' />
        </ColumnsDirective>
        <Inject services={[Group]} />
      </GridComponent ></div>
    );
  };
  export default App;

```

```
    </GridComponent ></div>
  };
  export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
```

```

    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {

```

```

      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
  ]
};

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),

```



```

      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
      'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
      Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
      'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
      Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
      'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
      'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
      Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
      Date(8376282e5),

```

```

        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]];

```

Grouping events

The Grid component provides two events that are triggered during the group action such as [actionBegin](#) and [actionComplete](#). The `actionBegin` event is triggered before the group action starts, and the `actionComplete` event is triggered after the group action is completed. You can use these events to perform any custom action based on the grouping.

1. **actionBegin event:** `actionBegin` event is triggered before the group action begins. It provides a way to perform any necessary operations before the group action takes place. This event provides a parameter that contains the current grid state, including the current group field name, requestType information and etc.
2. **actionComplete event:** `actionComplete` event is triggered after the group action is completed. It provides a way to perform any necessary operations after the group action has taken place. This event provides a parameter that contains the current grid state, including the grouped data and column information and etc.

The following example demonstrates how the `actionBegin` and `actionComplete` events work when grouping is performed. The `actionBegin` event is used to cancel the grouping of the **OrderID** column. The `actionComplete` event is used to display a message.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, GroupEventArgs,
Inject, Group } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { useState } from 'react';
import { data } from './datasource';
function App() {
  const [message, setMessage] = useState('');
  const actionBegin = (args) => {
    if (args.requestType === 'grouping' && args.columnName === 'OrderID') {
      args.cancel = true;
    }
  }
  const actionComplete = (args) => {
    if (args.requestType === 'grouping') {
      setMessage(args.requestType + ' action completed for ' + args.columnName
+ ' column');
    }
    else{
      setMessage('');
    }
  }
  return (<div>
    <div style={{ marginLeft: "100px" }}><p style={{ color: "red" }}
id="message">{message}</p></div>
    <GridComponent dataSource={data} allowGrouping={true} height={315}
actionBegin={actionBegin} actionComplete={actionComplete}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
        <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
/>
        <ColumnDirective field='ShipName' headerText='Ship Name' width='100'
/>
      </ColumnsDirective>
      <Inject services={[Group]} />
    </GridComponent></div>)
};
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, GroupEventArgs,
Inject, Group } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { useState } from 'react';
import { data } from './datasource';
function App() {
  const [message, setMessage] = useState('');
  const actionBegin = (args: GroupEventArgs) => {
    if (args.requestType === 'grouping' && args.columnName === 'OrderID') {
      args.cancel = true;
    }
  }
  const actionComplete = (args: GroupEventArgs) => {

```

```

    if (args.requestType === 'grouping') {
      setMessage(args.requestType + ' action completed for ' + args.columnName
+ ' column');
    }
    else{
      setMessage('');
    }
  }
  return (<div>
    <div style={{ marginLeft: "100px" }}><p style={{ color: "red" }}
id="message">{message}</p></div>
    <GridComponent dataSource={data} allowGrouping={true} height={315}
actionBegin={actionBegin} actionComplete={actionComplete}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
        <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
/>
        <ColumnDirective field='ShipName' headerText='Ship Name' width='100'
/>
      </ColumnsDirective>
      <Inject services={[Group]} />
    </GridComponent></div>)
  };
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {

```

```

    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {

```

```

    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let employeeData: Object[] = [{
  'EmployeeID': 1,
  'LastName': 'Davolio',
  'FirstName': 'Nancy',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-664743600000),
  'HireDate': new Date(704692800000),
  'Address': '507 - 20th Ave. E.\r\nApt. 2A',
  'City': 'Seattle',
  'Region': 'WA',
  'PostalCode': '98122',
  'Country': 'USA',

```

```

      'HomePhone': '(206) 555-9857',
      'Extension': '5467',
      'Photo': { 'Length': 21626 },
      'Notes': 'Education includes a BA in psychology from Colorado State
University in 1970. She also completed\
\'The Art of the Cold Call.\' Nancy is a member of Toastmasters
International.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 2,
      'LastName': 'Fuller',
      'FirstName': 'Andrew',
      'Title': 'Vice President, Sales',
      'TitleOfCourtesy': 'Dr.',
      'BirthDate': new Date(-563828400000),
      'HireDate': new Date(713764800000),
      'Address': '908 W. Capital Way',
      'City': 'Tacoma',
      'Region': 'WA',
      'PostalCode': '98401',
      'Country': 'USA',
      'HomePhone': '(206) 555-9482',
      'Extension': '3457',
      'Photo': { 'Length': 21626 },
      'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
Dallas in 1981. He is fluent in French and Italian and reads German. He
joined the company as a sales representative, \
was promoted to sales manager in January 1992 and to vice president of
sales in March 1993. Andrew is a member of the \
Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.',
      'ReportsTo': 0,
      'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
    },
    {
      'EmployeeID': 3,
      'LastName': 'Leverling',
      'FirstName': 'Janet',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-200088000000),
      'HireDate': new Date(702104400000),
      'Address': '722 Moss Bay Blvd.',
      'City': 'Kirkland',
      'Region': 'WA',
      'PostalCode': '98033',
      'Country': 'USA',
      'HomePhone': '(206) 555-3412',
      'Extension': '3355',
      'Photo': { 'Length': 21722 },
      'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
\
She has also completed a certificate program in food retailing
management.\

```

```

    Janet was hired as a sales associate in 1991 and promoted to sales
    representative in February 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
  },
  {
    'EmployeeID': 4,
    'LastName': 'Peacock',
    'FirstName': 'Margaret',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mrs.',
    'BirthDate': new Date(-1018814400000),
    'HireDate': new Date(736401600000),
    'Address': '4110 Old Redmond Rd.',
    'City': 'Redmond',
    'Region': 'WA',
    'PostalCode': '98052',
    'Country': 'USA',
    'HomePhone': '(206) 555-8122',
    'Extension': '5176',
    'Photo': { 'Length': 21626 },
    'Notes': 'Margaret holds a BA in English literature from Concordia
    College (1958) and an MA from the American \
    Institute of Culinary Arts (1966). She was assigned to the London office
    temporarily from July through November 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
  },
  {
    'EmployeeID': 5,
    'LastName': 'Buchanan',
    'FirstName': 'Steven',
    'Title': 'Sales Manager',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-468010800000),
    'HireDate': new Date(750830400000),
    'Address': '14 Garrett Hill',
    'City': 'London',
    'Region': null,
    'PostalCode':
    'SW1 8JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-4848',
    'Extension': '3453',
    'Photo': { 'Length': 21626 },
    'Notes': 'Steven Buchanan graduated from St. Andrews University,
    Scotland, with a BSC degree in 1976. Upon joining the company as \
    a sales representative in 1992, he spent 6 months in an orientation
    program at the Seattle office and then returned to his permanent \
    post in London. He was promoted to sales manager in March 1993. Mr.
    Buchanan has completed the courses \'Successful \
    Telemarketing\' and \'International Sales Management.\' He is fluent in
    French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
  },
  {

```



```

    'EmployeeID': 6,
    'LastName': 'Suyama',
    'FirstName': 'Michael',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-205185600000),
    'HireDate': new Date(750830400000),
    'Address': 'Coventry House\r\nMiner Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'EC2 7JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-7773',
    'Extension': '428',
    'Photo': { 'Length': 21626 },
    'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese, and
Spanish.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 7,
    'LastName': 'King',
    'FirstName': 'Robert',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-302731200000),
    'HireDate': new Date(757486800000),
    'Address': 'Edgeham Hollow\r\nWinchester Way',
    'City': 'London',
    'Region': null,
    'PostalCode': 'RG1 9SP',
    'Country': 'UK',
    'HomePhone': '(71) 555-5598',
    'Extension': '465',
    'Photo': { 'Length': 21626 },
    'Notes': 'Robert King served in the Peace Corps and traveled extensively
before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 8,
    'LastName': 'Callahan',
    'FirstName': 'Laura',
    'Title': 'Inside Sales Coordinator',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-377982000000),
    'HireDate': new Date(762843600000),
    'Address': '4726 - 11th Ave. N.E.',

```

```

    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98105',
    'Country': 'USA',
    'HomePhone': '(206) 555-1189',
    'Extension': '2344',
    'Photo': { 'Length': 21626 },
    'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/employees/davolio.bmp'
  },
  {
    'EmployeeID': 9,
    'LastName': 'Dodsworth',
    'FirstName': 'Anne',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-123966000000),
    'HireDate': new Date(784875600000),
    'Address': '7 Houndstooth Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'WG2 7LT',
    'Country': 'UK',
    'HomePhone': '(71) 555-4444',
    'Extension': '452',
    'Photo': { 'Length': 21626 },
    'Notes': 'Anne has a BA degree in English from St. Lawrence College. She
is fluent in French and German.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/employees/davolio.bmp'
  }
];
export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',

```

```

        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',

```

```

        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]];
export let sdata: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
        Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'Brazil',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
      },
      {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Brazil',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      }
    ];

```

The [args.requestType](#) property represents the name of the current action being performed. For instance, during grouping, the `args.requestType` value will be **grouping**.

Limitations

- Grouping is not compatible with the following features:
 1. Autofill

See also

- [Exporting grouped records](#)

Filtering in React Grid component

Filtering is a powerful feature in the Syncfusion Grid component that enables you to selectively view data based on specific criteria. It allows you to narrow down large datasets and focus on the information you need, thereby enhancing data analysis and decision-making.

To use filter, inject **Filter** module in the grid.

To enable filtering in the Grid, you need to set the [allowFiltering](#) property of the Grid component to true. Once filtering is enabled, you can configure various filtering options through the [filterSettings](#) property of the Grid component. This property allows you to define the behavior and appearance of the filter.

Here is an example that demonstrates the default filtering feature of the grid:

APP.JSX

```
import { ColumnDirective, ColumnsDirective } from '@syncfusion/ej2-react-grids';
import { Filter, GridComponent, Inject, Page, Sort } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  const pageSettings = { pageSize: 6 };
  return <GridComponent dataSource={data} allowFiltering={true}
allowPaging={true} pageSettings={pageSettings} allowSorting={true}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
      <ColumnDirective field='Freight' headerText='Freight' width='100'
format="C2" textAlign="Right" />
      <ColumnDirective field='OrderDate' headerText='Order Date' format='yMd'
width='100' />
    </ColumnsDirective>
    <Inject services={[Filter, Page, Sort]} />
  </GridComponent>
}
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, PageSettingsModel } from '@syncfusion/ej2-react-grids';
```

```
import { Filter, GridComponent, Inject, Page, Sort } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const pageSettings: PageSettingsModel = { pageSize: 6 };
  return <GridComponent dataSource={data} allowFiltering={true}
allowPaging={true} pageSettings={pageSettings} allowSorting={true}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
      <ColumnDirective field='Freight' headerText='Freight' width='100'
format="C2" textAlign="Right" />
      <ColumnDirective field='OrderDate' headerText='Order Date' format='yMd'
width='100' />
    </ColumnsDirective>
    <Inject services={[Filter, Page, Sort]} />
  </GridComponent>
}
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
```

```

        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',

```



```

        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]
  };

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },

```

```

    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
  ]
}

```

```

    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

* You can apply and clear filtering, by using [filterByColumn](#) and [clearFiltering](#) methods.

* To disable Filtering for a particular column, by specifying [allowFiltering](#) to false.

Initial filter

To apply an initial filter, you need to specify the filter criteria using the [predicate](#) object in [filterSettings.columns](#). The `predicate` object represents the filtering condition and contains properties such as field, operator, and value.

Here is an example of how to configure the initial filter using the `predicate` object:

APP.JSX

```
import { ColumnDirective, ColumnsDirective } from '@syncfusion/ej2-react-grids';
import { Filter, GridComponent, Inject } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
    const filterOptions = {
        columns: [
            {
                field: 'ShipCity', matchCase: false,
                operator: 'startswith', predicate: 'and', value: 'reims'
            },
            {
                field: 'ShipName', matchCase: false, operator: 'startswith',
                predicate: 'and', value: 'Vins et alcools Chevalier'
            }
        ]
    };
    return <GridComponent dataSource={data} allowFiltering={true}
    filterSettings={filterOptions} height={273}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID'
            width='100' textAlign="Right" />
            <ColumnDirective field='CustomerID' headerText='Customer ID'
            width='100' />
            <ColumnDirective field='ShipCity' headerText='Ship City'
            width='100' />
            <ColumnDirective field='ShipName' headerText='Ship Name'
            width='100' />
        </ColumnsDirective>
        <Inject services={[Filter]} />
    </GridComponent>;
}
;
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective } from '@syncfusion/ej2-react-grids';
import { Filter, FilterSettingsModel, GridComponent, Inject } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
    const filterOptions: FilterSettingsModel = {
        columns: [
```

```

    {
      field: 'ShipCity', matchCase: false,
      operator: 'startswith', predicate: 'and', value: 'reims'
    },
    {
      field: 'ShipName', matchCase: false, operator: 'startswith',
      predicate: 'and', value: 'Vins et alcools Chevalier'
    }
  ]
};
return <GridComponent dataSource={data} allowFiltering={true}
filterSettings={filterOptions}
height={273}>
  <ColumnsDirective>
    <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
    <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
    <ColumnDirective field='ShipCity' headerText='Ship City' width='100' />
    <ColumnDirective field='ShipName' headerText='Ship Name' width='100' />
  </ColumnsDirective>
  <Inject services={[Filter]} />
</GridComponent>
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),

```

```

        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),

```

```

        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
      },
      {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',

```



```

        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ];

```

Initial filter with multiple values for same column

In the Syncfusion React Grid, you can establish an initial filter containing multiple values for a particular column, which helps you to preset filter conditions for a specific column using multiple values. This functionality allows you to display a filtered records in the grid right after the grid is initially loaded.

To apply the filter with multiple values for same column at initial rendering, set the filter [predicate](#) object in [filterSettings.columns](#).

The following example demonstrates, how to perform an initial filter with multiple values for same **CustomerID** column using [filterSettings.columns](#) and [predicate](#).

APP.JSX

```
import { ColumnDirective, ColumnsDirective } from '@syncfusion/ej2-react-grids';
import { Filter, GridComponent, Inject } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const filterOptions = {
    type: 'Excel',
    columns: [{
      field: 'CustomerID',
      matchCase: false,
      operator: 'startswith',
      predicate: 'or',
      value: 'VINET',
    },
    {
      field: 'CustomerID',
      matchCase: false,
      operator: 'startswith',
      predicate: 'or',
      value: 'HANAR',
    }
  ]
};
  return <GridComponent dataSource={data} filterSettings={filterOptions}
allowFiltering={true} height={315} >
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
      <ColumnDirective field='ShipCity' headerText='Ship City' width='100' />
      <ColumnDirective field='ShipName' headerText='Ship Name' width='100' />
    </ColumnsDirective>
    <Inject services={[Filter]} />
  </GridComponent>
};
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective } from '@syncfusion/ej2-react-grids';
```

```

import { Filter, FilterSettingsModel, GridComponent, Inject } from
'@syncfusion/ej2-react-grids'
import * as React from 'react';
import { data } from './datasource';
function App() {
  const filterOptions: FilterSettingsModel = {
    type: 'Excel',
    columns: [{
      field: 'CustomerID',
      matchCase: false,
      operator: 'startswith',
      predicate: 'or',
      value: 'VINET',
    },
    {
      field: 'CustomerID',
      matchCase: false,
      operator: 'startswith',
      predicate: 'or',
      value: 'HANAR',
    }
  ]
};
  return <GridComponent dataSource={data} filterSettings={filterOptions}
allowFiltering={true} height={315} >
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
      <ColumnDirective field='ShipCity' headerText='Ship City' width='100' />
      <ColumnDirective field='ShipName' headerText='Ship Name' width='100' />
    </ColumnsDirective>
    <Inject services={[Filter]} />
  </GridComponent>
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },

```

```

    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
  ]
}

```

```

    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),

```

```

      ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
      ShipAddress: '59 rue de l Abbaye',
      ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
      Freight: 32.38, Verified: !0
    },
    {
      OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
      Date(836505e6),
      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
      'Luisenstr. 48',
      ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
      Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
      Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
      Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),

```

```

    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
    Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
    Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
    'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
    'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
    Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
    6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
    Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
    Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
    ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
    Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
    Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
    'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
    Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
    Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
    Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
    Date(8379738e5),

```

```
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',  
    ShipAddress: '2817 Milton Dr.',  
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',  
    Freight: 48.29, Verified: !0  
  }];
```

Initial filter with multiple values for different columns

By applying an initial filter with multiple values for different columns in the Syncfusion React Grid, you have the flexibility to set predefined filter settings for each column. This results in a filtered records of the grid right after the grid is initially loaded.

To apply the filter with multiple values for different column at initial rendering, set the filter [predicate](#) object in [filterSettings.columns](#).

The following example demonstrates how to perform an initial filter with multiple values for different **Order ID** and **Customer ID** columns using `filterSettings.columns` and `predicate`.

APP.JSX

```
import { ColumnDirective, ColumnsDirective } from '@syncfusion/ej2-react-grids';  
import { Filter, GridComponent, Inject } from '@syncfusion/ej2-react-grids';  
import * as React from 'react';  
import { data } from '../datasource';  
function App() {  
  const filterOptions = {  
    type: 'Excel',  
    columns: [  
      {  
        field: 'CustomerID',  
        matchCase: false,  
        operator: 'startswith',  
        predicate: 'or',  
        value: 'VINET',  
      },  
      {  
        field: 'CustomerID',  
        matchCase: false,  
        operator: 'startswith',  
        predicate: 'or',  
        value: 'HANAR',  
      },  
      {  
        field: 'OrderID',  
        matchCase: false,  
        operator: 'lessThan',  
        predicate: 'or',  
        value: 10250,  
      },  
      {  
        field: 'OrderID',  
        matchCase: false,  
        operator: 'notEqual',  
        predicate: 'or',  
        value: 10262,  
      },  
    ],  
  };  
}
```



```

    ]
  };
  return <GridComponent dataSource={data} filterSettings={filterOptions}
allowFiltering={true} height={315} >
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
      <ColumnDirective field='ShipCity' headerText='Ship City' width='100' />
      <ColumnDirective field='ShipName' headerText='Ship Name' width='100' />
    </ColumnsDirective>
    <Inject services={[Filter]} />
  </GridComponent>
};
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective } from '@syncfusion/ej2-react-
grids';
import { Filter, FilterSettingsModel, GridComponent, Inject } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const filterOptions: FilterSettingsModel = {
    type: 'Excel',
    columns: [
      {
        field: 'CustomerID',
        matchCase: false,
        operator: 'startswith',
        predicate: 'or',
        value: 'VINET',
      },
      {
        field: 'CustomerID',
        matchCase: false,
        operator: 'startswith',
        predicate: 'or',
        value: 'HANAR',
      },
      {
        field: 'OrderID',
        matchCase: false,
        operator: 'lessThan',
        predicate: 'or',
        value: 10250,
      },
      {
        field: 'OrderID',
        matchCase: false,
        operator: 'notEqual',
        predicate: 'or',
        value: 10262,
      },
    ],
  };

```

```

    },
  ],
};
return <GridComponent dataSource={data} filterSettings={filterOptions}
allowFiltering={true} height={315} >
  <ColumnsDirective>
    <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
    <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
    <ColumnDirective field='ShipCity' headerText='Ship City' width='100' />
    <ColumnDirective field='ShipName' headerText='Ship Name' width='100' />
  </ColumnsDirective>
  <Inject services={[Filter]} />
</GridComponent>
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),

```

```

    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
    Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
    Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
    Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
    'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
    'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
    Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
    6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
    Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
    Date(8376282e5),

```

```

        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
        Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',

```

```

      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
      Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
      'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
      Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
      'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
      Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
      'Carrera 22 con Ave. Carlos Soublette #8-35',

```

```

        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ];

```

Filter operators

The Syncfusion Grid component provides various filter operators that can be used to define filter conditions for columns. The filter operator for a column can be defined using the [operator](#) property in the [filterSettings.columns](#) object.

The available operators and its supported data types are,

Operator	Description	Supported Types
----------	-------------	-----------------

a*b | Everything that starts with "a" and ends with "b".

a* | Everything that starts with "a".

*b | Everything that ends with "b".

a | Everything that has an "a" in it.

ab* | Everything that has an "a" in it, followed by anything, followed by a "b", followed by anything.

Search			Columns	
Order ID	Shipped Date	Ship Country		
10250	7/12/1996	Brazil		
10251	7/15/1996	France		
10252	7/11/1996	Belgium		
10253	7/16/1996	Brazil		
10254	7/23/1996	Switzerland		
10255	7/15/1996	Switzerland		
10256	7/17/1996	Brazil		
10257	7/22/1996	Venezuela		
10258	7/23/1996	Austria		

LIKE filtering

The **LIKE** filter can process single search patterns using the "%" symbol, retrieving values matching the specified patterns. The following Grid features support LIKE filtering on string-type columns:

- Filter Menu
- Filter Bar with the [filterSettings.showFilterBarOperator](#) property enabled on the Grid [filterSettings](#).
- Custom Filter of Excel filter type.

For example:

Operator | Description

%ab% | Returns all the value that are contains "ab" character.

ab% | Returns all the value that are ends with "ab" character.

%ab | Returns all the value that are starts with "ab" character.

Order ID	Shipped Date	Ship Country
10250	7/12/1996	Brazil
10251	7/15/1996	France
10252	7/11/1996	Belgium
10253	7/16/1996	Brazil
10254	7/23/1996	Switzerland
10255	7/15/1996	Switzerland
10256	7/17/1996	Brazil
10257	7/22/1996	Venezuela
10258	7/23/1996	Austria

By default, the Syncfusion React Grid uses different filter operators for different column types. The default filter operator for string type columns is **startsWith**, for numerical type columns is **equal**, and for boolean type columns is also **equal**.

Diacritics filter

The diacritics filter feature in the Syncfusion React Grid is useful when working with text data that includes accented characters (diacritic characters). By default, the grid ignores these characters during filtering. However, if you need to consider diacritic characters in your filtering process, you can enable this feature by setting the [filterSettings.ignoreAccent](#) property to true using the [filterSettings](#).

Consider the following sample where the `ignoreAccent` property is set to true in order to include diacritic characters in the filtering process:

APP.JSX

```
import { ColumnDirective, ColumnsDirective } from '@syncfusion/ej2-react-grids';
import { Filter, GridComponent, Inject } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
    const filterOptions = {
        ignoreAccent: true
    };
}
```



```

    return <GridComponent dataSource={data} filterSettings={filterOptions}
allowFiltering={true}>
    <ColumnsDirective>
        <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='140' textAlign="Right" />
        <ColumnDirective field='Name' headerText='Name' width='140' />
        <ColumnDirective field='ShipName' headerText='Ship Name' width='170'
textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='CustomerID' width='140'
textAlign="Right" />
    </ColumnsDirective>
    <Inject services={[Filter]} />
    </GridComponent>;
};
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective } from '@syncfusion/ej2-react-
grids';
import { Filter, FilterSettingsModel, GridComponent, Inject } from
 '@syncfusion/ej2-react-grids'
import * as React from 'react';
import { data } from './datasource';
function App() {
    const filterOptions: FilterSettingsModel = {
        ignoreAccent: true
    };
    return <GridComponent dataSource={data} filterSettings={filterOptions}
allowFiltering={true}>
    <ColumnsDirective>
        <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='140' textAlign="Right" />
        <ColumnDirective field='Name' headerText='Name' width='140' />
        <ColumnDirective field='ShipName' headerText='Ship Name' width='170'
textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='CustomerID' width='140'
textAlign="Right" />
    </ColumnsDirective>
    <Inject services={[Filter]} />
    </GridComponent>
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        'EmployeeID': 1,
        'Name': 'Aeróbics',
        'id': 'list-01',
        'CustomerID': 'VINET',
        'ShipName': 'Vins et alcools Chevalier',
    },
    {
        'EmployeeID': 2,

```

```

    'Name': 'Aerografía en Agua',
    'id': 'list-02',
    'CustomerID': 'TOMSP',
    'ShipName': 'Toms SpezialitAiten',
  },
  {
    'EmployeeID': 3,
    'Name': 'AerografAa',
    'id': 'list-03',
    'CustomerID': 'TAMSP',
    'ShipName': 'Suprames dalices',
  },
  {
    'EmployeeID': 4,
    'Name': 'Aeromodelaje',
    'id': 'list-04',
    'CustomerID': 'HANAA',
    'ShipName': 'Ottilies Kaseladen'
  },
  {
    'EmployeeID': 5,
    'Name': 'Águilas',
    'id': 'list-05',
    'CustomerID': 'VICTE',
    'ShipName': 'Centro comercial Moctezuma',
  },
  {
    'EmployeeID': 6,
    'Name': 'Álbumes de Delta',
    'id': 'list-06',
    'CustomerID': 'HANAR',
    'ShipName': 'Que Delacia',
  },
  {
    'EmployeeID': 7,
    'Name': 'ÃÄlbumes de Música',
    'id': 'list-07',
    'CustomerID': 'SUPRD',
    'ShipName': 'Ernst Handel'
  },
  {
    'EmployeeID': 8,
    'Name': 'Alusivos',
    'id': 'list-08',
    'CustomerID': 'CHOPS',
    'ShipName': 'Richter Supermarkt'
  },
  {
    'EmployeeID': 9,
    'Name': 'Ãerografía',
    'id': 'list-09',
    'CustomerID': 'RICSU',
    'ShipName': 'Wellington'
  },
  {
    'EmployeeID': 10,
    'Name': 'Análisis de Escritura a Mano',

```

```
      'id': 'list-10',
      'CustomerID': 'WELLI',
      'ShipName': 'Victuailles'
    }
  ];
```

DATASOURCE.TSX

```
export let data: { [key: string]: Object }[] = [
  {
    'EmployeeID': 1,
    'Name': 'Aeróbics',
    'id': 'list-01',
    'CustomerID': 'VINET',
    'ShipName': 'Vins et alcools Chevalier',
  },
  {
    'EmployeeID': 2,
    'Name': 'Aerografía en Agua',
    'id': 'list-02',
    'CustomerID': 'TOMSP',
    'ShipName': 'Toms SpezialitAiten',
  },
  {
    'EmployeeID': 3,
    'Name': 'AerografÃa',
    'id': 'list-03',
    'CustomerID': 'TAMSP',
    'ShipName': 'Suprames dalices',
  },
  {
    'EmployeeID': 4,
    'Name': 'Aeromodelaje',
    'id': 'list-04',
    'CustomerID': 'HANAA',
    'ShipName': 'Ottilies Kaseladen'
  },
  {
    'EmployeeID': 5,
    'Name': 'Águilas',
    'id': 'list-05',
    'CustomerID': 'VICTE',
    'ShipName': 'Centro comercial Moctezuma',
  },
  {
    'EmployeeID': 6,
    'Name': 'Álbumes de Delta',
    'id': 'list-06',
    'CustomerID': 'HANAR',
    'ShipName': 'Que Delacia',
  },
  {
    'EmployeeID': 7,
    'Name': 'Ãlbumes de Música',
    'id': 'list-07',
    'CustomerID': 'SUPRD',
  },
];
```

```
        'ShipName': 'Ernst Handel'
      },
      {
        'EmployeeID': 8,
        'Name': 'Alusivos',
        'id': 'list-08',
        'CustomerID': 'CHOPS',
        'ShipName': 'Richter Supermarkt'
      },
      {
        'EmployeeID': 9,
        'Name': 'Aerografía',
        'id': 'list-09',
        'CustomerID': 'RICSU',
        'ShipName': 'Wellington'
      },
      {
        'EmployeeID': 10,
        'Name': 'Análisis de Escritura a Mano',
        'id': 'list-10',
        'CustomerID': 'WELLI',
        'ShipName': 'Victuailles'
      }
    ]
  };
```

Filtering with case sensitivity

The Syncfusion React Grid provides the flexibility to enable or disable case sensitivity during filtering. This feature is useful when you want to control whether filtering operations should consider the case of characters. It can be achieved by using the [enableCaseSensitivity](#) property within the [filterSettings](#) of the grid.

Below is an example code demonstrating how to enable or disable case sensitivity while filtering:

APP.JSX

```
import { ChangeEventArgs, SwitchComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, FilterSettingsModel } from '@syncfusion/ej2-react-grids';
import { Filter, GridComponent, Inject } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';

function App() {
  let grid;
  const filterSettings = { enableCaseSensitivity: false };
  const onToggleCaseSensitive = (args) => {
    if (args.checked) {
      grid.filterSettings.enableCaseSensitivity = true;
    }
    else {
      grid.filterSettings.enableCaseSensitivity = false;
    }
  }
  return (
    <div>
      <label style={{marginTop:'20px'}}> Enable Case Sensitivity </label>
      <SwitchComponent change={onToggleCaseSensitive}></SwitchComponent>
    </div>
  );
}
```

```

    <GridComponent ref={g => grid = g} dataSource={data}
    allowFiltering={true} filterSettings={filterSettings} >
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='100'
        textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
        width='100' />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
        width='100' />
        <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
        textAlign="Right" />
        <ColumnDirective field='ShipRegion' headerText='Ship Region'
        width='100' textAlign="Right" />
      </ColumnsDirective>
      <Inject services={[Filter]} />
    </GridComponent></div>
  };
  export default App;

```

APP.TSX

```

import { ChangeEventArgs, SwitchComponent } from '@syncfusion/ej2-react-
buttons';
import { ColumnDirective, ColumnsDirective, FilterSettingsModel } from
 '@syncfusion/ej2-react-grids';
import { Filter, GridComponent, Inject } from '@syncfusion/ej2-react-grids'
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid: GridComponent | null;
  const filterSettings: FilterSettingsModel = { enableCaseSensitivity: false
};
  const onToggleCaseSensitive = (args: ChangeEventArgs) => {
    if (args.checked) {
      (grid as GridComponent).filterSettings.enableCaseSensitivity = true;
    }
    else {
      (grid as GridComponent).filterSettings.enableCaseSensitivity = false;
    }
  }
  return (<div>
    <label style={{marginTop:'20px'}}> Enable Case Sensitivity </label>
    <SwitchComponent change={onToggleCaseSensitive}></SwitchComponent>
    <GridComponent ref={g => grid = g} dataSource={data}
    allowFiltering={true} filterSettings={filterSettings} >
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='100'
        textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
        width='100' />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
        width='100' />
        <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
        textAlign="Right" />
        <ColumnDirective field='ShipRegion' headerText='Ship Region'
        width='100' textAlign="Right" />

```

```

    </ColumnsDirective>
    <Inject services={[Filter]} />
  </GridComponent></div>)
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  }
]

```

```

    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
  },

```

```

    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
  ]
};

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),

```



```

        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),

```

```

      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
      'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
      Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }
  ]];

```

Enable different filter for a column

The Syncfusion React Grid offers the flexibility to customize filtering behavior for different columns by enabling various types of filters such as **Menu**, **Excel**, **Checkbox**. This feature allows you to tailor the filtering experience to suit the specific needs of each column in your grid. For example, you might prefer a menu-based filter for a category column, an Excel-like filter for a date column, and a checkbox filter for a status column.

It can be achieved by adjusting the [filter.type](#) property based on your requirements.

Here's an example where the menu filter is enabled by default for all columns, but you can dynamically modify the filter types through a dropdown:

APP.JSX

```

import { DropDownListComponent, ChangeEventArgs } from '@syncfusion/ej2-react-dropdowns';
import { Column, ColumnDirective, ColumnsDirective, FilterSettingsModel }
from '@syncfusion/ej2-react-grids';
import { Filter, GridComponent, Inject } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  let typeDrop;
  let fieldDrop;
  const filterSettings = { type: 'Menu' };

```

```

let columnFilterSettings;
let fieldData = [];
let column;
const dataBound = () => {
  fieldData = grid.getColumnFieldNames();
  fieldDrop.dataSource = fieldData
}
const onFieldChange = (args) => {
  typeDrop.enabled = true;
  typeDrop.dataSource = ['Menu', 'CheckBox', 'Excel'];
  column = grid.getColumnByField(args.value);
}
const onTypeChange = (args) => {
  columnFilterSettings = { type: args.value };
  column.filter = columnFilterSettings;
  grid.refreshColumns();
}
return (<div><div className="input-container">
  <label><b>Select Column</b> </label>
  <DropDownListComponent ref={field => fieldDrop = field} width={120}
  onChange={onFieldChange} placeholder="Eg: OrderID"></DropDownListComponent>
  <label><b>Select Filter Type</b> </label>
  <DropDownListComponent ref={type => typeDrop = type} width={120}
  onChange={onTypeChange} placeholder="Eg: Excel"
  enabled={false}></DropDownListComponent></div>
  <GridComponent ref={g => grid = g} dataSource={data}
  allowFiltering={true} filterSettings={filterSettings} dataBound={dataBound} >
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
      textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
      width='100' />
      <ColumnDirective field='ShipCountry' headerText='Ship Country'
      width='100' />
      <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
      textAlign="Right" />
      <ColumnDirective field='ShipRegion' headerText='Ship Region'
      width='100' textAlign="Right" />
    </ColumnsDirective>
    <Inject services={[Filter]} />
  </GridComponent></div>)
}
export default App;

```

APP.TSX

```

import { DropDownListComponent, ChangeEventArgs } from '@syncfusion/ej2-react-dropdowns';
import { Column, ColumnDirective, ColumnsDirective, FilterSettingsModel }
from '@syncfusion/ej2-react-grids';
import { Filter, GridComponent, Inject } from '@syncfusion/ej2-react-grids'
import * as React from 'react';
import { data } from '../datasource';
function App() {
  let grid: GridComponent | null;
  let typeDrop: DropDownListComponent | null;

```

```

let fieldDrop: DropDownListComponent | null;
const filterSettings: FilterSettingsModel = { type: 'Menu' };
let columnFilterSettings: FilterSettingsModel;
let fieldData: string[] = [];
let column: Column;
const dataBound = () => {
    fieldData = (grid as GridComponent).getColumnFieldNames();
    (fieldDrop as DropDownListComponent).dataSource = fieldData
}
const onFieldChange = (args: ChangeEventArgs) => {
    (typeDrop as DropDownListComponent).enabled = true;
    (typeDrop as DropDownListComponent).dataSource = ['Menu', 'CheckBox',
'Excel'];
    column = (grid as GridComponent).getColumnByField(args.value);
}
const onTypeChange = (args: ChangeEventArgs) => {
    columnFilterSettings = { type: args.value };
    column.filter = columnFilterSettings;
    (grid as GridComponent).refreshColumns();
}
return (<div><div className="input-container">
    <label><b>Select Column</b> </label>
    <DropDownListComponent ref={field => fieldDrop = field} width={120}
onChange={onFieldChange} placeholder="Eg: OrderID"></DropDownListComponent>
    <label><b>Select Filter Type</b> </label>
    <DropDownListComponent ref={type => typeDrop = type} width={120}
onChange={onTypeChange} placeholder="Eg: Excel"
enabled={false}></DropDownListComponent></div>
    <GridComponent ref={g => grid = g} dataSource={data}
allowFiltering={true} filterSettings={filterSettings} dataBound={dataBound} >
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
            <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
            <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='100' />
            <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
textAlign="Right" />
            <ColumnDirective field='ShipRegion' headerText='Ship Region'
width='100' textAlign="Right" />
        </ColumnsDirective>
        <Inject services={[Filter]} />
    </GridComponent></div>)
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
    }
]

```

```

        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
      },
      {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
      },
      {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
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        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',

```

```

        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
        Date(8364186e5),
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        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
];

```

```

    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {

```



```

    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

Change default filter operator for particular column

The Syncfusion Grid component provides the flexibility to change the default filter operator for a particular column. By default, the filter operator for string-type columns is **startsWith**, for numerical-type columns is **equal**, and for boolean-type columns is also **equal**. However, you may need to customize the filter operator to better match the nature of the data in a specific column. This can be achieved using the operator property within the [filterSettings](#) configuration.

Here's an example that demonstrates how to change the default filter operator column :

APP.JSX

```

import { DropDownListComponent, ChangeEventArgs } from '@syncfusion/ej2-react-dropdowns';
import { Column, ColumnDirective, ColumnsDirective } from '@syncfusion/ej2-react-grids';
import { Filter, GridComponent, Inject, Page } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data, stringOperatorsData, numericOperatorsData } from './datasource';
function App() {
  let grid;
  let operatorDrop;
  let fieldDrop;
  let availableOperator;
  let fieldData = [];
  let column;
  const dataBound = () => {
    fieldData = grid.getColumnFieldNames();
    fieldDrop.dataSource = fieldData
  }
  const onFieldChange = (args) => {
    operatorDrop.enabled = true;
    column = grid.getColumnByField(args.value);
    if(column) {
      availableOperator = column.type === 'string' ? stringOperatorsData :
numericOperatorsData;
      operatorDrop.dataSource = availableOperator;
    }
  }
}

```

```

const onOperatorChange = (args) => {
  let filterOptions = { operator: args.value, showFilterBarStatus: true };
  column.filter = filterOptions;
}

return (<div><div className="input-container">
  <label><b>Select Column</b> </label>
  <DropDownListComponent ref={field => fieldDrop = field} width={120}
  onChange={onFieldChange} placeholder="Eg: OrderID"></DropDownListComponent>
  <label><b>Select Operator</b> </label>
  <DropDownListComponent ref={operator => operatorDrop = operator}
  width={120} onChange={onOperatorChange} placeholder="Eg: Excel"
  enabled={false}></DropDownListComponent></div>
  <GridComponent ref={g => grid = g} dataSource={data}
  allowFiltering={true} allowPaging={true} dataBound={dataBound} >
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
      textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
      width='100' />
      <ColumnDirective field='Freight' headerText='Freight' format = 'C'
      width='100' textAlign="Right" />
      <ColumnDirective field='ShipCountry' headerText='Ship Country'
      width='100' />
      <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
      textAlign="Right" />
    </ColumnsDirective>
    <Inject services={[Filter, Page]} />
  </GridComponent></div>)
}

export default App;

```

APP.TSX

```

import { DropDownListComponent, ChangeEventArgs } from '@syncfusion/ej2-react-dropdowns';
import { Column, ColumnDirective, ColumnsDirective } from '@syncfusion/ej2-react-grids';
import { Filter, GridComponent, Inject, Page } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data, stringOperatorsData, numericOperatorsData } from './datasource';

function App() {
  let grid: GridComponent | null;
  let operatorDrop: DropDownListComponent | null;
  let fieldDrop: DropDownListComponent | null;
  let availableOperator: Object;
  let fieldData: string[] = [];
  let column: Column;

  const dataBound = () => {
    fieldData = (grid as GridComponent).getColumnFieldNames();
    (fieldDrop as DropDownListComponent).dataSource = fieldData;
  }

  const onFieldChange = (args: ChangeEventArgs) => {
    (operatorDrop as DropDownListComponent).enabled = true;
    column = (grid as GridComponent).getColumnByField(args.value);
  }

```

```

    console.log(args.value);
    console.log(column);
    if(column) {
        availableOperator = column.type === 'string' ? stringOperatorsData :
numericOperatorsData;
        (operatorDrop as DropDownListComponent).dataSource = availableOperator;
    }
}
const onOperatorChange = (args: ChangeEventArgs) => {
    let filterOptions = { operator: args.value, showFilterBarStatus: true };
    column.filter = filterOptions;
}
return (<div><div className="input-container">
    <label><b>Select Column</b> </label>
    <DropDownListComponent ref={field => fieldDrop = field} width={120}
onChange={onFieldChange} placeholder="Eg: OrderID"></DropDownListComponent>
    <label><b>Select Operator</b> </label>
    <DropDownListComponent ref={operator => operatorDrop = operator}
width={120} onChange={onOperatorChange} placeholder="Eg: Excel"
enabled={false}></DropDownListComponent></div>
    <GridComponent ref={g => grid = g} dataSource={data}
allowFiltering={true} allowPaging={true} dataBound={dataBound} >
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
            <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
            <ColumnDirective field='Freight' headerText='Freight' format = 'C'
width='100' textAlign="Right" />
            <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='100' />
            <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
textAlign="Right" />
        </ColumnsDirective>
        <Inject services={[Filter, Page]} />
    </GridComponent></div>)
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    }
]

```

```

        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',

```

```

        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ];
    export let stringOperatorsData = [
      'startsWith',
      'endsWith',
      'contains',
      'isnotempty',

```

```

    'isEmpty',
    'isNotNull',
    'isNull',
    'notEqual',
    'equal',
    'doesnotcontain',
    'doesnotendwith',
    'doesnotstartwith',
  ];
export let numericOperatorsData = [
  'equal',
  'notEqual',
  'greaterThan',
  'greaterThanOrEqual',
  'lessThan',
  'lessThanOrEqual',
  'isNull',
  'isNotNull',
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {

```

```

    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
        },
        {
            OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
            ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
            ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
            },
            {
                OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
                ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
                ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
                },
                {
                    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
                    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
                    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
                    },
                    {
                        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
                        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
                        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
                        },
                        {
                            OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
                            ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
                            ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
                            },
                            {

```

```

    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];
export let stringOperatorsData: Object[] = [
  'startsWith',
  'endsWith',
  'contains',
  'isnotempty',
  'isempty',
  'isnotnull',
  'isnull',
  'notEqual',
  'equal',
  'doesnotcontain',
  'doesnotendwith',
  'doesnotstartwith',
];
export let numericOperatorsData: Object[] = [
  'equal',
  'notEqual',
  'greaterThan',
  'greaterThanOrEqual',
  'lessThan',
  'lessThanOrEqual',
  'isnull',
  'isnotnull',
];

```


Filter grid programmatically with single and multiple values using method

Programmatic filtering in the Syncfusion React Grid with single and multiple values allows you to apply filters to specific columns in the grid without relying on interactions through the interface.

This can be achieved by utilizing the [filterByColumn](#) method of the Grid.

The following example demonstrates, how to programmatically filter the Grid using single and multiple values for the **OrderID** and **CustomerID** columns. This is accomplished by calling the `filterByColumn` method within an external button click function.

APP.JSX

```
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective } from '@syncfusion/ej2-react-grids';
import { Filter, GridComponent, Inject } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  const filterOptions = {
    type: 'Excel',
  };
  const onSingleValueFilter = () => {
    grid.clearFiltering();
    // filter OrderID column with single value
    grid.filterByColumn('OrderID', 'equal', 10248);
  }
  const onMultipleValueFilter = () => {
    grid.clearFiltering();
    // filter CustomerID column with multiple values
    grid.filterByColumn('CustomerID', 'equal', [
      'VINET',
      'TOMSP',
      'ERNSH',
    ]);
  }
  return (
    <div>
      <ButtonComponent cssClass="e-outline"
        onClick={onSingleValueFilter}>Filter with single value</ButtonComponent>
      <ButtonComponent cssClass="e-outline"
        onClick={onMultipleValueFilter}>Filter with multiple values</ButtonComponent>
      <GridComponent ref={g => grid = g} dataSource={data}
        filterSettings={filterOptions} allowFiltering={true} height={315} >
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='100'
            textAlign="Right" />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
            width='100' />
          <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
            />
          <ColumnDirective field='ShipName' headerText='Ship Name' width='100'
            />
        </ColumnsDirective>
        <Inject services={[Filter]} />
      </GridComponent></div>
    );
}
```

```
export default App;
```

APP.TSX

```
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective } from '@syncfusion/ej2-react-grids';
import { Filter, FilterSettingsModel, GridComponent, Inject } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid: GridComponent | null;
  const filterOptions: FilterSettingsModel = {
    type: 'Excel',
  };
  const onSingleValueFilter = () => {
    (grid as GridComponent).clearFiltering();
    // filter OrderID column with single value
    (grid as GridComponent).filterByColumn('OrderID', 'equal', 10248);
  }
  const onMultipleValueFilter = () => {
    (grid as GridComponent).clearFiltering();
    // filter CustomerID column with multiple values
    (grid as GridComponent).filterByColumn('CustomerID', 'equal', [
      'VINET',
      'TOMSP',
      'ERNSH',
    ]);
  }
  return (
    <div>
      <ButtonComponent cssClass="e-outline"
        onClick={onSingleValueFilter}>Filter with single value</ButtonComponent>
      <ButtonComponent cssClass="e-outline"
        onClick={onMultipleValueFilter}>Filter with multiple values</ButtonComponent>
      <GridComponent ref={g => grid = g} dataSource={data}
        filterSettings={filterOptions} allowFiltering={true} height={315} >
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='100'
            textAlign="Right" />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
            width='100' />
          <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
            />
          <ColumnDirective field='ShipName' headerText='Ship Name' width='100'
            />
        </ColumnsDirective>
        <Inject services={[Filter]} />
      </GridComponent></div>
    );
};
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
```

```

    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {

```

```

    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {

```

```

    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),

```

```

      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
      'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
      Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
      'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
      Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
      'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
      'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
      Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
      Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
      Date(8377146e5),

```

```

      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
  ]];

```

How to get filtered records

Retrieving filtered records in the Syncfusion React Grid is essential when you want to work with data that matches the currently applied filters. You can achieve this using available methods and properties in the grid component.

1. Using the `getFilteredRecords()` method

The [getFilteredRecords](#) method is used to obtain an array of records that match the currently applied filters on the grid.

This method retrieves an array of records that match the currently applied filters on the grid.

Here's an example of how to get the filtering data in a Syncfusion grid using the `getFilteredRecords` method:

APP.JSX

```

import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective } from '@syncfusion/ej2-react-grids';
import { Filter, GridComponent, Inject, Page, PageSettingsModel } from '@syncfusion/ej2-react-grids';
import { MessageComponent } from '@syncfusion/ej2-react-notifications';
import React, { useState } from 'react';
import { data } from './datasource';

function App() {
  let grid;
  let filteredGrid;
  const pageSettings = { pageSize: 10, pageCount: 5 };
  let filteredData;
  let showRecords;
  let showWarning;
  const [isFilteredGridVisible, setIsFilteredGridVisible] = useState(false);
  const [isMsgWarningVisible, setIsMsgWarningVisible] = useState(false);

```

```

const getFilter = () => {
  filteredData = grid.getFilteredRecords();
  showRecords = filteredData.length > 0 ? true : false;
  showWarning = !showRecords;
  if (showRecords) {
    filteredGrid.dataSource = filteredData;
  }
  setIsMsgWarningVisible(showWarning);
  setIsFilteredGridVisible(showRecords);
}

const clear = () => {
  grid.clearFiltering();
  showRecords = false;
  showWarning = false;
  setIsMsgWarningVisible(false);
  setIsFilteredGridVisible(false);
}

return (<div><div id='msgWarning' style={{ display: isMsgWarningVisible ?
'block' : 'none' }}>
  <MessageComponent content="No Records" cssClass="e-content-center"
severity="Warning"></MessageComponent></div>
  <ButtonComponent cssClass="e-success" onClick={getFilter}>Get Filtered
Data</ButtonComponent>
  <ButtonComponent cssClass='e-danger'
onClick={clear}>Clear</ButtonComponent>
  <GridComponent ref={g => grid = g} dataSource={data}
allowFiltering={true} pageSettings={pageSettings} allowPaging={true}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
      <ColumnDirective field='Freight' headerText='Freight' format='C'
width='100' textAlign="Right" />
      <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='100' />
      <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
textAlign="Right" />
    </ColumnsDirective>
    <Inject services={[Filter, Page]} />
  </GridComponent>
  <div id='filteredGrid' style={{ display: isFilteredGridVisible ? 'block'
: 'none' }}>
    <h3>Filtered Records</h3>
    <GridComponent ref={fg => filteredGrid = fg} allowPaging={true}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
        <ColumnDirective field='Freight' headerText='Freight' format='C'
width='100' textAlign="Right" />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='100' />
        <ColumnDirective field='ShipCity' headerText='Ship City'
width='100' textAlign="Right" />
      </ColumnsDirective>
    </GridComponent>
  </div>
</div>);

```



```

        <Inject services={[Page]} />
      </GridComponent>
    </div></div>)
  }
  export default App;

```

APP.TSX

```

import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective } from '@syncfusion/ej2-react-grids';
import { Filter, GridComponent, Inject, Page, PageSettingsModel } from '@syncfusion/ej2-react-grids';
import { MessageComponent } from '@syncfusion/ej2-react-notifications';
import React, { useState } from 'react';
import { data } from './datasource';

function App() {
  let grid: GridComponent | null;
  let filteredGrid: GridComponent | null;
  const pageSettings: PageSettingsModel = { pageSize: 10, pageCount: 5 };
  let filteredData;
  let showRecords;
  let showWarning;
  const [isFilteredGridVisible, setIsFilteredGridVisible] = useState(false);
  const [isMsgWarningVisible, setIsMsgWarningVisible] = useState(false);
  const getFilter = () => {
    filteredData = (grid as GridComponent).getFilteredRecords();
    showRecords = filteredData.length > 0 ? true : false;
    showWarning = !showRecords;
    if (showRecords) {
      (filteredGrid as GridComponent).dataSource = filteredData;
    }
    setIsMsgWarningVisible(showWarning);
    setIsFilteredGridVisible(showRecords);
  }
  const clear = () => {
    (grid as GridComponent).clearFiltering();
    showRecords = false;
    showWarning = false;
    setIsMsgWarningVisible(false);
    setIsFilteredGridVisible(false);
  }
  return (
    <div><div id='msgWarning' style={{ display: isMsgWarningVisible ? 'block' : 'none' }}>
      <MessageComponent content="No Records" cssClass="e-content-center" severity="Warning"></MessageComponent></div>
      <ButtonComponent cssClass="e-success" onClick={getFilter}>Get Filtered Data</ButtonComponent>
      <ButtonComponent cssClass='e-danger' onClick={clear}>Clear</ButtonComponent>
      <GridComponent ref={g => grid = g} dataSource={data} allowFiltering={true} pageSettings={pageSettings} allowPaging={true}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='100' textAlign="Right" />

```

```

    <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
    <ColumnDirective field='Freight' headerText='Freight' format='C'
width='100' textAlign="Right" />
    <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='100' />
    <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
textAlign="Right" />
  </ColumnsDirective>
  <Inject services={[Filter, Page]} />
</GridComponent>
<div id='filteredGrid' style={{ display: isFilteredGridVisible ? 'block'
: 'none' }}>
  <h3>Filtered Records</h3>
  <GridComponent ref={fg => filteredGrid = fg} allowPaging={true}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
      <ColumnDirective field='Freight' headerText='Freight' format='C'
width='100' textAlign="Right" />
      <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='100' />
      <ColumnDirective field='ShipCity' headerText='Ship City'
width='100' textAlign="Right" />
    </ColumnsDirective>
    <Inject services={[Page]} />
  </GridComponent>
</div></div>
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),

```

```

      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
      Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
      'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
      Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
      'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
      Date(8374554e5),

```

```

      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
      'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
      'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
      Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
      Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
      'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
      Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }
  ]
};

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
      },
      {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
      },
      {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',

```

```

    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
    Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
    Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
    'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
    'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
    Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
    6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
    Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
    Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
    ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
    Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
    Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
    'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
    Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
    Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
    Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
    Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
    ShipAddress: '2817 Milton Dr.',

```

```

        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }]];

```

2.Using the properties in the FilterEventArgs object

Alternatively, you can use the properties available in the [FilterEventArgs](#) object to obtain the filter record details.

- [columns](#): This property returns the collection of filtered columns.
- [currentFilterObject](#): This property returns the object that is currently filtered.
- [currentFilteringColumn](#): This property returns the column name that is currently filtered.

To access these properties, you can use the [actionComplete](#) event handler as shown below:

```

`typescript
actionComplete(args: FilterEventArgs) {
let column = args.columns;
let object = args.currentFilterObject;
let name = args.currentFilteringColumn;
}
`

```

Clear filtering using methods

The Syncfusion Grid provides a method called [clearFiltering](#) to clear the filtering applied to the grid. This method is used to remove the filter conditions and reset the grid to its original state.

Here's an example of how to clear the filtering in a Syncfusion grid using the [clearFiltering](#) method:

APP.JSX

```

import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective } from '@syncfusion/ej2-react-grids';
import { Filter, GridComponent, Inject, Page, Sort, PageSettingsModel } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    let grid;
    const pageSettings = { pageSize: 6 };
    const clearFilter = () => {
        grid.clearFiltering();
    }
    return (<div>
        <ButtonComponent cssClass='e-primary' onClick={clearFilter}>Clear
        Filter</ButtonComponent>
        <GridComponent ref={g => grid = g} dataSource={data}
        allowFiltering={true} pageSettings={pageSettings} allowSorting={true}
        allowPaging={true}>
            <ColumnsDirective>

```

```

        <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
        <ColumnDirective field='Freight' headerText='Freight' format='C'
width='100' textAlign="Right" />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='100' />
        <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
textAlign="Right" />
    </ColumnsDirective>
    <Inject services={[Filter, Page, Sort]} />
    </GridComponent>
</div>)
}
export default App;

```

APP.TSX

```

import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective } from '@syncfusion/ej2-react-
grids';
import { Filter, GridComponent, Inject, Page, Sort, PageSettingsModel } from
 '@syncfusion/ej2-react-grids'
import * as React from 'react';
import { data } from './datasource';
function App() {
    let grid: GridComponent | null;
    const pageSettings: PageSettingsModel = { pageSize: 6 };
    const clearFilter = () => {
        (grid as GridComponent).clearFiltering();
    }
    return (<div>
        <ButtonComponent cssClass='e-primary' onClick={clearFilter}>Clear
Filter</ButtonComponent>
        <GridComponent ref={g => grid = g} dataSource={data}
allowFiltering={true} pageSettings={pageSettings} allowSorting={true}
allowPaging={true}>
            <ColumnsDirective>
                <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
                <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
                <ColumnDirective field='Freight' headerText='Freight' format='C'
width='100' textAlign="Right" />
                <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='100' />
                <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
textAlign="Right" />
            </ColumnsDirective>
            <Inject services={[Filter, Page, Sort]} />
        </GridComponent>
    </div>)
}
export default App;

```


DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
```

```

        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',

```

```

        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]
  ];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },

```

```

    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
  ],
  {

```

```

    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

Filtering events

Filtering events allow you to customize the behavior of the grid when filtering is applied. You can prevent filtering for specific columns, show messages to users, or perform other actions to suit your application's needs.

To implement filtering events in the Syncfusion React Grid, you can utilize the available events such as [actionBegin](#) and [actionComplete](#). These events allow you to intervene in the filtering process and customize it as needed.

In the given example, the filtering is prevented for **ShipCity** column during **actionBegin** event.

APP.JSX

```

import { ColumnDirective, ColumnsDirective } from '@syncfusion/ej2-react-
grids';
import { Filter, GridComponent, Inject, Page, Sort } from '@syncfusion/ej2-
react-grids';
import React, { useState } from 'react';
import { data } from './datasource';
function App() {
  const [message, setMessage] = useState('');
  const actionBegin = (args) => {
    if (args.requestType === 'filtering' && args.currentFilteringColumn ===
'ShipCity') {
      args.cancel = true;
      setMessage('The ' + args.type + ' event has been triggered and the ' +
args.requestType + ' action is cancelled for ' +
args.currentFilteringColumn);
    }
  }
  const actionComplete = (args) => {
    if (args.requestType === 'filtering' && args.currentFilteringColumn) {

```

```

        setMessage('The ' + args.type + ' event has been triggered and the ' +
args.requestType + ' action for the ' + args.currentFilteringColumn + '
column has been successfully executed');
    } else {
        setMessage('');
    }
}
return (<div>
    <div id='message'>{message}</div>
    <GridComponent dataSource={data} allowFiltering={true}
actionBegin={actionBegin} actionComplete={actionComplete}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
            <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
            <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
textAlign="Right" />
            <ColumnDirective field='ShipName' headerText='Ship Name' width='100'
/>
        </ColumnsDirective>
        <Inject services={[Filter, Page, Sort]} />
    </GridComponent>
</div>)
}
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, FilterEventArgs } from
'@syncfusion/ej2-react-grids';
import { Filter, GridComponent, Inject, Page, Sort } from '@syncfusion/ej2-
react-grids';
import React, { useState } from 'react';
import { data } from './datasource';
function App() {
    const [message, setMessage] = useState('');
    const actionBegin = (args: FilterEventArgs) => {
        if (args.requestType === 'filtering' && args.currentFilteringColumn ===
'ShipCity') {
            args.cancel = true;
            setMessage('The ' + args.type + ' event has been triggered and the ' +
args.requestType + ' action is cancelled for ' +
args.currentFilteringColumn);
        }
    }
    const actionComplete = (args: FilterEventArgs) => {
        if (args.requestType === 'filtering' && args.currentFilteringColumn) {
            setMessage('The ' + args.type + ' event has been triggered and the ' +
args.requestType + ' action for the ' + args.currentFilteringColumn + '
column has been successfully executed');
        } else {
            setMessage('');
        }
    }
    return (<div>

```

```

    <div id='message'>{message}</div>
    <GridComponent dataSource={data} allowFiltering={true}
    actionBegin={actionBegin} actionComplete={actionComplete}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='100'
        textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
        width='100' />
        <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
        textAlign="Right" />
        <ColumnDirective field='ShipName' headerText='Ship Name' width='100'
        />
      </ColumnsDirective>
      <Inject services={[Filter, Page, Sort]} />
    </GridComponent>
  </div>)
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {

```

```

    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
        },
        {
            OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
            ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
            ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
            },
            {
                OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
                ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
                ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
                },
                {
                    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
                    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
                    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
                    },
                    {
                        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
                        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
                        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
                        },
                        {
                            OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
                            ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
                            ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
                            },
                            {

```



```

    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),

```

```

        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),

```

```

      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
      'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
      'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
      Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
      Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
      'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
      Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }
  ]];

```

See also

- [Customizing Filter Dialog by using an additional parameter](#)
- [Hide sorting options on Excel filter dialog](#)
- [How to change loading indicator in React Grid](#)

Scrolling in React Grid component

The scrolling feature in the React Grid component allows you to navigate through the content that extends beyond the visible area of the grid. It provides scrollbars that are automatically displayed when the content exceeds the specified **width** or **height** of the grid element. This feature is useful when you have a large amount of data or when the content needs to be displayed within a limited space. The vertical and horizontal scrollbars will be displayed based on the following criteria:

- The vertical scrollbar appears when the total height of rows present in the grid exceeds its element height.
- The horizontal scrollbar appears when the sum of columns width exceeds the grid element width.
- The [height](#) and [width](#) are used to set the grid height and width, respectively.

The default value for **height** and **width** is **auto**.

Set width and height

The React Grid component offers a straightforward method to tailor the width and height of the scroller to meet your specific requirements. This is particularly useful when you want precise control over the dimensions of the scroller. To achieve this, you can use pixel values as numbers for the [width](#) and [height](#) properties of the Grid.

In the following example, the scrollbar is enabled, and the grid's **height** is set to 315 pixels, while the **width** is set to 400 pixels:

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  return (<GridComponent dataSource={data} height={315} width={400}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='OrderID' width='120'
textAlign='Right' />
      <ColumnDirective field='CustomerID' headerText='CustomerID'
width='150' />
      <ColumnDirective field='EmployeeID' headerText='EmployeeID'
width='120' textAlign='Right' />
      <ColumnDirective field='ShipCity' headerText='ShipCity'
width='150' />
      <ColumnDirective field='ShipCountry' headerText='ShipCountry'
width='150' />
      <ColumnDirective field='ShipName' headerText='ShipName'
width='150' />
    </ColumnsDirective>
  </GridComponent>);
}
;
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  return (<GridComponent dataSource={data} height={315} width={400}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='OrderID' width='120'
textAlign='Right' />
      <ColumnDirective field='CustomerID' headerText='CustomerID'
width='150' />
      <ColumnDirective field='EmployeeID' headerText='EmployeeID'
width='120' textAlign='Right' />
      <ColumnDirective field='ShipCity' headerText='ShipCity'
width='150' />
      <ColumnDirective field='ShipCountry' headerText='ShipCountry'
width='150' />
      <ColumnDirective field='ShipName' headerText='ShipName'
width='150' />
    </ColumnsDirective>
  </GridComponent>)
};
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
```

```

        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]
  ];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },

```

```

    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
  ]
}

```



```

    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

Responsive with parent container

The Grid component allows you to create a responsive layout by making it fill its parent container and automatically adjust its size based on the available space and changes in the container's dimensions. This capability is particularly useful for building applications that need to adapt to various screen sizes and devices.

To achieve this, you need to specify the [width](#) and [height](#) properties of the Grid as 100%. However, keep in mind that setting the height property to 100% requires the Grid's parent element to have an explicit height defined.

In the following example, the parent container has explicit height and width set, and the Grid container's height and width are both set to 100%. This ensures that the Grid adjusts its size responsively based on the dimensions of the parent container:

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  return (<div style={{ height: '500px', width: '600px' }}>
    <GridComponent dataSource={data} height='100%' width='100%'>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='OrderID' width='120'
textAlign='Right' />
        <ColumnDirective field='CustomerID' headerText='CustomerID'
width='150' />
        <ColumnDirective field='Freight' headerText='Freight' width='120'
format='C2' />
        <ColumnDirective field='ShipAddress' headerText='ShipAddress'
width='150' />
      </ColumnsDirective>
    </GridComponent>
  </div>);
};
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  return (<div style={{ height: '500px', width: '600px' }}>
    <GridComponent dataSource={data} height='100%' width='100%'>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='OrderID' width='120'
textAlign='Right' />
        <ColumnDirective field='CustomerID' headerText='CustomerID'
width='150' />
        <ColumnDirective field='Freight' headerText='Freight' width='120'
format='C2' />
        <ColumnDirective field='ShipAddress' headerText='ShipAddress'
width='150' />
      </ColumnsDirective>
    </GridComponent>
  </div>);
};
export default App;
```

DATASOURCE.JSX

```

export let data = createLazyLoadData();
function createLazyLoadData() {
  let lazyLoadData = [];
  let customerid = ['VINET', 'TOMSP', 'HANAR', 'VICTE', 'SUPRD', 'HANAR',
'CHOPS', 'RICSU', 'WELLI', 'HILAA', 'ERNSH', 'CENTC',
'OTTIK', 'QUEDE', 'RATTC', 'ERNSH', 'FOLKO', 'BLONP', 'WARTH', 'FRANK',
'GROSR', 'WHITC', 'WARTH', 'SPLIR', 'RATTC', 'QUICK', 'VINET',
'MAGAA', 'TORTU', 'MORGK', 'BERGS', 'LEHMS', 'BERGS', 'ROMEY', 'ROMEY',
'LILAS', 'LEHMS', 'QUICK', 'QUICK', 'RICAR', 'REGGC', 'BSBEV',
'COMMI', 'QUEDE', 'TRADH', 'TORTU', 'RATTC', 'VINET', 'LILAS', 'BLONP',
'HUNGO', 'RICAR', 'MAGAA', 'WANDK', 'SUPRD', 'GODOS', 'TORTU',
'OLDWO', 'ROMEY', 'LONEP', 'ANATR', 'HUNGO', 'THEBI', 'DUMON', 'WANDK',
'QUICK', 'RATTC', 'ISLAT', 'RATTC', 'LONEP', 'ISLAT', 'TORTU',
'WARTH', 'ISLAT', 'PERIC', 'KOENE', 'SAVEA', 'KOENE', 'BOLID', 'FOLKO',
'FURIB', 'SPLIR', 'LILAS', 'BONAP', 'MEREP', 'WARTH', 'VICTE',
'HUNGO', 'PRINI', 'FRANK', 'OLDWO', 'MEREP', 'BONAP', 'SIMOB', 'FRANK',
'LEHMS', 'WHITC', 'QUICK', 'RATTC', 'FAMIA'];
  let product = ['Chai', 'Chang', 'Aniseed Syrup', 'Chef Anton\'s Cajun
Seasoning', 'Chef Anton\'s Gumbo Mix', 'Grandma\'s Boysenberry Spread',
'Uncle Bob\'s Organic Dried Pears', 'Northwoods Cranberry Sauce', 'Mishi
Kobe Niku', 'Ikura', 'Queso Cabrales', 'Queso Manchego La Pastora', 'Konbu',
'Tofu', 'Genen Shouyu', 'Pavlova', 'Alice Mutton', 'Carnarvon Tigers',
'Teatime Chocolate Biscuits', 'Sir Rodney\'s Marmalade', 'Sir Rodney\'s
Scones',
'Gustaf\'s Knäckebröd', 'Tunnbröd', 'Guaraná Fantástica', 'NuNuCa Nuß-
Nougat-Creme', 'Gumbär Gummibärchen', 'Schoggi Schokolade', 'Rössle
Sauerkraut',
'Thüringer Rostbratwurst', 'Nord-Ost Matjeshering', 'Gorgonzola Telino',
'Mascarpone Fabioli', 'Geitost', 'Sasquatch Ale', 'Steeleye Stout', 'Inlagd
Sill',
'Gravad lax', 'Côte de Blaye', 'Chartreuse verte', 'Boston Crab Meat',
'Jack\'s New England Clam Chowder', 'Singaporean Hokkien Fried Mee', 'Ipoh
Coffee',
'Gula Malacca', 'Rogede sild', 'Spegesild', 'Zaanse koeken', 'Chocolade',
'Maxilaku', 'Valkoinen suklaa', 'Manjimup Dried Apples', 'Filo Mix', 'Perth
Pasties',
'Tourtière', 'Pâté chinois', 'Gnocchi di nonna Alice', 'Ravioli Angelo',
'Escargots de Bourgogne', 'Raclette Courdavault', 'Camembert Pierrot', 'Sirop
d\'érable',
'Tarte au sucre', 'Vegie-spread', 'Wimmers gute Semmelknödel', 'Louisiana
Fiery Hot Pepper Sauce', 'Louisiana Hot Spiced Okra', 'Laughing Lumberjack
Lager', 'Scottish Longbreads',
'Gudbrandsdalsost', 'Outback Lager', 'Flotemysost', 'Mozzarella di
Giovanni', 'Röd Kaviar', 'Longlife Tofu', 'Rhönbräu Klosterbier',
'Lakkalikööri', 'Original Frankfurter grüne Soße'];
  let customername = ['Maria', 'Ana Trujillo', 'Antonio Moreno', 'Thomas
Hardy', 'Christina Berglund', 'Hanna Moos', 'Frédérique Citeaux', 'Martín
Sommer', 'Laurence Lebihan', 'Elizabeth Lincoln',
'Victoria Ashworth', 'Patricio Simpson', 'Francisco Chang', 'Yang Wang',
'Pedro Afonso', 'Elizabeth Brown', 'Sven Ottlieb', 'Janine Labrune', 'Ann
Devon', 'Roland Mendel', 'Aria Cruz', 'Diego Roel',
'Martine Rancé', 'Maria Larsson', 'Peter Franken', 'Carine Schmitt',
'Paolo Accorti', 'Lino Rodriguez', 'Eduardo Saavedra', 'José Pedro Freyre',
'André Fonseca', 'Howard Snyder', 'Manuel Pereira',

```

```

'Mario Pontes', 'Carlos Hernández', 'Yoshi Latimer', 'Patricia McKenna',
'Helen Bennett', 'Philip Cramer', 'Daniel Tonini', 'Annette Roulet', 'Yoshi
Tannamuri', 'John Steel', 'Renate Messner', 'Jaime Yorres',
'Carlos González', 'Felipe Izquierdo', 'Fran Wilson', 'Giovanni Rovelli',
'Catherine Dewey', 'Jean Fresnière', 'Alexander Feuer', 'Simon Crowther',
'Yvonne Moncada', 'Rene Phillips', 'Henriette Pfalzheim',
'Marie Bertrand', 'Guillermo Fernández', 'Georg PIPPS', 'Isabel de
Castro', 'Bernardo Batista', 'Lúcia Carvalho', 'Horst Kloss', 'Sergio
Gutiérrez', 'Paula Wilson', 'Maurizio Moroni', 'Janete Limeira', 'Michael
Holz',
'Alejandra Camino', 'Jonas Bergulfsen', 'Jose Pavarotti', 'Hari Kumar',
'Jytte Petersen', 'Dominique Perrier', 'Art Braunschweiger', 'Pascale
Cartrain', 'Liz Nixon', 'Liu Wong', 'Karin Josephs', 'Miguel Angel Paolino',
'Anabela Domingues', 'Helvetius Nagy', 'Palle Ibsen', 'Mary Saveley',
'Paul Henriot', 'Rita Müller', 'Pirkko Koskitalo', 'Paula Parente', 'Karl
Jablonski', 'Matti Karttunen', 'Zbyszek Piestrzeniewicz'];
let shipaddress = ['507 - 20th Ave. E.\r\nApt. 2A', '908 W. Capital Way',
'722 Moss Bay Blvd.', '4110 Old Redmond Rd.', '14 Garrett Hill', 'Coventry
House\r\nMiner Rd.', 'Edgeham Hollow\r\nWinchester Way',
'4726 - 11th Ave. N.E.', '7 Houndstooth Rd.', '59 rue de l\'Abbaye',
'Luisenstr. 48', '908 W. Capital Way', '722 Moss Bay Blvd.', '4110 Old
Redmond Rd.', '14 Garrett Hill', 'Coventry House\r\nMiner Rd.', 'Edgeham
Hollow\r\nWinchester Way',
'7 Houndstooth Rd.', '2817 Milton Dr.', 'Kirchgasse 6', 'Sierras de
Granada 9993', 'Mehrheimerstr. 369', 'Rua da Panificadora, 12', '2817 Milton
Dr.', 'Mehrheimerstr. 369'];
let frieght = [10, 24, 12, 48, 36, 12, 102, 18, 102,
1, 500, 2, 40, 250, 500, 20, 16, 10, 30, 24, 24, 12,
355, 20, 100];
let OrderID = 10248;
for (let i = 0; i < 5000; i++) {
    lazyLoadData.push({
        'OrderID': OrderID + i,
        'CustomerID': customerid[Math.floor(Math.random() *
customerid.length)],
        'CustomerName': customername[Math.floor(Math.random() *
customername.length)],
        'shipAddress': shipaddress[Math.floor(Math.random() *
shipaddress.length)],
        'ProductName': product[Math.floor(Math.random() *
product.length)],
        'ProductID': i,
        'Frieght': frieght[Math.floor(Math.random() * frieght.length)]
    })
}
return lazyLoadData;
}

```

DATASOURCE.TSX

```

export let data: Object[] = createLazyLoadData();
function createLazyLoadData(): Object[] {
    let lazyLoadData: Object[] = [];
    let customerid: string[] = ['VINET', 'TOMSP', 'HANAR', 'VICTE', 'SUPRD',
'HANAR', 'CHOPS', 'RICSU', 'WELLI', 'HILAA', 'ERNSH', 'CENTC',

```

```

'OTTIK', 'QUEDE', 'RATTC', 'ERNSH', 'FOLKO', 'BLONP', 'WARTH', 'FRANK',
'GROSR', 'WHITC', 'WARTH', 'SPLIR', 'RATTC', 'QUICK', 'VINET',
'MAGAA', 'TORTU', 'MORGK', 'BERGS', 'LEHMS', 'BERGS', 'ROMEY', 'ROMEY',
'LILAS', 'LEHMS', 'QUICK', 'QUICK', 'RICAR', 'REGGC', 'BSBEV',
'COMMI', 'QUEDE', 'TRADH', 'TORTU', 'RATTC', 'VINET', 'LILAS', 'BLONP',
'HUNGO', 'RICAR', 'MAGAA', 'WANDK', 'SUPRD', 'GODOS', 'TORTU',
'OLDWO', 'ROMEY', 'LONEP', 'ANATR', 'HUNGO', 'THEBI', 'DUMON', 'WANDK',
'QUICK', 'RATTC', 'ISLAT', 'RATTC', 'LONEP', 'ISLAT', 'TORTU',
'WARTH', 'ISLAT', 'PERIC', 'KOENE', 'SAVEA', 'KOENE', 'BOLID', 'FOLKO',
'FURIB', 'SPLIR', 'LILAS', 'BONAP', 'MEREPE', 'WARTH', 'VICTE',
'HUNGO', 'PRINI', 'FRANK', 'OLDWO', 'MEREPE', 'BONAP', 'SIMOB', 'FRANK',
'LEHMS', 'WHITC', 'QUICK', 'RATTC', 'FAMIA'];
let product: string[] = ['Chai', 'Chang', 'Aniseed Syrup', 'Chef Anton\'s
Cajun Seasoning', 'Chef Anton\'s Gumbo Mix', 'Grandma\'s Boysenberry Spread',
'Uncle Bob\'s Organic Dried Pears', 'Northwoods Cranberry Sauce', 'Mishi
Kobe Niku', 'Ikura', 'Queso Cabrales', 'Queso Manchego La Pastora', 'Konbu',
'Tofu', 'Genen Shouyu', 'Pavlova', 'Alice Mutton', 'Carnarvon Tigers',
'Teatime Chocolate Biscuits', 'Sir Rodney\'s Marmalade', 'Sir Rodney\'s
Scones',
'Gustaf\'s Knäckebröd', 'Tunnbröd', 'Guaraná Fantástica', 'NuNuCa Nuß-
Nougat-Creme', 'Gumbär Gummibärchen', 'Schoggi Schokolade', 'Rössle
Sauerkraut',
'Thüringer Rostbratwurst', 'Nord-Ost Matjeshering', 'Gorgonzola Telino',
'Mascarpone Fabioli', 'Geitost', 'Sasquatch Ale', 'Steeleye Stout', 'Inlagd
Sill',
'Gravad lax', 'Côte de Blaye', 'Chartreuse verte', 'Boston Crab Meat',
'Jack\'s New England Clam Chowder', 'Singaporean Hokkien Fried Mee', 'Ipoh
Coffee',
'Gula Malacca', 'Rogede sild', 'Spegesild', 'Zaanse koeken', 'Chocolade',
'Maxilaku', 'Valkoinen suklaa', 'Manjimup Dried Apples', 'Filo Mix', 'Perth
Pasties',
'Tourtière', 'Pâté chinois', 'Gnocchi di nonna Alice', 'Ravioli Angelo',
'Escargots de Bourgogne', 'Raclette Courdavault', 'Camembert Pierrot', 'Sirop
d\'érable',
'Tarte au sucre', 'Veggie-spread', 'Wimmers gute Semmelknödel', 'Louisiana
Fiery Hot Pepper Sauce', 'Louisiana Hot Spiced Okra', 'Laughing Lumberjack
Lager', 'Scottish Longbreads',
'Gudbrandsdalsost', 'Outback Lager', 'Flotemysost', 'Mozzarella di
Giovanni', 'Röd Kaviar', 'Longlife Tofu', 'Rhönbräu Klosterbier',
'Lakkalikööri', 'Original Frankfurter grüne Soße'];
let customername: string[] = ['Maria', 'Ana Trujillo', 'Antonio Moreno',
'Thomas Hardy', 'Christina Berglund', 'Hanna Moos', 'Frédérique Citeaux',
'Martín Sommer', 'Laurence Lebihan', 'Elizabeth Lincoln',
'Victoria Ashworth', 'Patricio Simpson', 'Francisco Chang', 'Yang Wang',
'Pedro Afonso', 'Elizabeth Brown', 'Sven Ottlieb', 'Janine Labrune', 'Ann
Devon', 'Roland Mendel', 'Aria Cruz', 'Diego Roel',
'Martine Rancé', 'Maria Larsson', 'Peter Franken', 'Carine Schmitt',
'Paolo Accorti', 'Lino Rodriguez', 'Eduardo Saavedra', 'José Pedro Freyre',
'André Fonseca', 'Howard Snyder', 'Manuel Pereira',
'Mario Pontes', 'Carlos Hernández', 'Yoshi Latimer', 'Patricia McKenna',
'Helen Bennett', 'Philip Cramer', 'Daniel Tonini', 'Annette Roulet', 'Yoshi
Tannamuri', 'John Steel', 'Renate Messner', 'Jaime Yorres',
'Carlos González', 'Felipe Izquierdo', 'Fran Wilson', 'Giovanni Rovelli',
'Catherine Dewey', 'Jean Fresnière', 'Alexander Feuer', 'Simon Crowther',
'Yvonne Moncada', 'Rene Phillips', 'Henriette Pfalzheim',
'Marie Bertrand', 'Guillermo Fernández', 'Georg Pippis', 'Isabel de
Castro', 'Bernardo Batista', 'Lúcia Carvalho', 'Horst Kloss', 'Sergio

```

```

Gutiérrez', 'Paula Wilson', 'Maurizio Moroni', 'Janete Limeira', 'Michael
Holz',
    'Alejandra Camino', 'Jonas Bergulfsen', 'Jose Pavarotti', 'Hari Kumar',
    'Jytte Petersen', 'Dominique Perrier', 'Art Braunschweiger', 'Pascale
Cartrain', 'Liz Nixon', 'Liu Wong', 'Karin Josephs', 'Miguel Angel Paolino',
    'Anabela Domingues', 'Helvetius Nagy', 'Palle Ibsen', 'Mary Saveley',
    'Paul Henriot', 'Rita Müller', 'Pirkko Koskitalo', 'Paula Parente', 'Karl
Jablonski', 'Matti Karttunen', 'Zbyszek Piestrzeniewicz'];
    let shipaddress: string[] = ['507 - 20th Ave. E.\r\nApt. 2A', '908 W.
Capital Way', '722 Moss Bay Blvd.', '4110 Old Redmond Rd.', '14 Garrett
Hill', 'Coventry House\r\nMiner Rd.', 'Edgeham Hollow\r\nWinchester Way',
    '4726 - 11th Ave. N.E.', '7 Houndstooth Rd.', '59 rue de l'Abbaye',
    'Luisenstr. 48', '908 W. Capital Way', '722 Moss Bay Blvd.', '4110 Old
Redmond Rd.', '14 Garrett Hill', 'Coventry House\r\nMiner Rd.', 'Edgeham
Hollow\r\nWinchester Way',
    '7 Houndstooth Rd.', '2817 Milton Dr.', 'Kirchgasse 6', 'Sierras de
Granada 9993', 'Mehrheimerstr. 369', 'Rua da Panificadora, 12', '2817 Milton
Dr.', 'Mehrheimerstr. 369'];
    let frieght: number[] = [10, 24, 12, 48, 36, 12, 102, 18, 102,
    1, 500, 2, 40, 250, 500, 20, 16, 10, 30, 24, 24, 12,
    355, 20, 100];
    let OrderID: number = 10248;
    for (let i: number = 0; i < 5000; i++) {
        lazyLoadData.push({
            'OrderID': OrderID + i,
            'CustomerID': customerid[Math.floor(Math.random() *
customerid.length)],
            'CustomerName': customername[Math.floor(Math.random() *
customername.length)],
            'shipAddress': shipaddress[Math.floor(Math.random() *
shipaddress.length)],
            'ProductName': product[Math.floor(Math.random() *
product.length)],
            'ProductID': i,
            'Frieght': frieght[Math.floor(Math.random() * frieght.length)]
        })
    }
    return lazyLoadData;
}

```

Sticky header

The React Grid component provides a feature that allows you to make column headers remain fixed while scrolling, ensuring they stay visible at all times. To achieve this, you can utilize the [enableStickyHeader](#) property by setting it to **true**.

In the below demo, the Grid headers will be sticky while scrolling the Grid's parent div element.

APP.JSX

```

import { SwitchComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    let grid;

```

```

const onChange = (args) => {
  grid.enableStickyHeader = args.checked;
}
return (<div>
  <label style={{ padding: "30px 20px 0 0" }}>Enable/Disable Sticky Header
</label>
  <SwitchComponent change={onChange}></SwitchComponent>
  <GridComponent ref={g => grid = g} dataSource={data} >
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='OrderID' width='120'
textAlign='Right' />
      <ColumnDirective field='CustomerID' headerText='CustomerID'
width='150' />
      <ColumnDirective field='Freight' headerText='Freight' width='120'
format='C2' />
      <ColumnDirective field='ShipAddress' headerText='ShipAddress'
width='150' />
    </ColumnsDirective>
  </GridComponent>
</div>)
};
export default App;

```

APP.TSX

```

import { ChangeEventArgs, SwitchComponent } from '@syncfusion/ej2-react-
buttons';
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid: GridComponent | null;
  const onChange = (args: ChangeEventArgs) => {
    (grid as GridComponent).enableStickyHeader = args.checked;
  }
  return (<div>
    <label style={{ padding: "30px 20px 0 0" }}>Enable/Disable Sticky Header
</label>
    <SwitchComponent change={onChange}></SwitchComponent>
    <GridComponent ref={g => grid = g} dataSource={data} >
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='OrderID' width='120'
textAlign='Right' />
        <ColumnDirective field='CustomerID' headerText='CustomerID'
width='150' />
        <ColumnDirective field='Freight' headerText='Freight' width='120'
format='C2' />
        <ColumnDirective field='ShipAddress' headerText='ShipAddress'
width='150' />
      </ColumnsDirective>
    </GridComponent>
  </div>)
};
export default App;

```

DATASOURCE.JSX

```

export let data = createLazyLoadData();
function createLazyLoadData() {
  let lazyLoadData = [];
  let customerid = ['VINET', 'TOMSP', 'HANAR', 'VICTE', 'SUPRD', 'HANAR',
'CHOPS', 'RICSU', 'WELLI', 'HILAA', 'ERNSH', 'CENTC',
'OTTIK', 'QUEDE', 'RATTC', 'ERNSH', 'FOLKO', 'BLONP', 'WARTH', 'FRANK',
'GROSR', 'WHITC', 'WARTH', 'SPLIR', 'RATTC', 'QUICK', 'VINET',
'MAGAA', 'TORTU', 'MORGK', 'BERGS', 'LEHMS', 'BERGS', 'ROMEY', 'ROMEY',
'LILAS', 'LEHMS', 'QUICK', 'QUICK', 'RICAR', 'REGGC', 'BSBEV',
'COMMI', 'QUEDE', 'TRADH', 'TORTU', 'RATTC', 'VINET', 'LILAS', 'BLONP',
'HUNGO', 'RICAR', 'MAGAA', 'WANDK', 'SUPRD', 'GODOS', 'TORTU',
'OLDWO', 'ROMEY', 'LONEP', 'ANATR', 'HUNGO', 'THEBI', 'DUMON', 'WANDK',
'QUICK', 'RATTC', 'ISLAT', 'RATTC', 'LONEP', 'ISLAT', 'TORTU',
'WARTH', 'ISLAT', 'PERIC', 'KOENE', 'SAVEA', 'KOENE', 'BOLID', 'FOLKO',
'FURIB', 'SPLIR', 'LILAS', 'BONAP', 'MEREP', 'WARTH', 'VICTE',
'HUNGO', 'PRINI', 'FRANK', 'OLDWO', 'MEREP', 'BONAP', 'SIMOB', 'FRANK',
'LEHMS', 'WHITC', 'QUICK', 'RATTC', 'FAMIA'];
  let product = ['Chai', 'Chang', 'Aniseed Syrup', 'Chef Anton\'s Cajun
Seasoning', 'Chef Anton\'s Gumbo Mix', 'Grandma\'s Boysenberry Spread',
'Uncle Bob\'s Organic Dried Pears', 'Northwoods Cranberry Sauce', 'Mishi
Kobe Niku', 'Ikura', 'Queso Cabrales', 'Queso Manchego La Pastora', 'Konbu',
'Tofu', 'Genen Shouyu', 'Pavlova', 'Alice Mutton', 'Carnarvon Tigers',
'Teatime Chocolate Biscuits', 'Sir Rodney\'s Marmalade', 'Sir Rodney\'s
Scones',
'Gustaf\'s Knäckebröd', 'Tunnbröd', 'Guaraná Fantástica', 'NuNuCa Nuß-
Nougat-Creme', 'Gumbär Gummibärchen', 'Schoggi Schokolade', 'Rössle
Sauerkraut',
'Thüringer Rostbratwurst', 'Nord-Ost Matjeshering', 'Gorgonzola Telino',
'Mascarpone Fabioli', 'Geitost', 'Sasquatch Ale', 'Steeleye Stout', 'Inlagd
Sill',
'Gravad lax', 'Côte de Blaye', 'Chartreuse verte', 'Boston Crab Meat',
'Jack\'s New England Clam Chowder', 'Singaporean Hokkien Fried Mee', 'Ipoh
Coffee',
'Gula Malacca', 'Rogede sild', 'Spegesild', 'Zaanse koeken', 'Chocolade',
'Maxilaku', 'Valkoinen suklaa', 'Manjimup Dried Apples', 'Filo Mix', 'Perth
Pasties',
'Tourtière', 'Pâté chinois', 'Gnocchi di nonna Alice', 'Ravioli Angelo',
'Escargots de Bourgogne', 'Raclette Courdavault', 'Camembert Pierrot', 'Sirop
d\'érable',
'Tarte au sucre', 'Vegie-spread', 'Wimmers gute Semmelknödel', 'Louisiana
Fiery Hot Pepper Sauce', 'Louisiana Hot Spiced Okra', 'Laughing Lumberjack
Lager', 'Scottish Longbreads',
'Gudbrandsdalsost', 'Outback Lager', 'Flotemysost', 'Mozzarella di
Giovanni', 'Röd Kaviar', 'Longlife Tofu', 'Rhönbräu Klosterbier',
'Lakkalikööri', 'Original Frankfurter grüne Soße'];
  let customername = ['Maria', 'Ana Trujillo', 'Antonio Moreno', 'Thomas
Hardy', 'Christina Berglund', 'Hanna Moos', 'Frédérique Citeaux', 'Martín
Sommer', 'Laurence Lebihan', 'Elizabeth Lincoln',
'Victoria Ashworth', 'Patricio Simpson', 'Francisco Chang', 'Yang Wang',
'Pedro Afonso', 'Elizabeth Brown', 'Sven Ottlieb', 'Janine Labrune', 'Ann
Devon', 'Roland Mendel', 'Aria Cruz', 'Diego Roel',
'Martine Rancé', 'Maria Larsson', 'Peter Franken', 'Carine Schmitt',
'Paolo Accorti', 'Lino Rodriguez', 'Eduardo Saavedra', 'José Pedro Freyre',
'André Fonseca', 'Howard Snyder', 'Manuel Pereira'];

```



```

'Mario Pontes', 'Carlos Hernández', 'Yoshi Latimer', 'Patricia McKenna',
'Helen Bennett', 'Philip Cramer', 'Daniel Tonini', 'Annette Roulet', 'Yoshi
Tannamuri', 'John Steel', 'Renate Messner', 'Jaime Yorres',
'Carlos González', 'Felipe Izquierdo', 'Fran Wilson', 'Giovanni Rovelli',
'Catherine Dewey', 'Jean Fresnière', 'Alexander Feuer', 'Simon Crowther',
'Yvonne Moncada', 'Rene Phillips', 'Henriette Pfalzheim',
'Marie Bertrand', 'Guillermo Fernández', 'Georg PIPPS', 'Isabel de
Castro', 'Bernardo Batista', 'Lúcia Carvalho', 'Horst Kloss', 'Sergio
Gutiérrez', 'Paula Wilson', 'Maurizio Moroni', 'Janete Limeira', 'Michael
Holz',
'Alejandra Camino', 'Jonas Bergulfsen', 'Jose Pavarotti', 'Hari Kumar',
'Jytte Petersen', 'Dominique Perrier', 'Art Braunschweiger', 'Pascale
Cartrain', 'Liz Nixon', 'Liu Wong', 'Karin Josephs', 'Miguel Angel Paolino',
'Anabela Domingues', 'Helvetius Nagy', 'Palle Ibsen', 'Mary Saveley',
'Paul Henriot', 'Rita Müller', 'Pirkko Koskitalo', 'Paula Parente', 'Karl
Jablonski', 'Matti Karttunen', 'Zbyszek Piestrzeniewicz'];
let shipaddress = ['507 - 20th Ave. E.\r\nApt. 2A', '908 W. Capital Way',
'722 Moss Bay Blvd.', '4110 Old Redmond Rd.', '14 Garrett Hill', 'Coventry
House\r\nMiner Rd.', 'Edgeham Hollow\r\nWinchester Way',
'4726 - 11th Ave. N.E.', '7 Houndstooth Rd.', '59 rue de l\'Abbaye',
'Luisenstr. 48', '908 W. Capital Way', '722 Moss Bay Blvd.', '4110 Old
Redmond Rd.', '14 Garrett Hill', 'Coventry House\r\nMiner Rd.', 'Edgeham
Hollow\r\nWinchester Way',
'7 Houndstooth Rd.', '2817 Milton Dr.', 'Kirchgasse 6', 'Sierras de
Granada 9993', 'Mehrheimerstr. 369', 'Rua da Panificadora, 12', '2817 Milton
Dr.', 'Mehrheimerstr. 369'];
let frieght = [10, 24, 12, 48, 36, 12, 102, 18, 102,
1, 500, 2, 40, 250, 500, 20, 16, 10, 30, 24, 24, 12,
355, 20, 100];
let OrderID = 10248;
for (let i = 0; i < 5000; i++) {
    lazyLoadData.push({
        'OrderID': OrderID + i,
        'CustomerID': customerid[Math.floor(Math.random() *
customerid.length)],
        'CustomerName': customername[Math.floor(Math.random() *
customername.length)],
        'shipAddress': shipaddress[Math.floor(Math.random() *
shipaddress.length)],
        'ProductName': product[Math.floor(Math.random() *
product.length)],
        'ProductID': i,
        'Frieght': frieght[Math.floor(Math.random() * frieght.length)]
    })
}
return lazyLoadData;
}

```

DATASOURCE.TSX

```

export let data: Object[] = createLazyLoadData();
function createLazyLoadData(): Object[] {
    let lazyLoadData: Object[] = [];
    let customerid: string[] = ['VINET', 'TOMSP', 'HANAR', 'VICTE', 'SUPRD',
'HANAR', 'CHOPS', 'RICSU', 'WELLI', 'HILAA', 'ERNSH', 'CENTC',

```

```

'OTTIK', 'QUEDE', 'RATTC', 'ERNSH', 'FOLKO', 'BLONP', 'WARTH', 'FRANK',
'GROSR', 'WHITC', 'WARTH', 'SPLIR', 'RATTC', 'QUICK', 'VINET',
'MAGAA', 'TORTU', 'MORGK', 'BERGS', 'LEHMS', 'BERGS', 'ROMEY', 'ROMEY',
'LILAS', 'LEHMS', 'QUICK', 'QUICK', 'RICAR', 'REGGC', 'BSBEV',
'COMMI', 'QUEDE', 'TRADH', 'TORTU', 'RATTC', 'VINET', 'LILAS', 'BLONP',
'HUNGO', 'RICAR', 'MAGAA', 'WANDK', 'SUPRD', 'GODOS', 'TORTU',
'OLDWO', 'ROMEY', 'LONEP', 'ANATR', 'HUNGO', 'THEBI', 'DUMON', 'WANDK',
'QUICK', 'RATTC', 'ISLAT', 'RATTC', 'LONEP', 'ISLAT', 'TORTU',
'WARTH', 'ISLAT', 'PERIC', 'KOENE', 'SAVEA', 'KOENE', 'BOLID', 'FOLKO',
'FURIB', 'SPLIR', 'LILAS', 'BONAP', 'MERE', 'WARTH', 'VICTE',
'HUNGO', 'PRINI', 'FRANK', 'OLDWO', 'MERE', 'BONAP', 'SIMOB', 'FRANK',
'LEHMS', 'WHITC', 'QUICK', 'RATTC', 'FAMIA'];
let product: string[] = ['Chai', 'Chang', 'Aniseed Syrup', 'Chef Anton\'s
Cajun Seasoning', 'Chef Anton\'s Gumbo Mix', 'Grandma\'s Boysenberry Spread',
'Uncle Bob\'s Organic Dried Pears', 'Northwoods Cranberry Sauce', 'Mishi
Kobe Niku', 'Ikura', 'Queso Cabrales', 'Queso Manchego La Pastora', 'Konbu',
'Tofu', 'Genen Shouyu', 'Pavlova', 'Alice Mutton', 'Carnarvon Tigers',
'Teatime Chocolate Biscuits', 'Sir Rodney\'s Marmalade', 'Sir Rodney\'s
Scones',
'Gustaf\'s Knäckebröd', 'Tunnbröd', 'Guaraná Fantástica', 'NuNuCa Nuß-
Nougat-Creme', 'Gumbär Gummibärchen', 'Schoggi Schokolade', 'Rössle
Sauerkraut',
'Thüringer Rostbratwurst', 'Nord-Ost Matjeshering', 'Gorgonzola Telino',
'Mascarpone Fabioli', 'Geitost', 'Sasquatch Ale', 'Steeleye Stout', 'Inlagd
Sill',
'Gravad lax', 'Côte de Blaye', 'Chartreuse verte', 'Boston Crab Meat',
'Jack\'s New England Clam Chowder', 'Singaporean Hokkien Fried Mee', 'Ipoh
Coffee',
'Gula Malacca', 'Rogede sild', 'Spegesild', 'Zaanse koeken', 'Chocolade',
'Maxilaku', 'Valkoinen suklaa', 'Manjimup Dried Apples', 'Filo Mix', 'Perth
Pasties',
'Tourtière', 'Pâté chinois', 'Gnocchi di nonna Alice', 'Ravioli Angelo',
'Escargots de Bourgogne', 'Raclette Courdavault', 'Camembert Pierrot', 'Sirop
d\'érable',
'Tarte au sucre', 'Veggie-spread', 'Wimmers gute Semmelknödel', 'Louisiana
Fiery Hot Pepper Sauce', 'Louisiana Hot Spiced Okra', 'Laughing Lumberjack
Lager', 'Scottish Longbreads',
'Gudbrandsdalsost', 'Outback Lager', 'Flotemysost', 'Mozzarella di
Giovanni', 'Röd Kaviar', 'Longlife Tofu', 'Rhönbräu Klosterbier',
'Lakkalikööri', 'Original Frankfurter grüne Soße'];
let customername: string[] = ['Maria', 'Ana Trujillo', 'Antonio Moreno',
'Thomas Hardy', 'Christina Berglund', 'Hanna Moos', 'Frédérique Citeaux',
'Martín Sommer', 'Laurence Lebihan', 'Elizabeth Lincoln',
'Victoria Ashworth', 'Patricio Simpson', 'Francisco Chang', 'Yang Wang',
'Pedro Afonso', 'Elizabeth Brown', 'Sven Ottlieb', 'Janine Labrune', 'Ann
Devon', 'Roland Mendel', 'Aria Cruz', 'Diego Roel',
'Martine Rancé', 'Maria Larsson', 'Peter Franken', 'Carine Schmitt',
'Paolo Accorti', 'Lino Rodriguez', 'Eduardo Saavedra', 'José Pedro Freyre',
'André Fonseca', 'Howard Snyder', 'Manuel Pereira',
'Mario Pontes', 'Carlos Hernández', 'Yoshi Latimer', 'Patricia McKenna',
'Helen Bennett', 'Philip Cramer', 'Daniel Tonini', 'Annette Roulet', 'Yoshi
Tannamuri', 'John Steel', 'Renate Messner', 'Jaime Yorres',
'Carlos González', 'Felipe Izquierdo', 'Fran Wilson', 'Giovanni Rovelli',
'Catherine Dewey', 'Jean Fresnière', 'Alexander Feuer', 'Simon Crowther',
'Yvonne Moncada', 'Rene Phillips', 'Henriette Pfalzheim',
'Marie Bertrand', 'Guillermo Fernández', 'Georg Pippis', 'Isabel de
Castro', 'Bernardo Batista', 'Lúcia Carvalho', 'Horst Kloss', 'Sergio

```

```

Gutiérrez', 'Paula Wilson', 'Maurizio Moroni', 'Janete Limeira', 'Michael
Holz',
    'Alejandra Camino', 'Jonas Bergulfsen', 'Jose Pavarotti', 'Hari Kumar',
    'Jytte Petersen', 'Dominique Perrier', 'Art Braunschweiger', 'Pascale
Cartrain', 'Liz Nixon', 'Liu Wong', 'Karin Josephs', 'Miguel Angel Paolino',
    'Anabela Domingues', 'Helvetius Nagy', 'Palle Ibsen', 'Mary Saveley',
    'Paul Henriot', 'Rita Müller', 'Pirkko Koskitalo', 'Paula Parente', 'Karl
Jablonski', 'Matti Karttunen', 'Zbyszek Piestrzeniewicz'];
    let shipaddress: string[] = ['507 - 20th Ave. E.\r\nApt. 2A', '908 W.
Capital Way', '722 Moss Bay Blvd.', '4110 Old Redmond Rd.', '14 Garrett
Hill', 'Coventry House\r\nMiner Rd.', 'Edgeham Hollow\r\nWinchester Way',
    '4726 - 11th Ave. N.E.', '7 Houndstooth Rd.', '59 rue de l'Abbaye',
    'Luisenstr. 48', '908 W. Capital Way', '722 Moss Bay Blvd.', '4110 Old
Redmond Rd.', '14 Garrett Hill', 'Coventry House\r\nMiner Rd.', 'Edgeham
Hollow\r\nWinchester Way',
    '7 Houndstooth Rd.', '2817 Milton Dr.', 'Kirchgasse 6', 'Sierras de
Granada 9993', 'Mehrheimerstr. 369', 'Rua da Panificadora, 12', '2817 Milton
Dr.', 'Mehrheimerstr. 369'];
    let frieght: number[] = [10, 24, 12, 48, 36, 12, 102, 18, 102,
    1, 500, 2, 40, 250, 500, 20, 16, 10, 30, 24, 24, 12,
    355, 20, 100];
    let OrderID: number = 10248;
    for (let i: number = 0; i < 5000; i++) {
        lazyLoadData.push({
            'OrderID': OrderID + i,
            'CustomerID': customerid[Math.floor(Math.random() *
customerid.length)],
            'CustomerName': customername[Math.floor(Math.random() *
customername.length)],
            'shipAddress': shipaddress[Math.floor(Math.random() *
shipaddress.length)],
            'ProductName': product[Math.floor(Math.random() *
product.length)],
            'ProductID': i,
            'Frieght': frieght[Math.floor(Math.random() * frieght.length)]
        })
    }
    return lazyLoadData;
}

```

Scroll to selected row

The React Grid component allows you to scroll the grid content to the position of the selected row, ensuring that the selected row is automatically brought into view. This feature is particularly useful when dealing with a large dataset and wanting to maintain focus on the selected row. To achieve this, you can utilize the [rowSelected](#) event provided by the Grid.

The following example that demonstrates how to use the `rowSelected` event to scroll to the selected row:

APP.JSX

```

import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';

```

```

function App() {
  let grid;
  const dropDownData = [
    { text: 'Select count' },
    { text: '10', value: '10' },
    { text: '20', value: '20' },
    { text: '30', value: '30' },
    { text: '80', value: '80' },
    { text: '100', value: '100' },
    { text: '200', value: '200' },
    { text: '232', value: '232' },
    { text: '300', value: '300' },
    { text: '500', value: '500' },
    { text: '800', value: '800' },
    { text: '820', value: '850' },
    { text: '920', value: '920' },
    { text: '2020', value: '2020' },
    { text: '3000', value: '3000' },
    { text: '4000', value: '4000' },
    { text: '4999', value: '4999' }
  ];
  const onChange = (args) => {
    grid.selectionModule.selectRow(parseInt((args.value), 10));
  }
  const rowSelected = () => {
    const rowHeight =
      grid.getRows()[grid.getSelectedRowIndex()[0]].scrollHeight;
    grid.getContent().children[0].scrollTop = rowHeight *
      grid.getSelectedRowIndex()[0];
  }
  return (<div>
    <label style={{ padding: "30px 20px 0 0" }} > Select row index :</label>
    <DropDownListComponent index={0} width={200} dataSource={dropDownData}
    change={onChange}></DropDownListComponent>
    <GridComponent dataSource={data} height="315" width="100%"
    rowSelected={rowSelected} ref={g => grid = g}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='OrderID' width='120'
        textAlign='Right' />
        <ColumnDirective field='CustomerID' headerText='CustomerID'
        width='150' />
        <ColumnDirective field='Freight' headerText='Freight' width='120'
        format='C2' />
        <ColumnDirective field='ShipAddress' headerText='ShipAddress'
        width='150' />
      </ColumnsDirective>
    </GridComponent></div>)
};
export default App;

```

APP.TSX

```

import { ChangeEventArgs, DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { ColumnDirective, ColumnsDirective, GridComponent } from '@syncfusion/ej2-react-grids';

```

```

import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid: GridComponent | null;
  const dropDownData: { [key: string]: Object; }[] = [
    { text: 'Select count' },
    { text: '10', value: '10' },
    { text: '20', value: '20' },
    { text: '30', value: '30' },
    { text: '80', value: '80' },
    { text: '100', value: '100' },
    { text: '200', value: '200' },
    { text: '232', value: '232' },
    { text: '300', value: '300' },
    { text: '500', value: '500' },
    { text: '800', value: '800' },
    { text: '820', value: '850' },
    { text: '920', value: '920' },
    { text: '2020', value: '2020' },
    { text: '3000', value: '3000' },
    { text: '4000', value: '4000' },
    { text: '4999', value: '4999' }
  ];
  const onChange = (args: ChangeEventArgs) => {
    (grid as GridComponent).selectionModule.selectRow(parseInt((args.value as string), 10));
  }
  const rowSelected = () => {
    const rowHeight = (grid as GridComponent).getRows()[0].scrollHeight;
    (grid as GridComponent).getContent().children[0].scrollTop = rowHeight * (grid as GridComponent).getSelectedRowIndex();
  }
  return (
    <div>
      <label style={{ padding: "30px 20px 0 0" }} > Select row index :</label>
      <DropDownListComponent index={0} width={200} dataSource={dropDownData}
      change={onChange}></DropDownListComponent>
      <GridComponent dataSource={data} height="315" width="100%"
      rowSelected={rowSelected} ref={g => grid = g}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='OrderID' width='120'
          textAlign='Right' />
          <ColumnDirective field='CustomerID' headerText='CustomerID'
          width='150' />
          <ColumnDirective field='Freight' headerText='Freight' width='120'
          format='C2' />
          <ColumnDirective field='ShipAddress' headerText='ShipAddress'
          width='150' />
        </ColumnsDirective>
      </GridComponent></div>
    );
};
export default App;

```

DATASOURCE.JSX

```
export let data = createLazyLoadData();
```

```
function createLazyLoadData() {
  let lazyLoadData = [];
  let customerid = ['VINET', 'TOMSP', 'HANAR', 'VICTE', 'SUPRD', 'HANAR',
'CHOPS', 'RICSU', 'WELLI', 'HILAA', 'ERNSH', 'CENTC',
'OTTIK', 'QUEDE', 'RATTC', 'ERNSH', 'FOLKO', 'BLONP', 'WARTH', 'FRANK',
'GROSR', 'WHITC', 'WARTH', 'SPLIR', 'RATTC', 'QUICK', 'VINET',
'MAGAA', 'TORTU', 'MORGK', 'BERGS', 'LEHMS', 'BERGS', 'ROMEY', 'ROMEY',
'LILAS', 'LEHMS', 'QUICK', 'QUICK', 'RICAR', 'REGGC', 'BSBEV',
'COMMI', 'QUEDE', 'TRADH', 'TORTU', 'RATTC', 'VINET', 'LILAS', 'BLONP',
'HUNGO', 'RICAR', 'MAGAA', 'WANDK', 'SUPRD', 'GODOS', 'TORTU',
'OLDWO', 'ROMEY', 'LONEP', 'ANATR', 'HUNGO', 'THEBI', 'DUMON', 'WANDK',
'QUICK', 'RATTC', 'ISLAT', 'ISLAT', 'RATTC', 'LONEP', 'ISLAT', 'TORTU',
'WARTH', 'ISLAT', 'PERIC', 'KOENE', 'SAVEA', 'KOENE', 'BOLID', 'FOLKO',
'FURIB', 'SPLIR', 'LILAS', 'BONAP', 'MEREP', 'WARTH', 'VICTE',
'HUNGO', 'PRINI', 'FRANK', 'OLDWO', 'MEREP', 'BONAP', 'SIMOB', 'FRANK',
'LEHMS', 'WHITC', 'QUICK', 'RATTC', 'FAMIA'];
  let product = ['Chai', 'Chang', 'Aniseed Syrup', 'Chef Anton\'s Cajun
Seasoning', 'Chef Anton\'s Gumbo Mix', 'Grandma\'s Boysenberry Spread',
'Uncle Bob\'s Organic Dried Pears', 'Northwoods Cranberry Sauce', 'Mishi
Kobe Niku', 'Ikura', 'Queso Cabrales', 'Queso Manchego La Pastora', 'Konbu',
'Tofu', 'Genen Shouyu', 'Pavlova', 'Alice Mutton', 'Carnarvon Tigers',
'Teatime Chocolate Biscuits', 'Sir Rodney\'s Marmalade', 'Sir Rodney\'s
Scones',
'Gustaf\'s Knäckebröd', 'Tunnbröd', 'Guaraná Fantástica', 'NuNuCa Nuß-
Nougat-Creme', 'Gumbär Gummibärchen', 'Schoggi Schokolade', 'Rössle
Sauerkraut',
'Thüringer Rostbratwurst', 'Nord-Ost Matjeshering', 'Gorgonzola Telino',
'Mascarpone Fabioli', 'Geitost', 'Sasquatch Ale', 'Steeleye Stout', 'Inlagd
Sill',
'Gravad lax', 'Côte de Blaye', 'Chartreuse verte', 'Boston Crab Meat',
'Jack\'s New England Clam Chowder', 'Singaporean Hokkien Fried Mee', 'Ipoh
Coffee',
'Gula Malacca', 'Rogede sild', 'Spegesild', 'Zaanse koeken', 'Chocolade',
'Maxilaku', 'Valkoinen suklaa', 'Manjimup Dried Apples', 'Filo Mix', 'Perth
Pasties',
'Tourtière', 'Pâté chinois', 'Gnocchi di nonna Alice', 'Ravioli Angelo',
'Escargots de Bourgogne', 'Raclette Courdavault', 'Camembert Pierrot', 'Sirop
d\'érable',
'Tarte au sucre', 'Veggie-spread', 'Wimmers gute Semmelknödel', 'Louisiana
Fiery Hot Pepper Sauce', 'Louisiana Hot Spiced Okra', 'Laughing Lumberjack
Lager', 'Scottish Longbreads',
'Gudbrandsdalsost', 'Outback Lager', 'Flotemysost', 'Mozzarella di
Giovanni', 'Röd Kaviar', 'Longlife Tofu', 'Rhönbräu Klosterbier',
'Lakkalikööri', 'Original Frankfurter grüne Soße'];
  let customername = ['Maria', 'Ana Trujillo', 'Antonio Moreno', 'Thomas
Hardy', 'Christina Berglund', 'Hanna Moos', 'Frédérique Citeaux', 'Martín
Sommer', 'Laurence Lebihan', 'Elizabeth Lincoln',
'Victoria Ashworth', 'Patricio Simpson', 'Francisco Chang', 'Yang Wang',
'Pedro Afonso', 'Elizabeth Brown', 'Sven Ottlieb', 'Janine Labrune', 'Ann
Devon', 'Roland Mendel', 'Aria Cruz', 'Diego Roel',
'Martine Rancé', 'Maria Larsson', 'Peter Franken', 'Carine Schmitt',
'Paolo Accorti', 'Lino Rodriguez', 'Eduardo Saavedra', 'José Pedro Freyre',
'André Fonseca', 'Howard Snyder', 'Manuel Pereira',
'Mario Pontes', 'Carlos Hernández', 'Yoshi Latimer', 'Patricia McKenna',
'Helen Bennett', 'Philip Cramer', 'Daniel Tonini', 'Annette Roulet', 'Yoshi
Tannamuri', 'John Steel', 'Renate Messner', 'Jaime Yorres',
```

```

    'Carlos González', 'Felipe Izquierdo', 'Fran Wilson', 'Giovanni Rovelli',
    'Catherine Dewey', 'Jean Fresnière', 'Alexander Feuer', 'Simon Crowther',
    'Yvonne Moncada', 'Rene Phillips', 'Henriette Pfalzheim',
    'Marie Bertrand', 'Guillermo Fernández', 'Georg Pippis', 'Isabel de
    Castro', 'Bernardo Batista', 'Lúcia Carvalho', 'Horst Kloss', 'Sergio
    Gutiérrez', 'Paula Wilson', 'Maurizio Moroni', 'Janete Limeira', 'Michael
    Holz',
    'Alejandra Camino', 'Jonas Bergulfsen', 'Jose Pavarotti', 'Hari Kumar',
    'Jytte Petersen', 'Dominique Perrier', 'Art Braunschweiger', 'Pascale
    Cartrain', 'Liz Nixon', 'Liu Wong', 'Karin Josephs', 'Miguel Angel Paolino',
    'Anabela Domingues', 'Helvetius Nagy', 'Palle Ibsen', 'Mary Saveley',
    'Paul Henriot', 'Rita Müller', 'Pirkko Koskitalo', 'Paula Parente', 'Karl
    Jablonski', 'Matti Karttunen', 'Zbyszek Piestrzeniewicz'];
    let shipaddress = ['507 - 20th Ave. E.\r\nApt. 2A', '908 W. Capital Way',
    '722 Moss Bay Blvd.', '4110 Old Redmond Rd.', '14 Garrett Hill', 'Coventry
    House\r\nMiner Rd.', 'Edgeham Hollow\r\nWinchester Way',
    '4726 - 11th Ave. N.E.', '7 Houndstooth Rd.', '59 rue de l\'Abbaye',
    'Luisenstr. 48', '908 W. Capital Way', '722 Moss Bay Blvd.', '4110 Old
    Redmond Rd.', '14 Garrett Hill', 'Coventry House\r\nMiner Rd.', 'Edgeham
    Hollow\r\nWinchester Way',
    '7 Houndstooth Rd.', '2817 Milton Dr.', 'Kirchgasse 6', 'Sierras de
    Granada 9993', 'Mehrheimerstr. 369', 'Rua da Panificadora, 12', '2817 Milton
    Dr.', 'Mehrheimerstr. 369'];
    let frieght = [10, 24, 12, 48, 36, 12, 102, 18, 102,
    1, 500, 2, 40, 250, 500, 20, 16, 10, 30, 24, 24, 12,
    355, 20, 100];
    let OrderID = 10248;
    for (let i = 0; i < 5000; i++) {
        lazyLoadData.push({
            'OrderID': OrderID + i,
            'CustomerID': customerid[Math.floor(Math.random() *
customerid.length)],
            'CustomerName': customername[Math.floor(Math.random() *
customername.length)],
            'shipAddress': shipaddress[Math.floor(Math.random() *
shipaddress.length)],
            'ProductName': product[Math.floor(Math.random() *
product.length)],
            'ProductID': i,
            'Frieght': frieght[Math.floor(Math.random() * frieght.length)]
        })
    }
    return lazyLoadData;
}

```

DATASOURCE.TSX

```

export let data: Object[] = createLazyLoadData();
function createLazyLoadData(): Object[] {
    let lazyLoadData: Object[] = [];
    let customerid: string[] = ['VINET', 'TOMSP', 'HANAR', 'VICTE', 'SUPRD',
    'HANAR', 'CHOPS', 'RICSU', 'WELLI', 'HILAA', 'ERNSH', 'CENTC',
    'OTTIK', 'QUEDE', 'RATTC', 'ERNSH', 'FOLKO', 'BLONP', 'WARTH', 'FRANK',
    'GROSR', 'WHITC', 'WARTH', 'SPLIR', 'RATTC', 'QUICK', 'VINET',
    'MAGAA', 'TORTU', 'MORGK', 'BERGS', 'LEHMS', 'BERGS', 'ROMEY', 'ROMEY',
    'LILAS', 'LEHMS', 'QUICK', 'QUICK', 'RICAR', 'REGGC', 'BSBEV',

```

```

    'COMMI', 'QUEDE', 'TRADH', 'TORTU', 'RATTC', 'VINET', 'LILAS', 'BLONP',
    'HUNGO', 'RICAR', 'MAGAA', 'WANDK', 'SUPRD', 'GODOS', 'TORTU',
    'OLDWO', 'ROMEY', 'LONEP', 'ANATR', 'HUNGO', 'THEBI', 'DUMON', 'WANDK',
    'QUICK', 'RATTC', 'ISLAT', 'RATTC', 'LONEP', 'ISLAT', 'TORTU',
    'WARTH', 'ISLAT', 'PERIC', 'KOENE', 'SAVEA', 'KOENE', 'BOLID', 'FOLKO',
    'FURIB', 'SPLIR', 'LILAS', 'BONAP', 'MEREP', 'WARTH', 'VICTE',
    'HUNGO', 'PRINI', 'FRANK', 'OLDWO', 'MEREP', 'BONAP', 'SIMOB', 'FRANK',
    'LEHMS', 'WHITC', 'QUICK', 'RATTC', 'FAMIA'];
    let product: string[] = ['Chai', 'Chang', 'Aniseed Syrup', 'Chef Anton\'s
    Cajun Seasoning', 'Chef Anton\'s Gumbo Mix', 'Grandma\'s Boysenberry Spread',
    'Uncle Bob\'s Organic Dried Pears', 'Northwoods Cranberry Sauce', 'Mishi
    Kobe Niku', 'Ikura', 'Queso Cabrales', 'Queso Manchego La Pastora', 'Konbu',
    'Tofu', 'Genen Shouyu', 'Pavlova', 'Alice Mutton', 'Carnarvon Tigers',
    'Teatime Chocolate Biscuits', 'Sir Rodney\'s Marmalade', 'Sir Rodney\'s
    Scones',
    'Gustaf\'s Knäckebröd', 'Tunnbröd', 'Guaraná Fantástica', 'NuNuCa Nuß-
    Nougat-Creme', 'Gumbär Gummibärchen', 'Schoggi Schokolade', 'Rössle
    Sauerkraut',
    'Thüringer Rostbratwurst', 'Nord-Ost Matjeshering', 'Gorgonzola Telino',
    'Mascarpone Fabioli', 'Geitost', 'Sasquatch Ale', 'Steeleye Stout', 'Inlagd
    Sill',
    'Gravad lax', 'Côte de Blaye', 'Chartreuse verte', 'Boston Crab Meat',
    'Jack\'s New England Clam Chowder', 'Singaporean Hokkien Fried Mee', 'Ipoh
    Coffee',
    'Gula Malacca', 'Rogede sild', 'Spegesild', 'Zaanse koeken', 'Chocolade',
    'Maxilaku', 'Valkoinen suklaa', 'Manjimup Dried Apples', 'Filo Mix', 'Perth
    Pasties',
    'Tourtière', 'Pâté chinois', 'Gnocchi di nonna Alice', 'Ravioli Angelo',
    'Escargots de Bourgogne', 'Raclette Courdavault', 'Camembert Pierrot', 'Sirop
    d\'érable',
    'Tarte au sucre', 'Veggie-spread', 'Wimmers gute Semmelknödel', 'Louisiana
    Fiery Hot Pepper Sauce', 'Louisiana Hot Spiced Okra', 'Laughing Lumberjack
    Lager', 'Scottish Longbreads',
    'Gudbrandsdalsost', 'Outback Lager', 'Flotemysost', 'Mozzarella di
    Giovanni', 'Röd Kaviar', 'Longlife Tofu', 'Rhönbräu Klosterbier',
    'Lakkaikööri', 'Original Frankfurter grüne Soße'];
    let customername: string[] = ['Maria', 'Ana Trujillo', 'Antonio Moreno',
    'Thomas Hardy', 'Christina Berglund', 'Hanna Moos', 'Frédérique Citeaux',
    'Martín Sommer', 'Laurence Lebihan', 'Elizabeth Lincoln',
    'Victoria Ashworth', 'Patricio Simpson', 'Francisco Chang', 'Yang Wang',
    'Pedro Afonso', 'Elizabeth Brown', 'Sven Ottlieb', 'Janine Labrune', 'Ann
    Devon', 'Roland Mendel', 'Aria Cruz', 'Diego Roel',
    'Martine Rancé', 'Maria Larsson', 'Peter Franken', 'Carine Schmitt',
    'Paolo Accorti', 'Lino Rodriguez', 'Eduardo Saavedra', 'José Pedro Freyre',
    'André Fonseca', 'Howard Snyder', 'Manuel Pereira',
    'Mario Pontes', 'Carlos Hernández', 'Yoshi Latimer', 'Patricia McKenna',
    'Helen Bennett', 'Philip Cramer', 'Daniel Tonini', 'Annette Roulet', 'Yoshi
    Tannamuri', 'John Steel', 'Renate Messner', 'Jaime Yorres',
    'Carlos González', 'Felipe Izquierdo', 'Fran Wilson', 'Giovanni Rovelli',
    'Catherine Dewey', 'Jean Fresnière', 'Alexander Feuer', 'Simon Crowther',
    'Yvonne Moncada', 'Rene Phillips', 'Henriette Pfalzheim',
    'Marie Bertrand', 'Guillermo Fernández', 'Georg Pippis', 'Isabel de
    Castro', 'Bernardo Batista', 'Lúcia Carvalho', 'Horst Kloss', 'Sergio
    Gutiérrez', 'Paula Wilson', 'Maurizio Moroni', 'Janete Limeira', 'Michael
    Holz',

```



```

'Alejandra Camino', 'Jonas Bergulfsen', 'Jose Pavarotti', 'Hari Kumar',
'Jytte Petersen', 'Dominique Perrier', 'Art Braunschweiger', 'Pascale
Cartrain', 'Liz Nixon', 'Liu Wong', 'Karin Josephs', 'Miguel Angel Paolino',
'Anabela Domingues', 'Helvetius Nagy', 'Palle Ibsen', 'Mary Saveley',
'Paul Henriot', 'Rita Müller', 'Pirkko Koskitalo', 'Paula Parente', 'Karl
Jablonski', 'Matti Karttunen', 'Zbyszek Piestrzeniewicz'];
let shipaddress: string[] = ['507 - 20th Ave. E.\r\nApt. 2A', '908 W.
Capital Way', '722 Moss Bay Blvd.', '4110 Old Redmond Rd.', '14 Garrett
Hill', 'Coventry House\r\nMiner Rd.', 'Edgeham Hollow\r\nWinchester Way',
'4726 - 11th Ave. N.E.', '7 Houndstooth Rd.', '59 rue de l'Abbaye',
'Luisenstr. 48', '908 W. Capital Way', '722 Moss Bay Blvd.', '4110 Old
Redmond Rd.', '14 Garrett Hill', 'Coventry House\r\nMiner Rd.', 'Edgeham
Hollow\r\nWinchester Way',
'7 Houndstooth Rd.', '2817 Milton Dr.', 'Kirchgasse 6', 'Sierras de
Granada 9993', 'Mehrheimerstr. 369', 'Rua da Panificadora, 12', '2817 Milton
Dr.', 'Mehrheimerstr. 369'];
let frieght: number[] = [10, 24, 12, 48, 36, 12, 102, 18, 102,
1, 500, 2, 40, 250, 500, 20, 16, 10, 30, 24, 24, 12,
355, 20, 100];
let OrderID: number = 10248;
for (let i: number = 0; i < 5000; i++) {
    lazyLoadData.push({
        'OrderID': OrderID + i,
        'CustomerID': customerid[Math.floor(Math.random() *
customerid.length)],
        'CustomerName': customername[Math.floor(Math.random() *
customername.length)],
        'shipAddress': shipaddress[Math.floor(Math.random() *
shipaddress.length)],
        'ProductName': product[Math.floor(Math.random() *
product.length)],
        'ProductID': i,
        'Frieght': frieght[Math.floor(Math.random() * frieght.length)]
    })
}
return lazyLoadData;
}

```

Hide the empty placehoder of scrollbar

The Syncfusion Grid component provides a feature to hide the empty placeholder of the scrollbar, offering a cleaner interface without unnecessary scrollbars. To achieve this, you can utilize the [hideScroll](#) method. This method allows you to determine whether the scrollbar should be hidden based on the content's overflow.

The following example that demonstrates how to use the `hideScroll` method inside the `dataBound` event:

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
'@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    let grid;
    const dataBound = () => {

```

```

    grid.hideScroll();
  };
  return (<div>
    <GridComponent dataSource={data.slice(0, 2)} dataBound={dataBound}
    height='312' ref={g => grid = g}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='OrderID' width='120'
        textAlign='Right' />
        <ColumnDirective field='CustomerID' headerText='CustomerID'
        width='150' />
        <ColumnDirective field='EmployeeID' headerText='EmployeeID'
        width='120' textAlign='Right' />
        <ColumnDirective field='ShipCity' headerText='ShipCity' width='150'
        />
        <ColumnDirective field='ShipCountry' headerText='ShipCountry'
        width='150' />
        <ColumnDirective field='ShipName' headerText='ShipName' width='150'
        />
      </ColumnsDirective>
    </GridComponent>
  </div>);
}
;
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid: GridComponent | null;
  const dataBound = () => {
    (grid as GridComponent).hideScroll();
  }
  return (<div>
    <GridComponent dataSource={data.slice(0, 2)} dataBound={dataBound}
    height='312' ref={g => grid = g}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='OrderID' width='120'
        textAlign='Right' />
        <ColumnDirective field='CustomerID' headerText='CustomerID'
        width='150' />
        <ColumnDirective field='EmployeeID' headerText='EmployeeID'
        width='120' textAlign='Right' />
        <ColumnDirective field='ShipCity' headerText='ShipCity' width='150'
        />
        <ColumnDirective field='ShipCountry' headerText='ShipCountry'
        width='150' />
        <ColumnDirective field='ShipName' headerText='ShipName' width='150'
        />
      </ColumnsDirective>
    </GridComponent>
  </div>);
};

```

```
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
```

```

      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),

```

```

      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }
  ]
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',

```

```

        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]
  };

```

Searching in React Grid component

The Syncfusion React Grid includes a powerful built-in searching feature that allows users to search for specific data within the grid. This feature enables efficient filtering of grid records based on user-defined search criteria, making it easier to locate and display relevant information. Whether you have a large dataset or simply need to find specific records quickly, the search feature provides a convenient solution.

To use the searching feature, need to inject **Search** module in the grid and set the [allowSearching](#) property to **true** to enable the searching feature in the grid.

To further enhance the search functionality, you can integrate a search text box directly into the grid's toolbar. This allows users to enter search criteria conveniently within the grid interface. To add the search item to the grid's toolbar, use the [toolbar](#) property and add **Search** item.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Inject, Search, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  const toolbarOptions = ['Search'];
  return (
    <GridComponent dataSource={data} toolbar={toolbarOptions}
    height={272}>
      <ColumnsDirective>

```

```

        <ColumnDirective field='OrderID' width='100'
textAlign="Right"/>
        <ColumnDirective field='CustomerID' width='100' />
        <ColumnDirective field='EmployeeID' width='100'
textAlign="Right"/>
        <ColumnDirective field='Freight' width='100' format="C2"
textAlign="Right"/>
        <ColumnDirective field='ShipCountry' width='100' />
    </ColumnsDirective>
    <Inject services={[Search, Toolbar]} />
</GridComponent>;
};
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
'@syncfusion/ej2-react-grids';
import { Inject, Search, Toolbar, ToolbarItems } from '@syncfusion/ej2-react-
grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    const toolbarOptions: ToolbarItems[] = ['Search'];
    return (
        <GridComponent dataSource={data} toolbar={toolbarOptions}
height={272}>
            <ColumnsDirective>
                <ColumnDirective field='OrderID' width='100'
textAlign="Right"/>
                <ColumnDirective field='CustomerID' width='100' />
                <ColumnDirective field='EmployeeID' width='100'
textAlign="Right"/>
                <ColumnDirective field='Freight' width='100' format="C2"
textAlign="Right"/>
                <ColumnDirective field='ShipCountry' width='100' />
            </ColumnsDirective>
            <Inject services={[Search, Toolbar]} />
        </GridComponent>
    );
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),

```



```

        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),

```

```

        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]
};

```

DATASOURCE.TSX

```
export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
]
```

```

{
  OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
  ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
  ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
},
{
  OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
  ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
  ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
},
{
  OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
  ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
  ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
},
{
  OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
  ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
  ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
},
{
  OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
  ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
  ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
},
{
  OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
  ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
  ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
},
{
  OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
  ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
  ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
},
{

```

```

    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
    Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
    ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
    Freight: 48.29, Verified: !0
  }];

```

The clear icon is shown in the Data Grid search text box when it is focused on search text or after typing the single character in the search text box. A single click of the clear icon clears the text in the search box as well as the search results in the Grid.

Initial search

By default, the search operation can be performed on the grid data after the grid renders. However, there might be scenarios where need to perform a search operation on the grid data during the initial rendering of the grid. In such cases, you can make use of the initial search feature provided by the grid.

To apply search at initial rendering, need to set the following properties in the [searchSettings](#) object.

Property | Description

startswith | Checks whether a value begins with the specified value.

endswith | Checks whether a value ends with the specified value.

contains | Checks whether a value contains with the specified value.

wildcard | Processes one or more search patterns using the “*” symbol, returning values that match the given patterns.

like | Processes a single search pattern using the “%” symbol, retrieving values that match the specified pattern.

equal | Checks whether a value equal to the specified value.

notequal | Checks whether a value not equal to the specified value.

These operators provide flexibility in defining the search behavior and allow you to perform different types of comparisons based on your requirements.

The following example demonstrates how to set the `searchSettings.operator` property based on changing the dropdown value using the [change](#) event of the [DropDownList](#) component.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent,
SearchSettingsModel } from '@syncfusion/ej2-react-grids';
import { Inject, Search, Toolbar, ToolbarItems } from '@syncfusion/ej2-react-grids';
import React, { useState } from 'react';
import { data } from './datasource';
import { DropDownListComponent, ChangeEventArgs } from '@syncfusion/ej2-react-dropdowns';
function App() {
  const [searchOptions, setSearchOptions] = useState({ operator: 'contains' });
  const toolbarOptions = ['Search'];
  const ddlData = [

```

```

    { text: 'startswith', value: 'startswith' },
    { text: 'endswith', value: 'endswith' },
    { text: 'wildcard', value: 'wildcard' },
    { text: 'like', value: 'like' },
    { text: 'equal', value: 'equal' },
    { text: 'notequal', value: 'notequal' },
  ];
  const valueChange = (args) => {
    const searchOperator = { operator: args.value };
    setSearchOptions(searchOperator);
  }
  return (<div>
    <label style={{ padding: "10px 10px 26px 0" }}>Change the search
operators:</label>
    <DropDownListComponent id="value" index={0} width={100}
dataSource={ddlData} change={valueChange}></DropDownListComponent>
    <GridComponent dataSource={data} toolbar={toolbarOptions}
searchSettings={searchOptions}
height={272}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' width='100' textAlign="Right" />
        <ColumnDirective field='CustomerID' width='100' />
        <ColumnDirective field='EmployeeID' width='100' textAlign="Right" />
        <ColumnDirective field='Freight' width='100' format="C2"
textAlign="Right" />
        <ColumnDirective field='ShipCountry' width='100' />
      </ColumnsDirective>
      <Inject services={[Search, Toolbar]} />
    </GridComponent></div>
  );
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent,
SearchSettingsModel } from '@syncfusion/ej2-react-grids';
import { Inject, Search, Toolbar, ToolbarItems } from '@syncfusion/ej2-react-
grids';
import React, { useState } from 'react';
import { data } from './datasource';
import { DropDownListComponent, ChangeEventArgs } from '@syncfusion/ej2-
react-dropdowns';
function App() {
  const [searchOptions, setSearchOptions] = useState<SearchSettingsModel>({
operator: 'contains' });
  const toolbarOptions: ToolbarItems[] = ['Search'];
  const ddlData: { [key: string]: Object; }[] = [
    { text: 'startswith', value: 'startswith' },
    { text: 'endswith', value: 'endswith' },
    { text: 'wildcard', value: 'wildcard' },
    { text: 'like', value: 'like' },
    { text: 'equal', value: 'equal' },
    { text: 'notequal', value: 'notequal' },
  ];
  const valueChange = (args: ChangeEventArgs) => {
    const searchOperator: SearchSettingsModel = { operator: args.value };

```

```

    setSearchOptions(searchOperator);
  }
  return (<div>
    <label style={{ padding: "10px 10px 26px 0" }}>Change the search
operators:</label>
    <DropDownListComponent id="value" index={0} width={100}
dataSource={ddlData} change={valueChange}></DropDownListComponent>
    <GridComponent dataSource={data} toolbar={toolbarOptions}
searchSettings={searchOptions}
    height={272}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' width='100' textAlign="Right" />
        <ColumnDirective field='CustomerID' width='100' />
        <ColumnDirective field='EmployeeID' width='100' textAlign="Right" />
        <ColumnDirective field='Freight' width='100' format="C2"
textAlign="Right" />
        <ColumnDirective field='ShipCountry' width='100' />
      </ColumnsDirective>
      <Inject services={[Search, Toolbar]} />
    </GridComponent></div>
  );
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',

```



```

        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]
  ];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },

```

```

    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {

```

```

    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

Search by external button

The Syncfusion Grid component allows you to perform searches programmatically, enabling you to search for records using an external button instead of relying solely on the built-in search bar. This feature provides flexibility and allows for custom search implementations within your application. To search for records using an external button, you can utilize the [search](#) method provided by the Grid component.

The `search` method allows you to perform a search operation based on a search key or criteria. The following example demonstrates how to implement `search` by an external button using the following steps:

1. Add a button element outside of the grid component.
2. Attach a click event handler to the button.
3. Inside the event handler, get the reference of the grid component.
4. Invoke the `search` method of the grid by passing the search key as a parameter.

APP.JSX

```
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { employeeData } from './datasource';
function App() {
    let grid;
    const inputStyle = { width: '200px', display: 'inline-block' };
    const clickHandler = () => {
        const searchText =
document.getElementsByClassName('searchtext')[0].value;
        if (grid) {
            grid.search(searchText);
        }
    };
    return (<div>
        <div className="e-float-input" style={inputStyle}>
            <input type="text" className="searchtext"/>
            <span className="e-float-line"/>
            <label className="e-float-text">Search text</label>
        </div>
        <ButtonComponent onClick={clickHandler}>Search</ButtonComponent>
        <GridComponent dataSource={employeeData} height={260} ref={g
=> grid = g}>
            <ColumnsDirective>
                <ColumnDirective field='EmployeeID' headerText='Employee
ID' width='120' textAlign='Right'/>
                <ColumnDirective field='FirstName' headerText='First
Name' width='150'/>
                <ColumnDirective field='City' headerText='City'
width='150'/>
                <ColumnDirective field='Country' headerText='Country'
width='150'/>
            </ColumnsDirective>
        </GridComponent>
    </div>);
};
export default App;
```

APP.TSX

```
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
```

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { employeeData } from './datasource';
function App() {
  let grid: GridComponent | null;
  const inputStyle: object = { width: '200px', display: 'inline-block' };
  const clickHandler = () => {
    const searchText: string =
      (document.getElementsByClassName('searchtext')[0] as HTMLFormElement).value;
    if (grid) {
      (grid as GridComponent).search(searchText);
    }
  };
  return (
    <div>
      <div className="e-float-input" style={inputStyle}>
        <input type="text" className="searchtext" />
        <span className="e-float-line" />
        <label className="e-float-text">Search text</label>
      </div>
      <ButtonComponent onClick={clickHandler}>Search</ButtonComponent>
      <GridComponent dataSource={employeeData} height={260} ref={g => grid =
g}>
        <ColumnsDirective>
          <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='120' textAlign='Right' />
          <ColumnDirective field='FirstName' headerText='First Name'
width='150' />
          <ColumnDirective field='City' headerText='City' width='150' />
          <ColumnDirective field='Country' headerText='Country' width='150'
/ >
        </ColumnsDirective>
      </GridComponent>
    </div>
  )
};
export default App;

```

DATASOURCE.JSX

```

export let employeeData = [{
  'EmployeeID': 1,
  'LastName': 'Davolio',
  'FirstName': 'Nancy',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-664743600000),
  'HireDate': new Date(704692800000),
  'Address': '507 - 20th Ave. E.\r\nApt. 2A',
  'City': 'Seattle',
  'Region': 'WA',
  'PostalCode': '98122',
  'Country': 'USA',
  'HomePhone': '(206) 555-9857',
  'Extension': '5467',

```

```

      'Photo': { 'Length': 21626 },
      'Notes': 'Education includes a BA in psychology from Colorado State
University in 1970. She also completed\
\'The Art of the Cold Call.\' Nancy is a member of Toastmasters
International.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 2,
      'LastName': 'Fuller',
      'FirstName': 'Andrew',
      'Title': 'Vice President, Sales',
      'TitleOfCourtesy': 'Dr.',
      'BirthDate': new Date(-563828400000),
      'HireDate': new Date(713764800000),
      'Address': '908 W. Capital Way',
      'City': 'Tacoma',
      'Region': 'WA',
      'PostalCode': '98401',
      'Country': 'USA',
      'HomePhone': '(206) 555-9482',
      'Extension': '3457',
      'Photo': { 'Length': 21626 },
      'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
Dallas in 1981. He is fluent in French and Italian and reads German. He
joined the company as a sales representative, \
was promoted to sales manager in January 1992 and to vice president of
sales in March 1993. Andrew is a member of the \
Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.',
      'ReportsTo': 0,
      'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
    },
    {
      'EmployeeID': 3,
      'LastName': 'Leverling',
      'FirstName': 'Janet',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-200088000000),
      'HireDate': new Date(702104400000),
      'Address': '722 Moss Bay Blvd.',
      'City': 'Kirkland',
      'Region': 'WA',
      'PostalCode': '98033',
      'Country': 'USA',
      'HomePhone': '(206) 555-3412',
      'Extension': '3355',
      'Photo': { 'Length': 21722 },
      'Notes': 'Janet has a BS degree in chemistry from Boston College
(1984). \
She has also completed a certificate program in food retailing
management.\
Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',

```

```

      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
    },
    {
      'EmployeeID': 4,
      'LastName': 'Peacock',
      'FirstName': 'Margaret',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mrs.',
      'BirthDate': new Date(-1018814400000),
      'HireDate': new Date(736401600000),
      'Address': '4110 Old Redmond Rd.',
      'City': 'Redmond',
      'Region': 'WA',
      'PostalCode': '98052',
      'Country': 'USA',
      'HomePhone': '(206) 555-8122',
      'Extension': '5176',
      'Photo': { 'Length': 21626 },
      'Notes': 'Margaret holds a BA in English literature from Concordia College (1958) and an MA from the American \
        Institute of Culinary Arts (1966). She was assigned to the London office temporarily from July through November 1992.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
    },
    {
      'EmployeeID': 5,
      'LastName': 'Buchanan',
      'FirstName': 'Steven',
      'Title': 'Sales Manager',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-468010800000),
      'HireDate': new Date(750830400000),
      'Address': '14 Garrett Hill',
      'City': 'London',
      'Region': null,
      'PostalCode': 'SW1 8JR',
      'Country': 'UK',
      'HomePhone': '(71) 555-4848',
      'Extension': '3453',
      'Photo': { 'Length': 21626 },
      'Notes': 'Steven Buchanan graduated from St. Andrews University, Scotland, with a BSC degree in 1976. Upon joining the company as \
        a sales representative in 1992, he spent 6 months in an orientation program at the Seattle office and then returned to his permanent \
        post in London. He was promoted to sales manager in March 1993. Mr. Buchanan has completed the courses \'Successful \
        Telemarketing\' and \'International Sales Management.\' He is fluent in French.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
    },
    {
      'EmployeeID': 6,
      'LastName': 'Suyama',
      'FirstName': 'Michael',

```

```

        'Title': 'Sales Representative',
        'TitleOfCourtesy': 'Mr.',
        'BirthDate': new Date(-205185600000),
        'HireDate': new Date(750830400000),
        'Address': 'Coventry House\r\nMiner Rd.',
        'City': 'London',
        'Region': null,
        'PostalCode': 'EC2 7JR',
        'Country': 'UK',
        'HomePhone': '(71) 555-7773',
        'Extension': '428',
        'Photo': { 'Length': 21626 },
        'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese, and
Spanish.',
        'ReportsTo': 5,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
        'EmployeeID': 7,
        'LastName': 'King',
        'FirstName': 'Robert',
        'Title': 'Sales Representative',
        'TitleOfCourtesy': 'Mr.',
        'BirthDate': new Date(-302731200000),
        'HireDate': new Date(757486800000),
        'Address': 'Edgeham Hollow\r\nWinchester Way',
        'City': 'London',
        'Region': null,
        'PostalCode': 'RG1 9SP',
        'Country': 'UK',
        'HomePhone': '(71) 555-5598',
        'Extension': '465',
        'Photo': { 'Length': 21626 },
        'Notes': 'Robert King served in the Peace Corps and traveled
extensively before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
        'ReportsTo': 5,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
        'EmployeeID': 8,
        'LastName': 'Callahan',
        'FirstName': 'Laura',
        'Title': 'Inside Sales Coordinator',
        'TitleOfCourtesy': 'Ms.',
        'BirthDate': new Date(-377982000000),
        'HireDate': new Date(762843600000),
        'Address': '4726 - 11th Ave. N.E.',
        'City': 'Seattle',
        'Region': 'WA',
        'PostalCode': '98105',

```



```

        'Country': 'USA',
        'HomePhone': '(206) 555-1189',
        'Extension': '2344',
        'Photo': { 'Length': 21626 },
        'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
        'ReportsTo': 2,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
        'EmployeeID': 9,
        'LastName': 'Dodsworth',
        'FirstName': 'Anne',
        'Title': 'Sales Representative',
        'TitleOfCourtesy': 'Ms.',
        'BirthDate': new Date(-123966000000),
        'HireDate': new Date(784875600000),
        'Address': '7 Houndstooth Rd.',
        'City': 'London',
        'Region': null,
        'PostalCode': 'WG2 7LT',
        'Country': 'UK',
        'HomePhone': '(71) 555-4444',
        'Extension': '452',
        'Photo': { 'Length': 21626 },
        'Notes': 'Anne has a BA degree in English from St. Lawrence College.
She is fluent in French and German.',
        'ReportsTo': 5,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    }
    ]];

```

DATASOURCE.TSX

```

export let employeeData: Object[] = [{
    'EmployeeID': 1,
    'LastName': 'Davolio',
    'FirstName': 'Nancy',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-664743600000),
    'HireDate': new Date(704692800000),
    'Address': '507 - 20th Ave. E.\r\nApt. 2A',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98122',
    'Country': 'USA',
    'HomePhone': '(206) 555-9857',
    'Extension': '5467',
    'Photo': { 'Length': 21626 },
    'Notes': 'Education includes a BA in psychology from Colorado State
University in 1970. She also completed\
\'The Art of the Cold Call.\' Nancy is a member of Toastmasters
International.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
}];

```

```

},
{
  'EmployeeID': 2,
  'LastName': 'Fuller',
  'FirstName': 'Andrew',
  'Title': 'Vice President, Sales',
  'TitleOfCourtesy': 'Dr.',
  'BirthDate': new Date(-563828400000),
  'HireDate': new Date(713764800000),
  'Address': '908 W. Capital Way',
  'City': 'Tacoma',
  'Region': 'WA',
  'PostalCode': '98401',
  'Country': 'USA',
  'HomePhone': '(206) 555-9482',
  'Extension': '3457',
  'Photo': { 'Length': 21626 },
  'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
  Dallas in 1981. He is fluent in French and Italian and reads German. He
joined the company as a sales representative, \
  was promoted to sales manager in January 1992 and to vice president of
sales in March 1993. Andrew is a member of the \
  Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.',
  'ReportsTo': 0,
  'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
},
{
  'EmployeeID': 3,
  'LastName': 'Leverling',
  'FirstName': 'Janet',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-200088000000),
  'HireDate': new Date(702104400000),
  'Address': '722 Moss Bay Blvd.',
  'City': 'Kirkland',
  'Region': 'WA',
  'PostalCode': '98033',
  'Country': 'USA',
  'HomePhone': '(206) 555-3412',
  'Extension': '3355',
  'Photo': { 'Length': 21722 },
  'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
\
  She has also completed a certificate program in food retailing
management.\
  Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
},
{
  'EmployeeID': 4,
  'LastName': 'Peacock',
  'FirstName': 'Margaret',

```

```

    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mrs.',
    'BirthDate': new Date(-1018814400000),
    'HireDate': new Date(736401600000),
    'Address': '4110 Old Redmond Rd.',
    'City': 'Redmond',
    'Region': 'WA',
    'PostalCode': '98052',
    'Country': 'USA',
    'HomePhone': '(206) 555-8122',
    'Extension': '5176',
    'Photo': { 'Length': 21626 },
    'Notes': 'Margaret holds a BA in English literature from Concordia College (1958) and an MA from the American \
    Institute of Culinary Arts (1966). She was assigned to the London office temporarily from July through November 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
  },
  {
    'EmployeeID': 5,
    'LastName': 'Buchanan',
    'FirstName': 'Steven',
    'Title': 'Sales Manager',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-468010800000),
    'HireDate': new Date(750830400000),
    'Address': '14 Garrett Hill',
    'City': 'London',
    'Region': null,
    'PostalCode': 'SW1 8JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-4848',
    'Extension': '3453',
    'Photo': { 'Length': 21626 },
    'Notes': 'Steven Buchanan graduated from St. Andrews University, Scotland, with a BSC degree in 1976. Upon joining the company as \
    a sales representative in 1992, he spent 6 months in an orientation program at the Seattle office and then returned to his permanent \
    post in London. He was promoted to sales manager in March 1993. Mr. Buchanan has completed the courses \'Successful \
    Telemarketing\' and \'International Sales Management.\' He is fluent in French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
  },
  {
    'EmployeeID': 6,
    'LastName': 'Suyama',
    'FirstName': 'Michael',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-205185600000),
    'HireDate': new Date(750830400000),
    'Address': 'Coventry House\r\nMiner Rd.',
    'City': 'London',

```

```

    'Region': null,
    'PostalCode': 'EC2 7JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-7773',
    'Extension': '428',
    'Photo': { 'Length': 21626 },
    'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese, and
Spanish.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 7,
    'LastName': 'King',
    'FirstName': 'Robert',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-302731200000),
    'HireDate': new Date(757486800000),
    'Address': 'Edgeham Hollow\r\nWinchester Way',
    'City': 'London',
    'Region': null,
    'PostalCode': 'RG1 9SP',
    'Country': 'UK',
    'HomePhone': '(71) 555-5598',
    'Extension': '465',
    'Photo': { 'Length': 21626 },
    'Notes': 'Robert King served in the Peace Corps and traveled extensively
before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 8,
    'LastName': 'Callahan',
    'FirstName': 'Laura',
    'Title': 'Inside Sales Coordinator',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-377982000000),
    'HireDate': new Date(762843600000),
    'Address': '4726 - 11th Ave. N.E.',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98105',
    'Country': 'USA',
    'HomePhone': '(206) 555-1189',
    'Extension': '2344',
    'Photo': { 'Length': 21626 },
    'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \

```

```

    French. She reads and writes French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 9,
    'LastName': 'Dodsworth',
    'FirstName': 'Anne',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-123966000000),
    'HireDate': new Date(784875600000),
    'Address': '7 Houndstooth Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'WG2 7LT',
    'Country': 'UK',
    'HomePhone': '(71) 555-4444',
    'Extension': '452',
    'Photo': { 'Length': 21626 },
    'Notes': 'Anne has a BA degree in English from St. Lawrence College. She
is fluent in French and German.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  }
];

```

Search specific columns

By default, the [search](#) functionality searches all visible columns. However, if you want to search only specific columns, you can define the specific column's field names in the [searchSettings.fields](#) property. This allows you to narrow down the search to a targeted set of columns, which is particularly useful when dealing with large datasets or grids with numerous columns.

The following example demonstrates how to search specific columns such as **CustomerID**, **Freight**, and **ShipCity** by using the [searchSettings.fields](#) property.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Inject, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const searchSettings = {
    fields: ['CustomerID', 'Freight', 'ShipCountry']
  };
  return (
    <div>
      <GridComponent dataSource={data} height={280} toolbar={['Search']}
searchSettings={searchSettings}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID'
width='100' textAlign="Right" />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />

```

```

        <ColumnDirective field='Freight' headerText='Freight'
width='100' format='C' textAlign="Right" />
        <ColumnDirective field='ShipCountry' headerText='Ship
Country' width='100' />
    </ColumnsDirective>
    <Inject services={[Toolbar]} />
</GridComponent>
</div>);
};
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Inject, SearchSettingsModel, Toolbar } from '@syncfusion/ej2-react-
grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    const searchSettings: SearchSettingsModel = {
        fields: ['CustomerID', 'Freight', 'ShipCountry']
    };
    return (<div>
        <GridComponent dataSource={data} height={280} toolbar={['Search']}
searchSettings={searchSettings}>
            <ColumnsDirective>
                <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
                <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
                <ColumnDirective field='Freight' headerText='Freight' width='100'
format='C' textAlign="Right" />
                <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='100' />
            </ColumnsDirective>
            <Inject services={[Toolbar]} />
        </GridComponent>
    </div>)
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    }
];

```

```

        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),

```

```

        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]
};

```

DATASOURCE.TSX


```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
]

```

```

    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {

```

```

    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
    Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
    ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
    Freight: 48.29, Verified: !0
  }];

```

Search on each key stroke

The search on each keystroke feature in Syncfusion Grid enables you to perform real-time searching of grid data as they type in the search text box. This functionality provides a seamless and interactive searching experience, allowing you to see the search results dynamically updating in real time as they enter each keystroke in the search box.

To achieve this, you need to bind the `keyup` event to the search input element inside the `created` event of the grid component.

In the following example, the `created` event is bound to the grid component, and inside the event handler, the `keyup` event is bound to the `search` input element. Whenever the `keyup` event is triggered, the current search string is obtained from the `search` input element, and the `search` method is invoked on the grid instance with the current search string as a parameter. This allows the search results to be displayed in real-time as you type in the search box.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Inject, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  const created = () => {
    document.getElementById(grid.element.id +
      "_searchbar").addEventListener('keyup', () => {
      grid.search(event.target.value);
    });
  };
  return (
    <div>
      <GridComponent dataSource={data} height={280} toolbar={['Search']}
      ref={g => grid = g} created={created}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID'
            width='100' textAlign="Right"/>
          <ColumnDirective field='CustomerID' headerText='Customer ID'
            width='100' />
          <ColumnDirective field='Freight' headerText='Freight'
            width='100' textAlign="Right"/>
          <ColumnDirective field='ShipCountry' headerText='Ship Country'
            width='100' />
        </ColumnsDirective>
        <Inject services={['Toolbar'] />
      </GridComponent>
    </div>
  );
};

```

```
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Inject, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid: GridComponent | null;
  const created = () => {
    (document.getElementById((grid as GridComponent).element.id +
      "_searchbar") as HTMLElement).addEventListener('keyup', (event) => {
      (grid as GridComponent).search((event.target as
      HTMLInputElement).value)
    });
  }
  return (<div>
    <GridComponent dataSource={data} height={280} toolbar= {[ 'Search' ]}
      ref={g => grid = g} created={created}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID'
width='100' textAlign="Right"/>
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
        <ColumnDirective field='Freight' headerText='Freight'
width='100' textAlign="Right"/>
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='100' />
      </ColumnsDirective>
      <Inject services={[Toolbar]} />
    </GridComponent>
  </div>);
};
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
];
```

```

    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {

```

```

    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),

```

```

      ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
      ShipAddress: '59 rue de l Abbaye',
      ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
      Freight: 32.38, Verified: !0
    },
    {
      OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
      Date(836505e6),
      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
      'Luisenstr. 48',
      ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
      Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
      Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
      Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),

```

```

        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),

```



```

        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }];

```

Search on each key stroke approach may affect the performance of the application when dealing with a large number of records.

Perform search based on column formatting

By default, the search operation considers the underlying raw data of each cell for searching. However, in some cases, you may want to search based on the formatted data visible to the users. To search data based on column formatting, you can utilize the `grid.valueFormatterService.fromView` method within the [actionBegin](#) event. This method allows you to retrieve the formatted value of a cell and perform searching on each column using the **OR** predicate.

The following example demonstrates how to implement searching based on column formatting in the Grid. In the [actionBegin](#) event, retrieve the search value from the [getColumns](#) method. Iterate through the columns and check whether the column has a format specified. If the column has a format specified, use the `grid.valueFormatterService.fromView` method to get the formatted value of the cell. If the formatted value matches the search value, set the **OR** predicate that includes the current column filter and the new filter based on the formatted value.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Inject, Toolbar } from '@syncfusion/ej2-react-grids';
import { Predicate, Query } from '@syncfusion/ej2-data';
import * as React from 'react';
import { data } from '../datasource';

function App() {
    let grid;
    const actionBegin = (args) => {
        if (args.requestType === 'searching') {
            args.cancel = true;
            setTimeout(() => {
                var columns = grid.getColumns();
                var predicate = null;
                for (var i = 0; i < columns.length; i++) {
                    var val =
grid.valueFormatterService.fromView(args.searchString,
columns[i].getParser(), columns[i].type);
                    if (val) {
                        if (predicate == null) {
                            predicate = new Predicate(columns[i].field,
'contains', val, true, true);
                        } else {
                            predicate = predicate.or(columns[i].field,
'contains', val, true, true);
                        }
                    }
                }
                grid.query = new Query().where(predicate);
            });
        }
    };
}

```

```

        }, 200);
    }
}
const keyPressed = (args) => {
    if (args.key === 'Enter' && args.target && args.target.closest('.e-search') && args.target.value === '') {
        args.cancel = true;
        grid.query = new Query();
    }
}
return (<div>
    <GridComponent ref={g => grid = g} dataSource={data} height={280}
    toolbar={['Search']} actionBegin={actionBegin} keyPressed={keyPressed}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID'
width='100' textAlign="Right" />
            <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
            <ColumnDirective field='Freight' headerText='Freight'
width='100' format='C' textAlign="Right" />
            <ColumnDirective field='OrderDate' headerText='OrderDate'
width='100' format='yMd' />
        </ColumnsDirective>
        <Inject services={[Toolbar]} />
    </GridComponent>
</div>);
};
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, SearchEventArgs }
from '@syncfusion/ej2-react-grids';
import { Inject, Toolbar } from '@syncfusion/ej2-react-grids';
import { Predicate, Query } from '@syncfusion/ej2-data';
import { KeyboardEventArgs } from '@syncfusion/ej2-base';
import * as React from 'react';
import { data } from '../datasource';
function App() {
    let grid: GridComponent | null;
    const actionBegin = (args: SearchEventArgs) => {
        if (args.requestType === 'searching') {
            args.cancel = true;
            setTimeout(() => {
                var columns = (grid as GridComponent).getColumns();
                var predicate: Predicate = null;
                for (var i = 0; i < columns.length; i++) {
                    var val = (grid as
GridComponent).valueFormatterService.fromView(args.searchString,
columns[i].getParser(), columns[i].type);
                    if (val) {
                        if (predicate == null) {
                            predicate = new Predicate(columns[i].field, 'contains', val,
true, true);
                        } else {

```

```

        predicate = predicate.or(columns[i].field, 'contains', val,
true, true);
    }
    }
    (grid as GridComponent).query = new Query().where(predicate as
Predicate);
    }, 200);
    }
    }
    const keyPressed = (args: KeyboardEventArgs) => {
        if (args.key === 'Enter' && args.target && args.target.closest('.e-
search') && args.target.value === '') {
            args.cancel = true;
            (grid as GridComponent).query = new Query();
        }
    }
    return (<div>
        <GridComponent ref={g => grid = g} dataSource={data} height={280}
toolbar={['Search']} actionBegin={actionBegin} keyPressed={keyPressed}>
            <ColumnsDirective>
                <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
                <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
                <ColumnDirective field='Freight' headerText='Freight' width='100'
format='C' textAlign="Right" />
                <ColumnDirective field='OrderDate' headerText='OrderDate' width='100'
format='yMd' />
            </ColumnsDirective>
            <Inject services={[Toolbar]} />
        </GridComponent>
    </div>);
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {

```

```

    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
  },
  {

```

```

    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),

```

```

    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
    Date(8371098e5),

```

```

        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),

```

```
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',  
    ShipAddress: '2817 Milton Dr.',  
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',  
    Freight: 48.29, Verified: !0  
  }];
```

Perform search operation in Grid using multiple keywords

In addition to searching with a single keyword, the Grid component offers the capability to perform a search operation using multiple keywords. This feature enables you to narrow down your search results by simultaneously matching multiple keywords. It can be particularly useful when you need to find records that meet multiple search conditions simultaneously. This can be achieved by the [actionBegin](#) event of the Grid.

The following example demonstrates, how to perform a search with multiple keywords in the grid by using the `query` property when the `requestType` is searching in the `actionBegin` event. The `searchString` is divided into multiple keywords using a comma (,) as the delimiter. Each keyword is then utilized to create a `predicate` that checks for a match in the desired columns. If multiple keywords are present, the predicates are combined using an **OR** condition. Finally, the Grid's `query` property is updated with the constructed `predicate`, and the Grid is refreshed to update the changes in the UI.

On the other hand, the [actionComplete](#) event is used to manage the completion of the search operation. It ensures that the search input value is updated if necessary and clears the `query` when the search input is empty.

APP.JSX

```
import { Toolbar, GridComponent, ColumnsDirective, ColumnDirective, Inject }  
from '@syncfusion/ej2-react-grids';  
import { Predicate, Query } from '@syncfusion/ej2-data';  
import * as React from 'react';  
import { data } from './datasource';  
function App() {  
  let values = '';  
  const key = '';  
  let refresh = false;  
  let removeQuery = false;  
  let valueAssign = false;  
  let grid;  
  const searchOptions = {  
    fields: ['OrderID', 'CustomerID', 'Freight', 'ShipCountry'],  
    key: '',  
    operator: 'contains',  
    ignoreCase: true  
  };  
  const toolbarOptions = ['Search'];  
  const actionBegin = (args) => {  
    if (args.requestType === 'searching') {  
      const keys = args.searchString.split(',');  
      let flag = true;  
      let predicate;  
      if (keys.length > 1) {  
        if (grid.searchSettings.key !== '') {  
          values = args.searchString;  
          keys.forEach((key) => {
```



```

        grid.getColumns().forEach((col) => {
            if (flag) {
                predicate = new Predicate(col.field,
'contains', key, true);
                flag = false;
            }
            else {
                var predic = new Predicate(col.field,
'contains', key, true);
                predicate = predicate.or(predic);
            }
        });
        grid.query = new Query().where(predicate);
        grid.searchSettings.key = '';
        refresh = true;
        valueAssign = true;
        removeQuery = true;
        grid.refresh();
    }
}
};
const actionComplete = (args) => {
    if (args.requestType === 'refresh' && valueAssign) {
        document.getElementById(grid.element.id + '_searchbar').value =
            values;
        valueAssign = false;
    }
    else if (document.getElementById(grid.element.id +
'_searchbar').value ===
        '' &&
        args.requestType === 'refresh' &&
        removeQuery) {
        grid.query = new Query();
        removeQuery = false;
        grid.refresh();
    }
};
return (<div>
    <GridComponent dataSource={data} height={280} toolbar={toolbarOptions}
searchSettings={searchOptions} ref={g => grid = g} actionBegin={actionBegin}
actionComplete={actionComplete}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID'
width='100' textAlign="Right"/>
            <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
            <ColumnDirective field='Freight' headerText='Freight' width='100'
format='C' textAlign="Right"/>
            <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='100' />
        </ColumnsDirective>
        <Inject services={[Toolbar]} />
    </GridComponent>
</div>);
};

```

```
export default App;
```

APP.TSX

```
import {Toolbar, ToolbarItems, Grid, GridComponent, SearchSettingsModel,
ColumnsDirective, ColumnDirective, Inject, SearchEventArgs} from
 '@syncfusion/ej2-react-grids';
import { Predicate, Query } from '@syncfusion/ej2-data';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  let values = '';
  const key = '';
  let refresh = false;
  let removeQuery = false;
  let valueAssign = false;
  let grid: Grid | null;
  const searchOptions: SearchSettingsModel = {
    fields: ['OrderID', 'CustomerID', 'Freight', 'ShipCountry'],
    key: '',
    operator: 'contains',
    ignoreCase: true
  };
  const toolbarOptions: ToolbarItems[] = ['Search'];
  const actionBegin = (args: SearchEventArgs): void => {
    if (args.requestType === 'searching') {
      const keys = args.searchString.split(',');
      let flag = true;
      let predicate;
      if (keys.length > 1) {
        if (grid?.searchSettings?.key !== '') {
          values = args.searchString;
          keys.forEach((key) => {
            grid?.getColumns().forEach((col) => {
              if (flag) {
                predicate = new Predicate(col.field, 'contains', key, true);
                flag = false;
              } else {
                var predic = new Predicate(col.field, 'contains', key, true);
                predicate = predicate.or(predic);
              }
            });
          });
        }
        grid?.query = new Query().where(predicate);
        grid?.searchSettings?.key = '';
        refresh = true;
        valueAssign = true;
        removeQuery = true;
        grid?.refreshColumns();
      }
    }
  };
  const actionComplete = (args: SearchEventArgs): void => {
    if (args.requestType === 'refresh' && valueAssign) {
      document.getElementById(grid?.element.id + '_searchbar').value =

```

```

        values;
        valueAssign = false;
    } else if (
        document.getElementById(grid.element.id + '_searchbar').value ===
        '' &&
        args.requestType === 'refresh' &&
        removeQuery
    ) {
        grid.query = new Query();
        removeQuery = false;
        grid.refreshColumns();
    }
};

return (<div>
    <GridComponent dataSource={data} height={280} toolbar= {toolbarOptions}
    searchSettings={searchOptions} ref={g => grid = g}
    actionBegin={actionBegin}
    actionComplete={actionComplete}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID'
width='100' textAlign="Right"/>
            <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
            <ColumnDirective field='Freight' headerText='Freight' width='100'
format = 'C' textAlign="Right"/>
            <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='100' />
        </ColumnsDirective>
        <Inject services={[Toolbar]} />
    </GridComponent>
</div>)
};

export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),

```

```

    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
    Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
    Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
    Date(8374554e5),

```

```

      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
      'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
      'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
      Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
      Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
      'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
      Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }
  ]
};

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
      },
      {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
      },
      {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',

```

```

    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
    Freight: 48.29, Verified: !0
  }];

```

By using this approach, you can perform a search operation in the grid using multiple keywords.

How to ignore accent while searching

By default, the searching operation in the Grid component does not ignore diacritic characters or accents. However, there are cases where ignoring diacritic characters becomes necessary. This feature enhances the search experience by enabling data searching without considering accents, ensuring a more comprehensive and accurate search and it can be achieved by utilizing the [searchSettings.ignoreAccent](#) property of the Grid component as **true**.

The following example demonstrates how to define the `ignoreAccent` property within the [searchSettings](#) property of the grid. Additionally, the [EJ2 Toggle Switch Button](#) component is included to modify the value of the `searchSettings.ignoreAccent` property. When the switch is toggled, the [change](#) event is triggered, and the `searchSettings.ignoreAccent` property is updated accordingly. This functionality helps to visualize the impact of the `searchSettings.ignoreAccent` setting when performing search operations.

APP.JSX

```

import { SwitchComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, GridComponent, Search } from
 '@syncfusion/ej2-react-grids';
import { Inject, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  const valueChange = (args) => {
    grid.searchSettings.ignoreAccent = args.checked;
  }
  return (<div>
    <label style={{ padding: "10px 10px" }}>Enable or disable
    ignoreAccent property</label>
    <SwitchComponent id='switch' change={valueChange}></SwitchComponent>
    <GridComponent ref={g => grid = g} dataSource={data} height={280}
    toolbar={['Search']} >
      <ColumnsDirective>
        <ColumnDirective field='CategoryName' headerText='Category
        Name' width='100' textAlign="Right" />
        <ColumnDirective field='ProductName' headerText='Product
        Name' width='100' />
        <ColumnDirective field='QuantityPerUnit' headerText='Quantity
        Per Unit' width='100' textAlign="Right" />
        <ColumnDirective field='UnitsInStock' headerText='Units In
        Stock' width='100' />
      </ColumnsDirective>
      <Inject services={[Toolbar, Search]} />
    </GridComponent>
  </div>);
};
export default App;

```


APP.TSX

```
import { SwitchComponent, ChangeEventArgs } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, GridComponent, Search } from '@syncfusion/ej2-react-grids';
import { Inject, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  let grid: GridComponent | null;
  const valueChange = (args: ChangeEventArgs) => {
    (grid as GridComponent).searchSettings.ignoreAccent = args.checked;
  }
  return (
    <div>
      <label style={{ padding: "10px 10px" }}>Enable or disable ignoreAccent property:</label>
      <SwitchComponent id='switch' change={valueChange}></SwitchComponent>
      <GridComponent ref={g => grid = g} dataSource={data} height={280} toolbar={['Search']} >
        <ColumnsDirective>
          <ColumnDirective field='CategoryName' headerText='Category Name' width='100' textAlign="Right" />
          <ColumnDirective field='ProductName' headerText='Product Name' width='100' />
          <ColumnDirective field='QuantityPerUnit' headerText='Quantity Per Unit' width='100' textAlign="Right" />
          <ColumnDirective field='UnitsInStock' headerText='Units In Stock' width='100' />
        </ColumnsDirective>
        <Inject services={['Toolbar', Search]} />
      </GridComponent>
    </div>
  );
};
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    "CategoryName": "Beverages",
    "ProductID": 1,
    "ProductName": 'Chäi',
    "SupplierID": 1,
    "QuantityPerUnit": '10 boxes x 20 bags',
    "UnitPrice": 18.00,
    "UnitsInStock": 39,
    "Discontinued": true
  },
  {
    "CategoryName": "Beverages",
    "ProductID": 2,
    "ProductName": 'CHANG',
    "SupplierID": 1,
```

```
'QuantityPerUnit': '24 - 12 oz bottles',
'UnitPrice': 19.00,
'UnitsInStock': 17,
'Discontinued': true
},

{
  "CategoryName": "Beverages",
  'ProductID': 3,
  'ProductName': 'Aniseed Syrup',
  'SupplierID': 1,
  'QuantityPerUnit': '12 - 550 ml bottles',
  'UnitPrice': 10.00,
  'UnitsInStock': 13,
  'Discontinued': true
},

{
  "CategoryName": "Beverages",
  'ProductID': 4,
  'ProductName': 'Chef Anton\'s Cajun Seasoning',
  'SupplierID': 2,
  'QuantityPerUnit': '48 - 6 oz jars',
  'UnitPrice': 22.00,
  'UnitsInStock': 53,
  'Discontinued': true
},

{
  "CategoryName": "Beverages",
  'ProductID': 5,
  'ProductName': 'Chef Anton\'s Gumbo Mix',
  'SupplierID': 2,
  'QuantityPerUnit': '36 boxes',
  'UnitPrice': 21.35,
  'UnitsInStock': 0,
  'Discontinued': true
},

{
  "CategoryName": "Beverages",
  'ProductID': 6,
  'ProductName': 'Grandma\'s Boysenberry Spread',
  'SupplierID': 3,
  'QuantityPerUnit': '12 - 8 oz jars',
  'UnitPrice': 25.00,
  'UnitsInStock': 120,
  'Discontinued': false
},

{
  "CategoryName": "Beverages",
  'ProductID': 7,
  'ProductName': 'Uncle Bob\'s Organic Dried Pears',
  'SupplierID': 3,
  'QuantityPerUnit': '12 - 1 lb pkgs.',
  'UnitPrice': 30.00,
```

```
      'UnitsInStock': 15,  
      'Discontinued': false  
    },  
  
    {  
      "CategoryName": "Beverages",  
      'ProductID': 8,  
      'ProductName': 'Northwoods Cranberry Sauce',  
      'SupplierID': 3,  
      'QuantityPerUnit': '12 - 12 oz jars',  
      'UnitPrice': 40.00,  
      'UnitsInStock': 6,  
      'Discontinued': false  
    },  
  
    {  
      "CategoryName": "Beverages",  
      'ProductID': 9,  
      'ProductName': 'Mishi Kobe Niku',  
      'SupplierID': 4,  
      'QuantityPerUnit': '18 - 500 g pkgs.',  
      'UnitPrice': 97.00,  
      'UnitsInStock': 29,  
      'Discontinued': true  
    },  
  
    {  
      "CategoryName": "Beverages",  
      'ProductID': 10,  
      'ProductName': 'Ikura',  
      'SupplierID': 4,  
      'QuantityPerUnit': '12 - 200 ml jars',  
      'UnitPrice': 31.00,  
      'UnitsInStock': 31,  
      'Discontinued': false  
    },  
  
    {  
      "CategoryName": "Beverages",  
      'ProductID': 11,  
      'ProductName': 'Queso Cabrales',  
      'SupplierID': 5,  
      'QuantityPerUnit': '1 kg pkg.',  
      'UnitPrice': 21.00,  
      'UnitsInStock': 22,  
      'Discontinued': false  
    },  
  
    {  
      "CategoryName": "Condiments",  
      'ProductID': 12,  
      'ProductName': 'Queso Manchego La Pastora',  
      'SupplierID': 5,  
      'QuantityPerUnit': '10 - 500 g pkgs.',  
      'UnitPrice': 38.00,  
      'UnitsInStock': 86,  
      'Discontinued': false  
    }
```

```
    },
    {
      "CategoryName": "Condiments",
      'ProductID': 13,
      'ProductName': 'Konbu',
      'SupplierID': 6,
      'QuantityPerUnit': '2 kg box',
      'UnitPrice': 6.00,
      'UnitsInStock': 24,
      'Discontinued': true
    },
    {
      "CategoryName": "Condiments",
      'ProductID': 14,
      'ProductName': 'Tofu',
      'SupplierID': 6,
      'QuantityPerUnit': '40 - 100 g pkgs.',
      'UnitPrice': 23.25,
      'UnitsInStock': 35,
      'Discontinued': true
    },
    {
      "CategoryName": "Condiments",
      'ProductID': 15,
      'ProductName': 'Genen Shouyu',
      'SupplierID': 6,
      'QuantityPerUnit': '24 - 250 ml bottles',
      'UnitPrice': 15.50,
      'UnitsInStock': 39,
      'Discontinued': true
    },
    {
      "CategoryName": "Condiments",
      'ProductID': 16,
      'ProductName': 'Pavlova',
      'SupplierID': 7,
      'QuantityPerUnit': '32 - 500 g boxes',
      'UnitPrice': 17.45,
      'UnitsInStock': 29,
      'Discontinued': true
    },
    {
      "CategoryName": "Condiments",
      'ProductID': 17,
      'ProductName': 'Alice Mutton',
      'SupplierID': 7,
      'QuantityPerUnit': '20 - 1 kg tins',
      'UnitPrice': 39.00,
      'UnitsInStock': 0,
      'Discontinued': true
    },
  ],
```

```
{
  "CategoryName": "Condiments",
  'ProductID': 18,
  'ProductName': 'Carnarvon Tigers',
  'SupplierID': 7,
  'QuantityPerUnit': '16 kg pkg.',
  'UnitPrice': 62.50,
  'UnitsInStock': 42,
  'Discontinued': false
},

{
  "CategoryName": "Condiments",
  'ProductID': 19,
  'ProductName': 'Teatime Chocolate Biscuits',
  'SupplierID': 8,
  'QuantityPerUnit': '10 boxes x 12 pieces',
  'UnitPrice': 9.20,
  'UnitsInStock': 25,
  'Discontinued': false
},

{
  "CategoryName": "Condiments",
  'ProductID': 20,
  'ProductName': 'Sir Rodney\'s Marmalade',
  'SupplierID': 8,
  'QuantityPerUnit': '30 gift boxes',
  'UnitPrice': 81.00,
  'UnitsInStock': 40,
  'Discontinued': false
},

{
  "CategoryName": "Condiments",
  'ProductID': 21,
  'ProductName': 'Sir Rodney\'s Scones',
  'SupplierID': 8,
  'QuantityPerUnit': '24 pkgs. x 4 pieces',
  'UnitPrice': 10.00,
  'UnitsInStock': 3,
  'Discontinued': false
},

{
  "CategoryName": "Condiments",
  'ProductID': 22,
  'ProductName': 'Gustaf\'s Knäckebröd',
  'SupplierID': 9,
  'QuantityPerUnit': '24 - 500 g pkgs.',
  'UnitPrice': 21.00,
  'UnitsInStock': 104,
  'Discontinued': false
},

{
  "CategoryName": "Confections",
```

```
'ProductID': 23,
'ProductName': 'Tunnbröd',
'SupplierID': 9,
'QuantityPerUnit': '12 - 250 g pkgs.',
'UnitPrice': 9.00,
'UnitsInStock': 61,
'Discontinued': false
},

{
  "CategoryName": "Confections",
  'ProductID': 24,
  'ProductName': 'Guaraná Fantástica',
  'SupplierID': 10,
  'QuantityPerUnit': '12 - 355 ml cans',
  'UnitPrice': 4.50,
  'UnitsInStock': 20,
  'Discontinued': true
},

{
  "CategoryName": "Confections",
  'ProductID': 25,
  'ProductName': 'NuNuCa Nuß-Nougat-Creme',
  'SupplierID': 11,
  'QuantityPerUnit': '20 - 450 g glasses',
  'UnitPrice': 14.00,
  'UnitsInStock': 76,
  'Discontinued': false
},

{
  "CategoryName": "Confections",
  'ProductID': 26,
  'ProductName': 'Gumbär Gummibärchen',
  'SupplierID': 11,
  'QuantityPerUnit': '100 - 250 g bags',
  'UnitPrice': 31.23,
  'UnitsInStock': 15,
  'Discontinued': true
},

{
  "CategoryName": "Confections",
  'ProductID': 27,
  'ProductName': 'Schoggi Schokolade',
  'SupplierID': 11,
  'QuantityPerUnit': '100 - 100 g pieces',
  'UnitPrice': 43.90,
  'UnitsInStock': 49,
  'Discontinued': true
},

{
  "CategoryName": "Confections",
  'ProductID': 28,
  'ProductName': 'Rössle Sauerkraut',
```

```
'SupplierID': 12,
'QuantityPerUnit': '25 - 825 g cans',
'UnitPrice': 45.60,
'UnitsInStock': 26,
'Discontinued': true
},

{
  "CategoryName": "Confections",
  'ProductID': 29,
  'ProductName': 'Thüringer Rostbratwurst',
  'SupplierID': 12,
  'QuantityPerUnit': '50 bags x 30 sausgs.',
  'UnitPrice': 123.79,
  'UnitsInStock': 0,
  'Discontinued': true
},

{
  "CategoryName": "Confections",
  'ProductID': 30,
  'ProductName': 'Nord-Ost Matjeshering',
  'SupplierID': 13,
  'QuantityPerUnit': '10 - 200 g glasses',
  'UnitPrice': 25.89,
  'UnitsInStock': 10,
  'Discontinued': true
},

{
  "CategoryName": "Confections",
  'ProductID': 31,
  'ProductName': 'Gorgonzola Telino',
  'SupplierID': 14,
  'QuantityPerUnit': '12 - 100 g pkgs',
  'UnitPrice': 12.50,
  'UnitsInStock': 0,
  'Discontinued': true
},

{
  "CategoryName": "Confections",
  'ProductID': 32,
  'ProductName': 'Mascarpone Fabioli',
  'SupplierID': 14,
  'QuantityPerUnit': '24 - 200 g pkgs.',
  'UnitPrice': 32.00,
  'UnitsInStock': 9,
  'Discontinued': false
},

{
  "CategoryName": "Confections",
  'ProductID': 33,
  'ProductName': 'Geitost',
  'SupplierID': 15,
  'QuantityPerUnit': '500 g',
```

```
      'UnitPrice': 2.50,  
      'UnitsInStock': 112,  
      'Discontinued': false  
    },  
  
    {  
      "CategoryName": "Confections",  
      'ProductID': 34,  
      'ProductName': 'Sasquatch Ale',  
      'SupplierID': 16,  
      'QuantityPerUnit': '24 - 12 oz bottles',  
      'UnitPrice': 14.00,  
      'UnitsInStock': 111,  
      'Discontinued': false  
    },  
  
    {  
      "CategoryName": "Confections",  
      'ProductID': 35,  
      'ProductName': 'Steeleye Stout',  
      'SupplierID': 16,  
      'QuantityPerUnit': '24 - 12 oz bottles',  
      'UnitPrice': 18.00,  
      'UnitsInStock': 20,  
      'Discontinued': false  
    },  
  
    {  
      "CategoryName": "Dairy Products",  
      'ProductID': 36,  
      'ProductName': 'Inlagd Sill',  
      'SupplierID': 17,  
      'QuantityPerUnit': '24 - 250 g jars',  
      'UnitPrice': 19.00,  
      'UnitsInStock': 112,  
      'Discontinued': false  
    },  
  
    {  
      "CategoryName": "Dairy Products",  
      'ProductID': 37,  
      'ProductName': 'Gravad lax',  
      'SupplierID': 17,  
      'QuantityPerUnit': '12 - 500 g pkgs.',  
      'UnitPrice': 26.00,  
      'UnitsInStock': 11,  
      'Discontinued': false  
    },  
  
    {  
      "CategoryName": "Dairy Products",  
      'ProductID': 38,  
      'ProductName': 'Côte de Blaye',  
      'SupplierID': 18,  
      'QuantityPerUnit': '12 - 75 cl bottles',  
      'UnitPrice': 263.50,  
      'UnitsInStock': 17,
```



```
    'Discontinued': false
  },
  {
    'CategoryName': 'Dairy Products',
    'ProductID': 39,
    'ProductName': 'Chartreuse verte',
    'SupplierID': 18,
    'QuantityPerUnit': '750 cc per bottle',
    'UnitPrice': 18.00,
    'UnitsInStock': 69,
    'Discontinued': true
  },
  {
    'CategoryName': 'Dairy Products',
    'ProductID': 40,
    'ProductName': 'Boston Crab Meat',
    'SupplierID': 19,
    'QuantityPerUnit': '24 - 4 oz tins',
    'UnitPrice': 18.40,
    'UnitsInStock': 123,
    'Discontinued': true
  },
  {
    'CategoryName': 'Dairy Products',
    'ProductID': 41,
    'ProductName': 'Jack\'s New England Clam Chowder',
    'SupplierID': 19,
    'QuantityPerUnit': '12 - 12 oz cans',
    'UnitPrice': 9.65,
    'UnitsInStock': 85,
    'Discontinued': false
  },
  {
    'CategoryName': 'Dairy Products',
    'ProductID': 42,
    'ProductName': 'Singaporean Hokkien Fried Mee',
    'SupplierID': 20,
    'QuantityPerUnit': '32 - 1 kg pkgs.',
    'UnitPrice': 14.00,
    'UnitsInStock': 26,
    'Discontinued': true
  },
  {
    'CategoryName': 'Dairy Products',
    'ProductID': 43,
    'ProductName': 'Ipoh Coffee',
    'SupplierID': 20,
    'QuantityPerUnit': '16 - 500 g tins',
    'UnitPrice': 46.00,
    'UnitsInStock': 17,
    'Discontinued': false
  },
  },
```

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{
  "CategoryName": "Dairy Products",
  'ProductID': 44,
  'ProductName': 'Gula Malacca',
  'SupplierID': 20,
  'QuantityPerUnit': '20 - 2 kg bags',
  'UnitPrice': 19.45,
  'UnitsInStock': 27,
  'Discontinued': false
},

{
  "CategoryName": "Dairy Products",
  'ProductID': 45,
  'ProductName': 'Rogede sild',
  'SupplierID': 21,
  'QuantityPerUnit': '1k pkg.',
  'UnitPrice': 9.50,
  'UnitsInStock': 5,
  'Discontinued': true
},

{
  "CategoryName": "Grains/Cereals",
  'ProductID': 46,
  'ProductName': 'Spegesild',
  'SupplierID': 21,
  'QuantityPerUnit': '4 - 450 g glasses',
  'UnitPrice': 12.00,
  'UnitsInStock': 95,
  'Discontinued': true
},

{
  "CategoryName": "Grains/Cereals",
  'ProductID': 47,
  'ProductName': 'Zaanse koeken',
  'SupplierID': 22,
  'QuantityPerUnit': '10 - 4 oz boxes',
  'UnitPrice': 9.50,
  'UnitsInStock': 36,
  'Discontinued': true
},

{
  "CategoryName": "Grains/Cereals",
  'ProductID': 48,
  'ProductName': 'Chocolade',
  'SupplierID': 22,
  'QuantityPerUnit': '10 pkgs.',
  'UnitPrice': 12.75,
  'UnitsInStock': 15,
  'Discontinued': true
},

{
```

```
"CategoryName": "Grains/Cereals",
'ProductID': 49,
'ProductName': 'Maxilaku',
'SupplierID': 23,
'QuantityPerUnit': '24 - 50 g pkgs.',
'UnitPrice': 20.00,
'UnitsInStock': 10,
'Discontinued': false
},

{
  "CategoryName": "Grains/Cereals",
  'ProductID': 50,
  'ProductName': 'Valkoinen suklaa',
  'SupplierID': 23,
  'QuantityPerUnit': '12 - 100 g bars',
  'UnitPrice': 16.25,
  'UnitsInStock': 65,
  'Discontinued': false
},

{
  "CategoryName": "Grains/Cereals",
  'ProductID': 51,
  'ProductName': 'Manjimup Dried Apples',
  'SupplierID': 24,
  'QuantityPerUnit': '50 - 300 g pkgs.',
  'UnitPrice': 53.00,
  'UnitsInStock': 20,
  'Discontinued': false
},

{
  "CategoryName": "Meat/Poultry",
  'ProductID': 52,
  'ProductName': 'Filo Mix',
  'SupplierID': 24,
  'QuantityPerUnit': '16 - 2 kg boxes',
  'UnitPrice': 7.00,
  'UnitsInStock': 38,
  'Discontinued': true
},

{
  "CategoryName": "Meat/Poultry",
  'ProductID': 53,
  'ProductName': 'Perth Pasties',
  'SupplierID': 24,
  'QuantityPerUnit': '48 pieces',
  'UnitPrice': 32.80,
  'UnitsInStock': 0,
  'Discontinued': true
},

{
  "CategoryName": "Produce",
  'ProductID': 54,
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    'ProductName': 'Tourtière',
    'SupplierID': 25,
    'QuantityPerUnit': '16 pies',
    'UnitPrice': 7.45,
    'UnitsInStock': 21,
    'Discontinued': true
  },
  {
    "CategoryName": "Produce",
    'ProductID': 55,
    'ProductName': 'Pâté chinois',
    'SupplierID': 25,
    'QuantityPerUnit': '24 boxes x 2 pies',
    'UnitPrice': 24.00,
    'UnitsInStock': 115,
    'Discontinued': true
  },
  {
    "CategoryName": "Produce",
    'ProductName': 'Gnocchi di nonna Alice',
    'SupplierID': 26,
    'QuantityPerUnit': '24 - 250 g pkgs.',
    'UnitPrice': 38.00,
    'UnitsInStock': 21,
    'Discontinued': false
  },
  {
    "CategoryName": "Produce",
    'ProductName': 'Ravioli Angelo',
    'SupplierID': 26,
    'QuantityPerUnit': '24 - 250 g pkgs.',
    'UnitPrice': 19.50,
    'UnitsInStock': 36,
    'Discontinued': false
  },
  {
    "CategoryName": "Seafood",
    'ProductID': 58,
    'ProductName': 'Escargots de Bourgogne',
    'SupplierID': 27,
    'QuantityPerUnit': '24 pieces',
    'UnitPrice': 13.25,
    'UnitsInStock': 62,
    'Discontinued': false
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  {
    "CategoryName": "Seafood",
    'ProductID': 59,
    'ProductName': 'Raclette Courdavault',
    'SupplierID': 28,
    'QuantityPerUnit': '5 kg pkg.',
    'UnitPrice': 55.00,
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'UnitsInStock': 79,  
'Discontinued': false  
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{  
  "CategoryName": "Seafood",  
  'ProductID': 60,  
  'ProductName': 'Camembert Pierrot',  
  'SupplierID': 28,  
  'QuantityPerUnit': '15 - 300 g rounds',  
  'UnitPrice': 34.00,  
  'UnitsInStock': 19,  
  'Discontinued': false  
},  
  
{  
  "CategoryName": "Seafood",  
  'ProductID': 61,  
  'ProductName': 'Sirop d\'érable',  
  'SupplierID': 29,  
  'QuantityPerUnit': '24 - 500 ml bottles',  
  'UnitPrice': 28.50,  
  'UnitsInStock': 113,  
  'Discontinued': false  
},  
  
{  
  "CategoryName": "Seafood",  
  'ProductID': 62,  
  'ProductName': 'Tarte au sucre',  
  'SupplierID': 29,  
  'QuantityPerUnit': '48 pies',  
  'UnitPrice': 49.30,  
  'UnitsInStock': 17,  
  'Discontinued': false  
},  
  
{  
  "CategoryName": "Seafood",  
  'ProductID': 63,  
  'ProductName': 'Veggie-spread',  
  'SupplierID': 7,  
  'QuantityPerUnit': '15 - 625 g jars',  
  'UnitPrice': 43.90,  
  'UnitsInStock': 24,  
  'Discontinued': true  
},  
  
{  
  "CategoryName": "Seafood",  
  'ProductID': 64,  
  'ProductName': 'Wimmers gute Semmelknödel',  
  'SupplierID': 12,  
  'QuantityPerUnit': '20 bags x 4 pieces',  
  'UnitPrice': 33.25,  
  'UnitsInStock': 22,  
  'Discontinued': true  
}
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    },
    {
      "CategoryName": "Seafood",
      'ProductID': 65,
      'ProductName': 'Louisiana Fiery Hot Pepper Sauce',
      'SupplierID': 2,
      'QuantityPerUnit': '32 - 8 oz bottles',
      'UnitPrice': 21.05,
      'UnitsInStock': 76,
      'Discontinued': true
    },
    {
      "CategoryName": "Seafood",
      'ProductID': 66,
      'ProductName': 'Louisiana Hot Spiced Okra',
      'SupplierID': 2,
      'QuantityPerUnit': '24 - 8 oz jars',
      'UnitPrice': 17.00,
      'UnitsInStock': 4,
      'Discontinued': false
    },
    {
      "CategoryName": "Seafood",
      'ProductID': 67,
      'ProductName': 'Laughing Lumberjack Lager',
      'SupplierID': 16,
      'QuantityPerUnit': '24 - 12 oz bottles',
      'UnitPrice': 14.00,
      'UnitsInStock': 52,
      'Discontinued': false
    },
    {
      "CategoryName": "Seafood",
      'ProductID': 68,
      'ProductName': 'Scottish Longbreads',
      'SupplierID': 8,
      'QuantityPerUnit': '10 boxes x 8 pieces',
      'UnitPrice': 12.50,
      'UnitsInStock': 6,
      'Discontinued': false
    },
    {
      "CategoryName": "Seafood",
      'ProductID': 69,
      'ProductName': 'Gudbrandsdalsost',
      'SupplierID': 15,
      'QuantityPerUnit': '10 kg pkg.',
      'UnitPrice': 36.00,
      'UnitsInStock': 26,
      'Discontinued': false
    }
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DATASOURCE.TSX

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    'SupplierID': 1,
    'QuantityPerUnit': '10 boxes x 20 bags',
    'UnitPrice': 18.00,
    'UnitsInStock': 39,
    'Discontinued': true
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  {
    "CategoryName": "Beverages",
    'ProductID': 2,
    'ProductName': 'CHANG',
    'SupplierID': 1,
    'QuantityPerUnit': '24 - 12 oz bottles',
    'UnitPrice': 19.00,
    'UnitsInStock': 17,
    'Discontinued': true
  },
  {
    "CategoryName": "Beverages",
    'ProductID': 3,
    'ProductName': 'Aniseed Syrup',
    'SupplierID': 1,
    'QuantityPerUnit': '12 - 550 ml bottles',
    'UnitPrice': 10.00,
    'UnitsInStock': 13,
    'Discontinued': true
  },
  {
    "CategoryName": "Beverages",
    'ProductID': 4,
    'ProductName': 'Chef Anton\'s Cajun Seasoning',
    'SupplierID': 2,
    'QuantityPerUnit': '48 - 6 oz jars',
    'UnitPrice': 22.00,
    'UnitsInStock': 53,
    'Discontinued': true
  },
  {
    "CategoryName": "Beveräges",
    'ProductID': 5,
    'ProductName': 'Chef Anton\'s Gumbo Mix',
    'SupplierID': 2,
    'QuantityPerUnit': '36 boxes',
    'UnitPrice': 21.35,
    'UnitsInStock': 0,
  }
]
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    'Discontinued': true
  },
  {
    "CategoryName": "Beverages",
    'ProductID': 6,
    'ProductName': 'Grandma\'s Boysenberry Spread',
    'SupplierID': 3,
    'QuantityPerUnit': '12 - 8 oz jars',
    'UnitPrice': 25.00,
    'UnitsInStock': 120,
    'Discontinued': false
  },
  {
    "CategoryName": "Beveräges",
    'ProductID': 7,
    'ProductName': 'Uncle Bob\'s Organic Dried Pears',
    'SupplierID': 3,
    'QuantityPerUnit': '12 - 1 lb pkgs.',
    'UnitPrice': 30.00,
    'UnitsInStock': 15,
    'Discontinued': false
  },
  {
    "CategoryName": "Beverages",
    'ProductID': 8,
    'ProductName': 'Northwoods Cranberry Sauce',
    'SupplierID': 3,
    'QuantityPerUnit': '12 - 12 oz jars',
    'UnitPrice': 40.00,
    'UnitsInStock': 6,
    'Discontinued': false
  },
  {
    "CategoryName": "Beverages",
    'ProductID': 9,
    'ProductName': 'Mishi Kobe Niku',
    'SupplierID': 4,
    'QuantityPerUnit': '18 - 500 g pkgs.',
    'UnitPrice': 97.00,
    'UnitsInStock': 29,
    'Discontinued': true
  },
  {
    "CategoryName": "Beverages",
    'ProductID': 10,
    'ProductName': 'Ikura',
    'SupplierID': 4,
    'QuantityPerUnit': '12 - 200 ml jars',
    'UnitPrice': 31.00,
    'UnitsInStock': 31,
    'Discontinued': false
  },
}
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```
{
  "CategoryName": "Beverages",
  'ProductID': 11,
  'ProductName': 'Queso Cabrales',
  'SupplierID': 5,
  'QuantityPerUnit': '1 kg pkg.',
  'UnitPrice': 21.00,
  'UnitsInStock': 22,
  'Discontinued': false
},

{
  "CategoryName": "Condiments",
  'ProductID': 12,
  'ProductName': 'Queso Manchego La Pastora',
  'SupplierID': 5,
  'QuantityPerUnit': '10 - 500 g pkgs.',
  'UnitPrice': 38.00,
  'UnitsInStock': 86,
  'Discontinued': false
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{
  "CategoryName": "Condiments",
  'ProductID': 13,
  'ProductName': 'Konbu',
  'SupplierID': 6,
  'QuantityPerUnit': '2 kg box',
  'UnitPrice': 6.00,
  'UnitsInStock': 24,
  'Discontinued': true
},

{
  "CategoryName": "Condiments",
  'ProductID': 14,
  'ProductName': 'Tofu',
  'SupplierID': 6,
  'QuantityPerUnit': '40 - 100 g pkgs.',
  'UnitPrice': 23.25,
  'UnitsInStock': 35,
  'Discontinued': true
},

{
  "CategoryName": "Condiments",
  'ProductID': 15,
  'ProductName': 'Genen Shouyu',
  'SupplierID': 6,
  'QuantityPerUnit': '24 - 250 ml bottles',
  'UnitPrice': 15.50,
  'UnitsInStock': 39,
  'Discontinued': true
},

{
```

```
    "CategoryName": "Condiments",
    'ProductID': 16,
    'ProductName': 'Pavlova',
    'SupplierID': 7,
    'QuantityPerUnit': '32 - 500 g boxes',
    'UnitPrice': 17.45,
    'UnitsInStock': 29,
    'Discontinued': true
  },
  {
    "CategoryName": "Condiments",
    'ProductID': 17,
    'ProductName': 'Alice Mutton',
    'SupplierID': 7,
    'QuantityPerUnit': '20 - 1 kg tins',
    'UnitPrice': 39.00,
    'UnitsInStock': 0,
    'Discontinued': true
  },
  {
    "CategoryName": "Condiments",
    'ProductID': 18,
    'ProductName': 'Carnarvon Tigers',
    'SupplierID': 7,
    'QuantityPerUnit': '16 kg pkg.',
    'UnitPrice': 62.50,
    'UnitsInStock': 42,
    'Discontinued': false
  },
  {
    "CategoryName": "Condiments",
    'ProductID': 19,
    'ProductName': 'Teatime Chocolate Biscuits',
    'SupplierID': 8,
    'QuantityPerUnit': '10 boxes x 12 pieces',
    'UnitPrice': 9.20,
    'UnitsInStock': 25,
    'Discontinued': false
  },
  {
    "CategoryName": "Condiments",
    'ProductID': 20,
    'ProductName': 'Sir Rodney\'s Marmalade',
    'SupplierID': 8,
    'QuantityPerUnit': '30 gift boxes',
    'UnitPrice': 81.00,
    'UnitsInStock': 40,
    'Discontinued': false
  },
  {
    "CategoryName": "Condiments",
    'ProductID': 21,
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```
'ProductName': 'Sir Rodney\'s Scones',
'SupplierID': 8,
'QuantityPerUnit': '24 pkgs. x 4 pieces',
'UnitPrice': 10.00,
'UnitsInStock': 3,
'Discontinued': false
},
{
  "CategoryName": "Condiments",
  'ProductID': 22,
  'ProductName': 'Gustaf\'s Knäckebröd',
  'SupplierID': 9,
  'QuantityPerUnit': '24 - 500 g pkgs.',
  'UnitPrice': 21.00,
  'UnitsInStock': 104,
  'Discontinued': false
},
{
  "CategoryName": "Confections",
  'ProductID': 23,
  'ProductName': 'Tunnbröd',
  'SupplierID': 9,
  'QuantityPerUnit': '12 - 250 g pkgs.',
  'UnitPrice': 9.00,
  'UnitsInStock': 61,
  'Discontinued': false
},
{
  "CategoryName": "Confections",
  'ProductID': 24,
  'ProductName': 'Guaraná Fantástica',
  'SupplierID': 10,
  'QuantityPerUnit': '12 - 355 ml cans',
  'UnitPrice': 4.50,
  'UnitsInStock': 20,
  'Discontinued': true
},
{
  "CategoryName": "Confections",
  'ProductID': 25,
  'ProductName': 'NuNuCa Nuß-Nougat-Creme',
  'SupplierID': 11,
  'QuantityPerUnit': '20 - 450 g glasses',
  'UnitPrice': 14.00,
  'UnitsInStock': 76,
  'Discontinued': false
},
{
  "CategoryName": "Confections",
  'ProductID': 26,
  'ProductName': 'Gumbär Gummibärchen',
  'SupplierID': 11,
```

```
'QuantityPerUnit': '100 - 250 g bags',
'UnitPrice': 31.23,
'UnitsInStock': 15,
'Discontinued': true
},

{
  "CategoryName": "Confections",
  'ProductID': 27,
  'ProductName': 'Schoggi Schokolade',
  'SupplierID': 11,
  'QuantityPerUnit': '100 - 100 g pieces',
  'UnitPrice': 43.90,
  'UnitsInStock': 49,
  'Discontinued': true
},

{
  "CategoryName": "Confections",
  'ProductID': 28,
  'ProductName': 'Rössle Sauerkraut',
  'SupplierID': 12,
  'QuantityPerUnit': '25 - 825 g cans',
  'UnitPrice': 45.60,
  'UnitsInStock': 26,
  'Discontinued': true
},

{
  "CategoryName": "Confections",
  'ProductID': 29,
  'ProductName': 'Thüringer Rostbratwurst',
  'SupplierID': 12,
  'QuantityPerUnit': '50 bags x 30 sausgs.',
  'UnitPrice': 123.79,
  'UnitsInStock': 0,
  'Discontinued': true
},

{
  "CategoryName": "Confections",
  'ProductID': 30,
  'ProductName': 'Nord-Ost Matjeshering',
  'SupplierID': 13,
  'QuantityPerUnit': '10 - 200 g glasses',
  'UnitPrice': 25.89,
  'UnitsInStock': 10,
  'Discontinued': true
},

{
  "CategoryName": "Confections",
  'ProductID': 31,
  'ProductName': 'Gorgonzola Telino',
  'SupplierID': 14,
  'QuantityPerUnit': '12 - 100 g pkgs',
  'UnitPrice': 12.50,
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```
    },
    {
      "CategoryName": "Dairy Products",
      'ProductID': 37,
      'ProductName': 'Gravad lax',
      'SupplierID': 17,
      'QuantityPerUnit': '12 - 500 g pkgs.',
      'UnitPrice': 26.00,
      'UnitsInStock': 11,
      'Discontinued': false
    },
    {
      "CategoryName": "Dairy Products",
      'ProductID': 38,
      'ProductName': 'Côte de Blaye',
      'SupplierID': 18,
      'QuantityPerUnit': '12 - 75 cl bottles',
      'UnitPrice': 263.50,
      'UnitsInStock': 17,
      'Discontinued': false
    },
    {
      "CategoryName": "Dairy Products",
      'ProductID': 39,
      'ProductName': 'Chartreuse verte',
      'SupplierID': 18,
      'QuantityPerUnit': '750 cc per bottle',
      'UnitPrice': 18.00,
      'UnitsInStock': 69,
      'Discontinued': true
    },
    {
      "CategoryName": "Dairy Products",
      'ProductID': 40,
      'ProductName': 'Boston Crab Meat',
      'SupplierID': 19,
      'QuantityPerUnit': '24 - 4 oz tins',
      'UnitPrice': 18.40,
      'UnitsInStock': 123,
      'Discontinued': true
    },
    {
      "CategoryName": "Dairy Products",
      'ProductID': 41,
      'ProductName': 'Jack\'s New England Clam Chowder',
      'SupplierID': 19,
      'QuantityPerUnit': '12 - 12 oz cans',
      'UnitPrice': 9.65,
      'UnitsInStock': 85,
      'Discontinued': false
    },
  ],
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{
  "CategoryName": "Dairy Products",
  'ProductID': 42,
  'ProductName': 'Singaporean Hokkien Fried Mee',
  'SupplierID': 20,
  'QuantityPerUnit': '32 - 1 kg pkgs.',
  'UnitPrice': 14.00,
  'UnitsInStock': 26,
  'Discontinued': true
},

{
  "CategoryName": "Dairy Products",
  'ProductID': 43,
  'ProductName': 'Ipoh Coffee',
  'SupplierID': 20,
  'QuantityPerUnit': '16 - 500 g tins',
  'UnitPrice': 46.00,
  'UnitsInStock': 17,
  'Discontinued': false
},

{
  "CategoryName": "Dairy Products",
  'ProductID': 44,
  'ProductName': 'Gula Malacca',
  'SupplierID': 20,
  'QuantityPerUnit': '20 - 2 kg bags',
  'UnitPrice': 19.45,
  'UnitsInStock': 27,
  'Discontinued': false
},

{
  "CategoryName": "Dairy Products",
  'ProductID': 45,
  'ProductName': 'Rogede sild',
  'SupplierID': 21,
  'QuantityPerUnit': '1k pkg.',
  'UnitPrice': 9.50,
  'UnitsInStock': 5,
  'Discontinued': true
},

{
  "CategoryName": "Grains/Cereals",
  'ProductID': 46,
  'ProductName': 'Spegesild',
  'SupplierID': 21,
  'QuantityPerUnit': '4 - 450 g glasses',
  'UnitPrice': 12.00,
  'UnitsInStock': 95,
  'Discontinued': true
},

{
  "CategoryName": "Grains/Cereals",
```

```
'ProductID': 47,
'ProductName': 'Zaanse koeken',
'SupplierID': 22,
'QuantityPerUnit': '10 - 4 oz boxes',
'UnitPrice': 9.50,
'UnitsInStock': 36,
'Discontinued': true
},

{
  "CategoryName": "Grains/Cereals",
  'ProductID': 48,
  'ProductName': 'Chocolade',
  'SupplierID': 22,
  'QuantityPerUnit': '10 pkgs.',
  'UnitPrice': 12.75,
  'UnitsInStock': 15,
  'Discontinued': true
},

{
  "CategoryName": "Grains/Cereals",
  'ProductID': 49,
  'ProductName': 'Maxilaku',
  'SupplierID': 23,
  'QuantityPerUnit': '24 - 50 g pkgs.',
  'UnitPrice': 20.00,
  'UnitsInStock': 10,
  'Discontinued': false
},

{
  "CategoryName": "Grains/Cereals",
  'ProductID': 50,
  'ProductName': 'Valkoinen suklaa',
  'SupplierID': 23,
  'QuantityPerUnit': '12 - 100 g bars',
  'UnitPrice': 16.25,
  'UnitsInStock': 65,
  'Discontinued': false
},

{
  "CategoryName": "Grains/Cereals",
  'ProductID': 51,
  'ProductName': 'Manjimup Dried Apples',
  'SupplierID': 24,
  'QuantityPerUnit': '50 - 300 g pkgs.',
  'UnitPrice': 53.00,
  'UnitsInStock': 20,
  'Discontinued': false
},

{
  "CategoryName": "Meat/Poultry",
  'ProductID': 52,
  'ProductName': 'Filo Mix',
```



```
'SupplierID': 24,
'QuantityPerUnit': '16 - 2 kg boxes',
'UnitPrice': 7.00,
'UnitsInStock': 38,
'Discontinued': true
},

{
  "CategoryName": "Meat/Poultry",
  'ProductID': 53,
  'ProductName': 'Perth Pasties',
  'SupplierID': 24,
  'QuantityPerUnit': '48 pieces',
  'UnitPrice': 32.80,
  'UnitsInStock': 0,
  'Discontinued': true
},

{
  "CategoryName": "Produce",
  'ProductID': 54,
  'ProductName': 'Tourtière',
  'SupplierID': 25,
  'QuantityPerUnit': '16 pies',
  'UnitPrice': 7.45,
  'UnitsInStock': 21,
  'Discontinued': true
},

{
  "CategoryName": "Produce",
  'ProductID': 55,
  'ProductName': 'Pâté chinois',
  'SupplierID': 25,
  'QuantityPerUnit': '24 boxes x 2 pies',
  'UnitPrice': 24.00,
  'UnitsInStock': 115,
  'Discontinued': true
},

{
  "CategoryName": "Produce",
  'ProductName': 'Gnocchi di nonna Alice',
  'SupplierID': 26,
  'QuantityPerUnit': '24 - 250 g pkgs.',
  'UnitPrice': 38.00,
  'UnitsInStock': 21,
  'Discontinued': false
},

{
  "CategoryName": "Produce",
  'ProductName': 'Ravioli Angelo',
  'SupplierID': 26,
  'QuantityPerUnit': '24 - 250 g pkgs.',
  'UnitPrice': 19.50,
  'UnitsInStock': 36,
```

```
    'Discontinued': false
  },
  {
    "CategoryName": "Seafood",
    'ProductID': 58,
    'ProductName': 'Escargots de Bourgogne',
    'SupplierID': 27,
    'QuantityPerUnit': '24 pieces',
    'UnitPrice': 13.25,
    'UnitsInStock': 62,
    'Discontinued': false
  },
  {
    "CategoryName": "Seafood",
    'ProductID': 59,
    'ProductName': 'Raclette Courdavault',
    'SupplierID': 28,
    'QuantityPerUnit': '5 kg pkg.',
    'UnitPrice': 55.00,
    'UnitsInStock': 79,
    'Discontinued': false
  },
  {
    "CategoryName": "Seafood",
    'ProductID': 60,
    'ProductName': 'Camembert Pierrot',
    'SupplierID': 28,
    'QuantityPerUnit': '15 - 300 g rounds',
    'UnitPrice': 34.00,
    'UnitsInStock': 19,
    'Discontinued': false
  },
  {
    "CategoryName": "Seafood",
    'ProductID': 61,
    'ProductName': 'Sirop d\'érable',
    'SupplierID': 29,
    'QuantityPerUnit': '24 - 500 ml bottles',
    'UnitPrice': 28.50,
    'UnitsInStock': 113,
    'Discontinued': false
  },
  {
    "CategoryName": "Seafood",
    'ProductID': 62,
    'ProductName': 'Tarte au sucre',
    'SupplierID': 29,
    'QuantityPerUnit': '48 pies',
    'UnitPrice': 49.30,
    'UnitsInStock': 17,
    'Discontinued': false
  },
}
```

```
{
  "CategoryName": "Seafood",
  'ProductID': 63,
  'ProductName': 'Vegie-spread',
  'SupplierID': 7,
  'QuantityPerUnit': '15 - 625 g jars',
  'UnitPrice': 43.90,
  'UnitsInStock': 24,
  'Discontinued': true
},

{
  "CategoryName": "Seafood",
  'ProductID': 64,
  'ProductName': 'Wimmers gute Semmelknödel',
  'SupplierID': 12,
  'QuantityPerUnit': '20 bags x 4 pieces',
  'UnitPrice': 33.25,
  'UnitsInStock': 22,
  'Discontinued': true
},

{
  "CategoryName": "Seafood",
  'ProductID': 65,
  'ProductName': 'Louisiana Fiery Hot Pepper Sauce',
  'SupplierID': 2,
  'QuantityPerUnit': '32 - 8 oz bottles',
  'UnitPrice': 21.05,
  'UnitsInStock': 76,
  'Discontinued': true
},

{
  "CategoryName": "Seafood",
  'ProductID': 66,
  'ProductName': 'Louisiana Hot Spiced Okra',
  'SupplierID': 2,
  'QuantityPerUnit': '24 - 8 oz jars',
  'UnitPrice': 17.00,
  'UnitsInStock': 4,
  'Discontinued': false
},

{
  "CategoryName": "Seafood",
  'ProductID': 67,
  'ProductName': 'Laughing Lumberjack Lager',
  'SupplierID': 16,
  'QuantityPerUnit': '24 - 12 oz bottles',
  'UnitPrice': 14.00,
  'UnitsInStock': 52,
  'Discontinued': false
},

{
```

```

        "CategoryName": "Seafood",
        'ProductID': 68,
        'ProductName': 'Scottish Longbreads',
        'SupplierID': 8,
        'QuantityPerUnit': '10 boxes x 8 pieces',
        'UnitPrice': 12.50,
        'UnitsInStock': 6,
        'Discontinued': false
    },
    {
        "CategoryName": "Seafood",
        'ProductID': 69,
        'ProductName': 'Gudbrandsdalsost',
        'SupplierID': 15,
        'QuantityPerUnit': '10 kg pkg.',
        'UnitPrice': 36.00,
        'UnitsInStock': 26,
        'Discontinued': false
    }
];

```

* You can set [searchSettings.ignoreAccent](#) property along with other search settings such as [fields](#), [operator](#), and [ignoreCase](#) to achieve the desired search behavior.

* This feature works only for the characters that are not in the ASCII range.

* This feature may have a slight impact on search performance.

Highlight the search text

The Syncfusion Grid component allows you to visually highlight search results within the displayed data. This feature helps you to quickly identify where the search items are found within the displayed data. By adding a style to the matched text, you can quickly identify where the search items are present in the grid.

To achieve search text highlighting in the Grid, you can utilize the [queryCellInfo](#) event. This event is triggered for each cell during the Grid rendering process, allowing you to customize the cell content based on your requirements.

The following example demonstrates how to highlight search text in grid using the `queryCellInfo` event. The `queryCellInfo` event checks if the current cell is in the desired search column, retrieves the cell value, search keyword and uses the `includes` method to check if the cell value contains the search keyword. If it does, the matched text is replaced with the same text wrapped in a `span` tag with a `customcss` class. You can then use CSS to define the `customcss` class and style to easily identify where the search keywords are present in the grid.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Search } from
 '@syncfusion/ej2-react-grids';
import { Inject, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
    let key = '';

```

```

const actionBegin = (args) => {
  if (args.requestType === 'searching') {
    key = args.searchString.toLowerCase();
  }
}

const queryCellInfo = (args) => {
  if (key !== '') {
    let cellContent = args.data[args.column.field];
    let parsedContent = cellContent.toString().toLowerCase();
    if (parsedContent.includes(key.toLowerCase())) {
      let i = 0;
      let searchStr = '';
      while (i < key.length) {
        let index = parsedContent.indexOf(key[i]);
        searchStr = searchStr + cellContent.toString()[index];
        i++;
      }
      args.cell.innerHTML = args.cell.innerText.replaceAll(searchStr,
"<span class='customcss'" + searchStr + '</span>');
    }
  }
}

return (<div>
  <GridComponent dataSource={data} height={280} toolbar={['Search']}
actionBegin={actionBegin} queryCellInfo={queryCellInfo}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
      <ColumnDirective field='Freight' headerText='Freight' width='100'
textAlign="Right" />
      <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='100' />
    </ColumnsDirective>
    <Inject services={['Toolbar', Search]} />
  </GridComponent>
</div>);
};
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent,
QueryCellInfoEventArgs, Search, SearchEventArgs } from '@syncfusion/ej2-
react-grids';
import { Inject, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let key: string = '';
  const actionBegin = (args: SearchEventArgs) => {
    if (args.requestType === 'searching') {
      key = args.searchString.toLowerCase();
    }
  }
}

```

```

const queryCellInfo = (args: QueryCellInfoEventArgs) => {
  if (key !== '') {
    let cellContent = args.data[args.column.field];
    let parsedContent = cellContent.toString().toLowerCase();
    if (parsedContent.includes(key.toLowerCase())) {
      let i = 0;
      let searchStr = '';
      while (i < key.length) {
        let index = parsedContent.indexOf(key[i]);
        searchStr = searchStr + cellContent.toString()[index];
        i++;
      }
      args.cell.innerHTML = args.cell.innerText.replaceAll(searchStr,
"<span class='customcss'" + searchStr + '</span>');
    }
  }
}

return (<div>
  <GridComponent dataSource={data} height={280} toolbar={['Search']}
actionBegin={actionBegin} queryCellInfo={queryCellInfo}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
      <ColumnDirective field='Freight' headerText='Freight' width='100'
textAlign="Right" />
      <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='100' />
    </ColumnsDirective>
    <Inject services={['Toolbar', Search]} />
  </GridComponent>
</div>);
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {

```

```
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
```

```

    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',

```



```

        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
      },
      {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
      },
      {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',

```

```

    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
    Freight: 48.29, Verified: !0
  }];

```

Clear search by external button

The Syncfusion Grid component provides a capability to clear searched data in the grid. This functionality offers the ability to reset or clear any active search filters that have been applied to the grid's data.

To clear the searched grid records from an external button, you can set the [searchSettings.key](#) property to an **empty** string to clear the search text. This property represents the current search text in the search box.

The following example demonstrates how to clear the searched records using an external button.

APP.JSX

```

import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Inject, Search, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  const toolbarOptions = ['Search'];
  const searchOptions = {
    fields: ['CustomerID'],
    ignoreCase: true,
    key: 'Ha',
    operator: 'contains',
  };
  const clickHandler = () => {
    if (grid) {
      grid.searchSettings.key = '';
    }
  };
  return (
    <div>
      <ButtonComponent onClick={clickHandler}>Clear Search</ButtonComponent>
      <GridComponent
        dataSource={data}
        toolbar={toolbarOptions}
        searchSettings={searchOptions}
        height={260}
        ref={g => grid = g}
      >
        <ColumnsDirective>
          <ColumnDirective field='OrderID' width='100' textAlign="Right"/>
          <ColumnDirective field='CustomerID' width='100' />
          <ColumnDirective field='EmployeeID' width='100'
            textAlign="Right"/>
          <ColumnDirective field='ShipCountry' width='100' />
        </ColumnsDirective>
        <Inject services={[Search, Toolbar]} />
      </GridComponent>
    </div>
  );
}
export default App;

```

APP.TSX

```

import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, Grid, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Inject, Search, SearchSettingsModel, Toolbar, ToolbarItems } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid: Grid | null;
  const toolbarOptions: ToolbarItems[] = ['Search'];
  const searchOptions: SearchSettingsModel = {
    fields: ['CustomerID'],
    ignoreCase: true,
    key: 'Ha',
    operator: 'contains',
  };
  const clickHandler = () => {
    if (grid) {
      grid.searchSettings.key = '';
    }
  };
  return (
    <div>
      <ButtonComponent onClick={clickHandler}>Clear Search</ButtonComponent>
      <GridComponent dataSource={data} toolbar={toolbarOptions}
        searchSettings={searchOptions} height={260} ref={g => grid = g}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' width='100' textAlign="Right" />
          <ColumnDirective field='CustomerID' width='100' />
          <ColumnDirective field='EmployeeID' width='100' textAlign="Right" />
          <ColumnDirective field='ShipCountry' width='100' />
        </ColumnsDirective>
        <Inject services={[Search, Toolbar]} />
      </GridComponent></div>
    );
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {

```

```

OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
  ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
  ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
},
{
  OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
  ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
  ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
},
{
  OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
  ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
  ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
},
{
  OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
  ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
  ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
},
{
  OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
  ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
  ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
},
{
  OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
  ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
  ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
},
{
  OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
  ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
  ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
},
{

```

```

    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),

```

```

      ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
      ShipAddress: '59 rue de l Abbaye',
      ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
      Freight: 32.38, Verified: !0
    },
    {
      OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
      Date(836505e6),
      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
      'Luisenstr. 48',
      ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
      Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
      Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
      Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),

```

```

        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),

```



```
ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',  
ShipAddress: '2817 Milton Dr.',  
ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',  
Freight: 48.29, Verified: !0  
}];
```

You can also clear the searched records by using the clear icon within the search input field.

See also

- [How to perform search by using Wildcard and LIKE operator filter](#)

Paging in React Grid component

Paging provides an option to display grid data in segmented pages, making it easier to navigate through large datasets. This feature is particularly useful when dealing with extensive data sets.

To enable paging, you need to set the [allowPaging](#) property to **true**. This property determines whether paging is enabled or disabled for the grid. When paging is enabled, a pager component rendered at the bottom of the grid, allowing you to navigate through different pages of data.

To use paging, you need to inject the **Page** module into the grid. This service provides the necessary methods and events to handle paging functionality.

Paging options can be configured through the [pageSettings](#) property. The `pageSettings` object allows you to control various aspects of paging, such as the page size, current page, and total number of records.

You can achieve better performance by using grid paging to fetch only a pre-defined number of records from the data source.

Customize the pager options

Customizing the pager options in the Syncfusion Grid allows you to tailor the pagination control according to your specific requirements. You can customize the pager to display the number of pages using the `pageCount` property, change the current page using `currentPage` property, display the number of records in the grid using the `pageSize` property, and even adjust the page sizes in a dropdown using the `pageSizes` property. Additionally, you can include the current page as a query string in the URL for convenient navigation.

Change the page size

The Syncfusion Grid allows you to control the number of records displayed per page, providing you with flexibility in managing your data. This feature is particularly useful when you want to adjust the amount of data visible to you at any given time. To achieve this, you can utilize the [pageSettings.pageSize](#) property. This property is used to specify the initial number of records to display on each page. The default value of `pageSize` property is **12**.

The following example demonstrates how to change the page size of a Grid using an external button click based on **TextBox** input.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Page }  
from '@syncfusion/ej2-react-grids';  
import React, { useState } from 'react';
```

```

import { data } from './datasource';
import { TextBoxComponent } from '@syncfusion/ej2-react-inputs';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
function App() {
  const [pageSettings, setPageSettings] = useState();
  let textbox;
  const click = () => {
    const pageSize = { pageSize: textbox.value };
    setPageSettings(pageSize);
  }
  return (<div>
    <label style={{ padding: "30px 17px 0 0" }}>Enter page size:</label>
    <TextBoxComponent ref={t => textbox = t} width={120}></TextBoxComponent>
    <ButtonComponent onClick={click}>Click button</ButtonComponent>
    <GridComponent dataSource={data} height={265} allowPaging={true}
pageSettings={pageSettings}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" isPrimaryKey={true} />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='140' />
        <ColumnDirective field='Freight' headerText='Freight' width='120'
format="C" textAlign="Right" />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' />
        <ColumnDirective field='ShipCity' headerText='Ship City' width='150'
/>
        <ColumnDirective field='Verified' headerText='Verified' width='150'
displayAsCheckBox={true} />
      </ColumnsDirective>
      <Inject services={[Page]} />
    </GridComponent></div>)
};
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Page,
PageSettingsModel } from '@syncfusion/ej2-react-grids';
import React, { useState } from 'react';
import { data } from './datasource';
import { TextBoxComponent } from '@syncfusion/ej2-react-inputs';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
function App() {
  const [pageSettings, setPageSettings] = useState<PageSettingsModel>();
  let textbox: TextBoxComponent | null;
  const click = () => {
    const pageSize: PageSettingsModel = { pageSize: (textbox as
TextBoxComponent).value };
    setPageSettings(pageSize);
  }
  return (<div>
    <label style={{ padding: "30px 17px 0 0" }}>Enter page size:</label>
    <TextBoxComponent ref={t => textbox = t} width={120}></TextBoxComponent>
    <ButtonComponent onClick={click}>Click button</ButtonComponent>

```

```

    <GridComponent dataSource={data} height={265} allowPaging={true}
    pageSettings={pageSettings}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='120'
        textAlign="Right" isPrimaryKey={true} />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
        width='140' />
        <ColumnDirective field='Freight' headerText='Freight' width='120'
        format="C" textAlign="Right" />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
        width='150' />
        <ColumnDirective field='ShipCity' headerText='Ship City' width='150'
        />
        <ColumnDirective field='Verified' headerText='Verified' width='150'
        displayAsCheckBox={true} />
      </ColumnsDirective>
      <Inject services={[Page]} />
    </GridComponent></div>
  };
  export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },

```

```

{
  OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
  ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
  ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
},
{
  OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
  ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
  ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
},
{
  OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
  ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
  ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
},
{
  OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
  ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
  ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
},
{
  OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
  ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
  ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
},
{
  OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
  ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
  ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
},
{
  OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
  ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
  ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
},
{

```

```

    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),

```

```

      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
      Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
      'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
      Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
      'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
      Date(8374554e5),

```

```

        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]];

```

Change the page count

The Syncfusion Grid allows you to adjust the number of pages displayed in the pager container. This is useful when you want to manage the number of pages you see while navigating through extensive datasets. The default value of `pageCount` property is 8.

To change the page count in the Syncfusion Grid, you can utilize the [pageSettings.pageCount](#) property, which defines the number of pages displayed in the pager container.

The following example demonstrates how to change the page count of a Grid using an external button click based on **TextBox** input.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Page }
from '@syncfusion/ej2-react-grids';
import React, { useState } from 'react';
import { data } from './datasource';
import { TextBoxComponent } from '@syncfusion/ej2-react-inputs';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
function App() {
  const [pageSettings, setPageSettings] = useState();
  let textbox;
  const click = () => {
    const pageCount = { pageCount: textbox.value };
    setPageSettings(pageCount);
  }
  return (<div>
    <label style={{ padding: "30px 17px 0 0" }}>Enter page count:</label>
    <TextBoxComponent ref={t => textbox = t} width={120}></TextBoxComponent>
    <ButtonComponent onClick={click}>Click button</ButtonComponent>
    <GridComponent dataSource={data} height={265} allowPaging={true}
pageSettings={pageSettings}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" isPrimaryKey={true} />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='140' />
        <ColumnDirective field='Freight' headerText='Freight' width='120'
format="C" textAlign="Right" />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' />
        <ColumnDirective field='ShipCity' headerText='Ship City' width='150'
/>
        <ColumnDirective field='Verified' headerText='Verified' width='150'
displayAsCheckBox={true} />
      </ColumnsDirective>
      <Inject services={[Page]} />
    </GridComponent></div>
  );
}
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Page,
PageSettingsModel } from '@syncfusion/ej2-react-grids';
import React, { useState } from 'react';
import { data } from './datasource';
import { TextBoxComponent } from '@syncfusion/ej2-react-inputs';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
function App() {
  const [pageSettings, setPageSettings] = useState<PageSettingsModel>();
  let textbox: TextBoxComponent | null;
  const click = () => {
```



```

const pageCount: PageSettingsModel = { pageCount: (textbox as
TextBoxComponent).value };
setPageSettings(pageCount);
}
return (<div>
  <label style={{ padding: "30px 17px 0 0" }}>Enter page count:</label>
  <TextBoxComponent ref={t => textbox = t} width={120}></TextBoxComponent>
  <ButtonComponent onClick={click}>Click button</ButtonComponent>
  <GridComponent dataSource={data} height={265} allowPaging={true}
pageSettings={pageSettings}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" isPrimaryKey={true} />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='140' />
      <ColumnDirective field='Freight' headerText='Freight' width='120'
format="C" textAlign="Right" />
      <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' />
      <ColumnDirective field='ShipCity' headerText='Ship City' width='150'
/>
      <ColumnDirective field='Verified' headerText='Verified' width='150'
displayAsCheckBox={true} />
    </ColumnsDirective>
    <Inject services={[Page]} />
  </GridComponent></div>
);
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },

```

```

    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {

```

```

    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),

```

```

      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
      'Luisenstr. 48',
      ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
      Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
      Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
      Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
      'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
      Date(837369e6),

```

```

        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]];

```

Change the current page

The Syncfusion Grid allows you to change the currently displayed page, which can be particularly useful when you need to navigate through different pages of data either upon the initial rendering of the grid or update the displayed page based on interactions or specific conditions. The default value of `currentPage` property is **1**.

To change the current page in the Syncfusion Grid, you can utilize the [pageSettings.currentPage](#) property, which defines the current page number of the pager.

The following example demonstrates how to dynamically change the current page using an external button click based on **TextBox** input:

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Page }
  from '@syncfusion/ej2-react-grids';
import React, { useState } from 'react';
import { data } from './datasource';
import { TextBoxComponent } from '@syncfusion/ej2-react-inputs';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
function App() {
  const [pageSettings, setPageSettings] = useState();
  let textbox;
  const click = () => {
    const currentPage = { currentPage: textbox.value };
    setPageSettings(currentPage);
  }
  return (<div>
    <label style={{ padding: "30px 17px 0 0" }}>Enter current page:</label>
    <TextBoxComponent ref={t => textbox = t} width={120}></TextBoxComponent>
    <ButtonComponent onClick={click}>Click button</ButtonComponent>
    <GridComponent dataSource={data} height={265} allowPaging={true}
    pageSettings={pageSettings}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='120'
        textAlign="Right" isPrimaryKey={true} />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
        width='140' />
        <ColumnDirective field='Freight' headerText='Freight' width='120'
        format="C" textAlign="Right" />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
        width='150' />
        <ColumnDirective field='ShipCity' headerText='Ship City' width='150'
        />
        <ColumnDirective field='Verified' headerText='Verified' width='150'
        displayAsCheckBox={true} />
      </ColumnsDirective>
      <Inject services={[Page]} />
    </GridComponent></div>
  );
};
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Page,
  PageSettingsModel } from '@syncfusion/ej2-react-grids';
```

```

import React, { useState } from 'react';
import { data } from './datasource';
import { TextBoxComponent } from '@syncfusion/ej2-react-inputs';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
function App() {
  const [pageSettings, setPageSettings] = useState<PageSettingsModel>();
  let textbox: TextBoxComponent | null;
  const click = () => {
    const currentPage: PageSettingsModel = { currentPage: (textbox as
    TextBoxComponent).value };
    setPageSettings(currentPage);
  }
  return (<div>
    <label style={{ padding: "30px 17px 0 0" }}>Enter current page:</label>
    <TextBoxComponent ref={t => textbox = t} width={120}></TextBoxComponent>
    <ButtonComponent onClick={click}>Click button</ButtonComponent>
    <GridComponent dataSource={data} height={265} allowPaging={true}
    pageSettings={pageSettings}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='120'
        textAlign="Right" isPrimaryKey={true} />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
        width='140' />
        <ColumnDirective field='Freight' headerText='Freight' width='120'
        format="C" textAlign="Right" />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
        width='150' />
        <ColumnDirective field='ShipCity' headerText='Ship City' width='150'
        />
        <ColumnDirective field='Verified' headerText='Verified' width='150'
        displayAsCheckBox={true} />
      </ColumnsDirective>
      <Inject services={[Page]} />
    </GridComponent></div>
  );
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },

```

```

    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {

```



```

    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),

```

```

      ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
      ShipAddress: '59 rue de l Abbaye',
      ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
      Freight: 32.38, Verified: !0
    },
    {
      OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
      Date(836505e6),
      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
      'Luisenstr. 48',
      ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
      Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
      Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
      Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),

```

```

      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),

```

```

    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
    ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
    Freight: 48.29, Verified: !0
  }];

```

Add current page in URL as a query string

The Syncfusion Grid allows you to include the current page information as a query string in the URL. This feature is particularly useful for scenarios where you need to maintain and share the state of the grid's pagination.

To add the current page detail to the URL as a query string in the Syncfusion Grid, you can enable the [enableQueryString](#) property. When this property is set to **true**, it will automatically pass the current page information as a query string parameter along with the URL when navigating to other pages within the grid.

By enabling the `enableQueryString` property, you can easily copy the URL of the current page and share it with others. When the shared URL is opened, it will load the grid with the exact page that was originally shared.

In the following example, the [EJ2 Toggle Switch Button](#) component is added to enable or disable the addition of the current page to the URL as a query string. When the switch is toggled, the [change](#) event is triggered and the `enableQueryString` property of the grid is updated accordingly.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Page }
  from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
import { ChangeEventArgs, SwitchComponent } from '@syncfusion/ej2-react-
  buttons';
function App() {
  let grid;
  const toggleQueryString = (args) => {
    grid.pageSettings.enableQueryString = args.checked;
  }
  return (<div>
    <label style={{ padding: "30px 17px 0 0" }}>Enable/Disable Query
    String</label>
    <SwitchComponent change={toggleQueryString}></SwitchComponent>
    <GridComponent dataSource={data} height={265} ref={g => grid = g}
    allowPaging={true} >
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='120'
        textAlign="Right" isPrimaryKey={true} />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
        width='140' />
        <ColumnDirective field='Freight' headerText='Freight' width='120'
        format="C" textAlign="Right" />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
        width='150' />
        <ColumnDirective field='ShipCity' headerText='Ship City' width='150'
        />
      </ColumnsDirective>
    </GridComponent>
  </div>);
}

```

```

        <ColumnDirective field='Verified' headerText='Verified' width='150'
displayAsCheckBox={true} />
    </ColumnsDirective>
    <Inject services={[Page]} />
</GridComponent></div>
);
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Page }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
import { ChangeEventArgs, SwitchComponent } from '@syncfusion/ej2-react-
buttons';
function App() {
    let grid: GridComponent | null;
    const toggleQueryString = (args: ChangeEventArgs) => {
        (grid as GridComponent).pageSettings.enableQueryString = args.checked;
    }
    return (<div>
        <label style={{ padding: "30px 17px 0 0" }}>Enable/Disable Query
String</label>
        <SwitchComponent change={toggleQueryString}></SwitchComponent>
        <GridComponent dataSource={data} height={265} ref={g => grid = g}
allowPaging={true} >
            <ColumnsDirective>
                <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" isPrimaryKey={true} />
                <ColumnDirective field='CustomerID' headerText='Customer ID'
width='140' />
                <ColumnDirective field='Freight' headerText='Freight' width='120'
format="C" textAlign="Right" />
                <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' />
                <ColumnDirective field='ShipCity' headerText='Ship City' width='150'
/>
                <ColumnDirective field='Verified' headerText='Verified' width='150'
displayAsCheckBox={true} />
            </ColumnsDirective>
            <Inject services={[Page]} />
        </GridComponent></div>
    );
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    }
];

```

```

    },
    {
      OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
      ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
  ],

```

```

    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
  ];

```

DATASOURCE.TSX

```
export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
```



```

      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),

```

```

      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }
  ]];

```

Pager template

The pager template in Syncfusion Grid allows you to customize the appearance and behavior of the pager element, which is used for navigation through different pages of grid data. This feature is particularly useful when you want to use custom elements inside the pager instead of the default elements.

To use the pager template, you need to specify the [pagerTemplate](#) property in your Syncfusion Grid configuration. The [pagerTemplate](#) property allows you to define a custom template for the pager. Within the template, you can access the [currentPage](#), [pageSize](#), [pageCount](#), [totalPage](#) and [totalRecordCount](#) values.

The following example demonstrates how to render a **NumericTextBox** component in the pager using the [pagerTemplate](#) property:

APP.JSX

```

import { NumericTextBoxComponent } from "@syncfusion/ej2-react-inputs";
import { ColumnDirective, ColumnsDirective } from '@syncfusion/ej2-react-grids';
import { GridComponent, Inject, Page } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  const change = (args) => {
    grid.pageSettings.currentPage = args.value;
  };
  const template = (pagerData) => {
    return (
      <div className="e-pagertemplate">
        <div className="col-lg-12 control-section">
          <div className="content-wrapper">
            <NumericTextBoxComponent min={1} max={3}
              value={pagerData.currentPage} format='###.##'
              change={change}></NumericTextBoxComponent>
          </div>
        </div>
        <div id="totalPages" className="e-pagertemplatemessage" style={{
          marginTop: 8, marginLeft: 30, border: "none", display: "inline-block" }}>
          <span className="e-pagenomsg">
            {pagerData.currentPage} of {pagerData.totalPages} pages
            ({pagerData.totalRecordsCount} items)
          </span>
        </div>
      </div>
    );
  };

```

```

        </span>
      </div>
    </div>);
  };
  return (<GridComponent dataSource={data} allowPaging={true}
pageSettings={{ template: template, pageSize: 5 }} ref={g => grid = g}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign="Right"/>
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
      <ColumnDirective field='ShipCity' headerText='Ship City'
width='100' />
    </ColumnsDirective>
    <Inject services={[Page]} />
  </GridComponent>);
}
;
export default App;

```

APP.TSX

```

import { NumericTextBoxComponent } from "@syncfusion/ej2-react-inputs";
import { ColumnDirective, ColumnsDirective } from '@syncfusion/ej2-react-
grids';
import { GridComponent, Inject, Grid, Page, PageSettingsModel } from
'@syncfusion/ej2-react-grids'
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid: Grid | null;
  const change = (args) => {
    grid.pageSettings.currentPage = args.value;
  }
  const template = (pagerData) => {
    return (
      <div className="e-pagertemplate">
        <div className="col-lg-12 control-section">
          <div className="content-wrapper">
            <NumericTextBoxComponent min={1} max={3}
value={pagerData.currentPage} format='###.##'
change={change}></NumericTextBoxComponent>
          </div>
        </div>
        <div
          id="totalPages"
          className="e-pagertemplatemessage" style={{ marginTop: 8,
marginLeft: 30, border: "none", display: "inline-block"}}>
          <span className="e-pagenomsg">
            {pagerData.currentPage} of {pagerData.totalPages} pages
            ({pagerData.totalRecordsCount} items)
          </span>
        </div>
      </div>
    );
  };
}

```

```

    return (<GridComponent dataSource={data} allowPaging={true}
pageSettings={{ template: template, pageSize: 5 }} ref={g=> grid = g}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign="Right"/>
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
        <ColumnDirective field='ShipCity' headerText='Ship City'
width='100' />
      </ColumnsDirective>
      <Inject services={[Page]} />
    </GridComponent>)
  };
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',

```

```

        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]
  };

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },

```

```

    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {

```

```

    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
    ]
};

```

Pager with page size dropdown

The pager with a page size dropdown in Syncfusion Grid allows you to dynamically change the number of records displayed in the grid. This feature is useful when you want to easily customize the number of records to be shown per page.

To enable the page size Dropdown feature in the Syncfusion Grid, you need to set the [pageSettings.pageSize](#) property to **true** in the grid configuration. This property configuration triggers the rendering of a dropdown list within the pager, allowing you to select the desired page size. The selected page size determines the number of records displayed on each page of the grid.

The following example that demonstrates how to integrate the page size Dropdown feature by configuring the `pageSizes` property:

APP.JSX


```
import { ColumnDirective, ColumnsDirective } from '@syncfusion/ej2-react-grids';
import { GridComponent, Inject, Page } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    const pageOptions = {
        pageSize: 8, pageSizes: true
    };
    return (<GridComponent dataSource={data} allowPaging={true} height={268}
pageSettings={pageOptions}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign="Right"/>
            <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
            <ColumnDirective field='ShipCity' headerText='Ship City'
width='100' />
        </ColumnsDirective>
        <Inject services={[Page]} />
    </GridComponent>);
}
;
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective } from '@syncfusion/ej2-react-grids';
import { GridComponent, Inject, Page, PageSettingsModel } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    const pageOptions: PageSettingsModel = {
        pageSize: 8, pageSizes: true
    };
    return (<GridComponent dataSource={data} allowPaging={true} height={268}
pageSettings={pageOptions}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign="Right"/>
            <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
            <ColumnDirective field='ShipCity' headerText='Ship City'
width='100' />
        </ColumnsDirective>
        <Inject services={[Page]} />
    </GridComponent>)
};
export default App;
```

DATASOURCE.JSX

```
export let data = [
    {
```

```

    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {

```

```

    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
        },
        {
            OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
            ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
            ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
            },
            {
                OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
                ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
                ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
                },
                {
                    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
                    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
                    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
                    },
                    {
                        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
                        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
                        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
                        },
                        {
                            OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
                            ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
                            ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
                            },
                            {

```

```

    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),

```

```

      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
      'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
      Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
      'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
      Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
      'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
      'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
      Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
      Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
      Date(8377146e5),

```

```

      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
  ]];

```

If the `pageSizes` property is set to a boolean value like `'true'` or `'false'`, the page size dropdown defaults to an array of strings containing options such as `['All', '5', '10', '15', '20']`.

Customize page size dropdown

The Syncfusion Grid allows you to customize the default values of the page size dropdown in the pager, allowing you to change the number of records displayed per page. To achieve this, you can define the `pageSizes` property as an array of string instead of boolean value.

The following example demonstrate how to customize the default values of the pager dropdown using the `pageSizes` property:

APP.JSX

```

import { ColumnDirective, ColumnsDirective } from '@syncfusion/ej2-react-
grids';
import { GridComponent, Inject, Page } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const pageOptions = {
    pageSizes: ['5', '10', '15', '20', 'All']
  };
  return (<GridComponent dataSource={data} allowPaging={true} height={268}
pageSettings={pageOptions}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
      <ColumnDirective field='ShipCity' headerText='Ship City'
width='100' />
    </ColumnsDirective>
    <Inject services={[Page]} />
  </GridComponent>);

```

```
}  
;  
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective } from '@syncfusion/ej2-react-grids';  
import { GridComponent, Inject, Page, PageSettingsModel } from '@syncfusion/ej2-react-grids';  
import * as React from 'react';  
import { data } from './datasource';  
function App() {  
    const pageOptions: PageSettingsModel = {  
        pageSizes: ['5', '10', '15', '20', 'All']  
    };  
    return (<GridComponent dataSource={data} allowPaging={true} height={268}  
pageSettings={pageOptions}>  
        <ColumnsDirective>  
            <ColumnDirective field='OrderID' headerText='Order ID' width='120'  
textAlign="Right" />  
            <ColumnDirective field='CustomerID' headerText='Customer ID'  
width='100' />  
            <ColumnDirective field='ShipCity' headerText='Ship City' width='100' />  
        </ColumnsDirective>  
        <Inject services={[Page]} />  
    </GridComponent>  
);  
};  
export default App;
```

DATASOURCE.JSX

```
export let data = [  
    {  
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new  
Date(8364186e5),  
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',  
ShipAddress: '59 rue de l Abbaye',  
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',  
Freight: 32.38, Verified: !0  
    },  
    {  
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new  
Date(836505e6),  
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:  
'Luisenstr. 48',  
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',  
Freight: 11.61, Verified: !1  
    },  
    {  
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new  
Date(8367642e5),  
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:  
'Rua do Paço, 67',  
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',  
Freight: 65.83, Verified: !0  
    }  
];
```

```

    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
  ],

```



```

    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
      Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }
  ]
};

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),

```

```

      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
      'Luisenstr. 48',
      ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
      Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
      Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
      Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
      'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
      Date(837369e6),

```

```

      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
      'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
      Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
      'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
      'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
      Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
      Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
      'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
      Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }
  ]];

```

The `pageSizes` property can be configured with either an array of strings or a boolean value.

How to navigate to particular page

Navigating to a particular page in the Syncfusion Grid is particularly useful when dealing with large datasets. It provides a quick and efficient way to jump to a specific page within the grid.

To achieve page navigation, you can use the [goToPage](#) method provided by Syncfusion Grid. This method allows you to programmatically navigate to a specific page within the grid.

The following example demonstrates how to dynamically navigate to a particular page using the [goToPage](#) method triggered by an external button click based on **TextBox** input:

APP.JSX

```
import { ColumnDirective, ColumnsDirective, Grid, GridComponent, Inject, Page
} from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
import { NumericTextBoxComponent, TextBoxComponent } from '@syncfusion/ej2-
react-inputs';
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { ButtonComponent, CheckBoxComponent } from '@syncfusion/ej2-react-
buttons';
import { FormsModule } from '@angular/forms';
function App() {
  let grid;
  let textbox;
  const click = () => {
    (grid.pagerModule).goToPage(textbox.value);
  }
  return (<div>
    <label style={{ padding: "30px 17px 0 0" }}>Select page
index:</label>
    <TextBoxComponent ref={t => textbox = t}
width={120}></TextBoxComponent>
    <ButtonComponent onClick={click}>Click button</ButtonComponent>
    <GridComponent dataSource={data} height={265} ref={g => grid = g}
allowPaging={true} >
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign="Right" isPrimaryKey={true} />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='140' />
        <ColumnDirective field='Freight' headerText='Freight'
width='120' format="C" textAlign="Right" />
        <ColumnDirective field='ShipCountry' headerText='Ship
Country' width='150' />
        <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
        <ColumnDirective field='Verified' headerText='Verified'
width='150' displayAsCheckBox={true} />
      </ColumnsDirective>
      <Inject services={[Page]} />
    </GridComponent></div>)
};
export default App;
```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Page }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
import { TextBoxComponent } from '@syncfusion/ej2-react-inputs';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
function App() {
  let grid: GridComponent | null;
  let textbox: TextBoxComponent | null;
  const click = () => {
    (grid as GridComponent).pagerModule.goToPage((textbox as
    TextBoxComponent).value);
  }
  return (<div>
    <label style={{ padding: "30px 17px 0 0" }}>Select page index:</label>
    <TextBoxComponent ref={t => textbox = t} width={120}></TextBoxComponent>
    <ButtonComponent onClick={click}>Click button</ButtonComponent>
    <GridComponent dataSource={data} height={265} ref={g => grid = g}
    allowPaging={true} >
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='120'
        textAlign="Right" isPrimaryKey={true} />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
        width='140' />
        <ColumnDirective field='Freight' headerText='Freight' width='120'
        format="C" textAlign="Right" />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
        width='150' />
        <ColumnDirective field='ShipCity' headerText='Ship City' width='150'
        />
        <ColumnDirective field='Verified' headerText='Verified' width='150'
        displayAsCheckBox={true} />
      </ColumnsDirective>
      <Inject services={[Page]} />
    </GridComponent></div>
  );
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  }
]

```

```

    },
    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
  },

```

```

    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
  ];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),

```

```

      ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
      ShipAddress: '59 rue de l Abbaye',
      ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
      Freight: 32.38, Verified: !0
    },
    {
      OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
      Date(836505e6),
      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
      'Luisenstr. 48',
      ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
      Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
      Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
      Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),

```



```

      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),

```

```
ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',  
ShipAddress: '2817 Milton Dr.',  
ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',  
Freight: 48.29, Verified: !0  
}];
```

How to get the pager element

You can get pager element in the Syncfusion Grid. This allows you to customize the pager's appearance or behavior to meet the requirements of your application.

[getPager](#)- This method allows you to obtain a reference to the pager element within the Syncfusion Grid. It returns an HTML element representing the pager.

```
`ts
```

```
grid.getPager()  
`
```

Dynamically calculate page size based on element height

You have an option to dynamically calculate the page size of a grid by considering the height of its parent element. This functionality proves invaluable in ensuring that the grid's content remains within the available space, preventing the need for excessive scrolling. It primarily serves the purpose of automatically adjusting the `pageSize` when the height of the grid's parent element changes dynamically. Upon each alteration in the parent element's height, invoking this method will compute the grid's `pageSize` and present the current page records accordingly. This feature effectively addresses situations where a static `pageSize` value does not cater to the varying heights of different parent elements, preventing any unwanted empty spaces within the grid.

To achieve page size calculation based on an element's height in the Grid, you can utilize the [calculatePageSizeByParentHeight](#) method. This method calculates the page size based on the height of the parent element.

The following example demonstrates how to calculate the page size based on element height using the `calculatePageSizeByParentHeight` method triggered by a change event based on the **NumericTextBox** input:

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Page }  
from '@syncfusion/ej2-react-grids';  
import React, { useState } from 'react';  
import { data } from './datasource';  
import { NumericTextBoxComponent } from '@syncfusion/ej2-react-inputs';  
function App() {  
  let grid;  
  const [pageSize, setPageSize] = useState()  
  const calculatePageSize = ({ value }) => {  
    const newValue = { pageSize:  
grid.calculatePageSizeByParentHeight(value.toString()) };  
    setPageSize(newValue);  
  }  
  return (<div>  
    <label style={{ padding: "30px 17px 0 0" }}>Select page size:</label>
```

```

        <NumericTextBoxComponent placeholder='select container height'
format='####.##' min={150} step={50} width={200}
change={calculatePageSize}></NumericTextBoxComponent>
        <GridComponent dataSource={data} ref={g => grid = g}
allowPaging={true} pageSettings={pageSize}>
            <ColumnsDirective>
                <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign="Right" isPrimaryKey={true} />
                <ColumnDirective field='CustomerID' headerText='Customer ID'
width='140' />
                <ColumnDirective field='Freight' headerText='Freight'
width='120' format="C" textAlign="Right" />
                <ColumnDirective field='ShipCountry' headerText='Ship
Country' width='150' />
                <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
                <ColumnDirective field='Verified' headerText='Verified'
width='150' displayAsCheckBox={true} />
            </ColumnsDirective>
            <Inject services={[Page]} />
        </GridComponent></div>
    );
    export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Page,
PageSettingsModel } from '@syncfusion/ej2-react-grids';
import React, { useState } from 'react';
import { data } from './datasource';
import { NumericTextBoxComponent, ChangeEventArgs } from '@syncfusion/ej2-
react-inputs';
function App() {
    let grid: GridComponent | null;
    const [pageSize, setPageSize] = useState<PageSettingsModel>()
    const calculatePageSize = ({ value }: ChangeEventArgs) => {
        const newValue: PageSettingsModel = { pageSize: (grid as
GridComponent).calculatePageSizeByParentHeight((value as number).toString())
    };
        setPageSize(newValue);
    }
    return (<div>
        <label style={{ padding: "30px 17px 0 0" }}>Select page size:</label>
        <NumericTextBoxComponent placeholder='select container height'
format='####.##' min={150} step={50} width={200}
change={calculatePageSize}></NumericTextBoxComponent>
        <GridComponent dataSource={data} ref={g => grid = g} allowPaging={true}
pageSettings={pageSize}>
            <ColumnsDirective>
                <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" isPrimaryKey={true} />
                <ColumnDirective field='CustomerID' headerText='Customer ID'
width='140' />
                <ColumnDirective field='Freight' headerText='Freight' width='120'
format="C" textAlign="Right" />

```

```

        <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' />
        <ColumnDirective field='ShipCity' headerText='Ship City' width='150'
/>
        <ColumnDirective field='Verified' headerText='Verified' width='150'
displayAsCheckBox={true} />
    </ColumnsDirective>
    <Inject services={[Page]} />
    </GridComponent></div>
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {

```

```

    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {

```

```

    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),

```

```

        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),

```

```

        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]
};

```

Render pager at the top of the grid

The Grid component provides built-in support for rendering a pager at the bottom of the grid by default. However, in certain scenarios, you might want to display the pager at the top of the grid. This can be achieved by utilizing the [dataBound](#) event. This event is triggered when the Grid completes rendering its data. By handling this event, you can customize the rendering of the pager and move it to the top of the Grid.

Here's an example that demonstrates how to render the pager at the top of the grid using the `dataBound` event:

APP.JSX

```

import { ColumnDirective, ColumnsDirective, Toolbar } from '@syncfusion/ej2-react-grids';
import { GridComponent, Inject, Page } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';

```



```
function App() {
  let gridInstance;
  let initialGridLoad = true;
  const pageOptions = {
    pageSize: 8, pageSizes: true
  };
  const dataBound = () => {
    if (initialGridLoad && gridInstance) {
      initialGridLoad = false;
      const pager = document.getElementsByClassName('e-gridpager');
      let topElement = document.getElementsByClassName('e-gridheader');
      gridInstance.element.insertBefore(pager[0], topElement[0]);
    }
  };
  return (<GridComponent dataSource={data} ref={grid => gridInstance =
grid} toolbar={toolbarOptions} allowPaging={true} height={268}
pageSettings={pageOptions} dataBound={dataBound}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign="Right"/>
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150'/>
      <ColumnDirective field='ShipCity' headerText='Ship City'
width='150'/>
      <ColumnDirective field='ShipName' headerText='Ship Name'
width='150'/>
    </ColumnsDirective>
    <Inject services={[Page, Toolbar]}/>
  </GridComponent>);
}
;
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective } from '@syncfusion/ej2-react-
grids';
import { Grid, GridComponent, Inject, Page, PageSettingsModel } from
'@syncfusion/ej2-react-grids'
import * as React from 'react';
import { data } from '../datasource';
function App() {
  let gridInstance: Grid | null;
  let initialGridLoad: boolean = true;
  const pageOptions: PageSettingsModel = {
    pageSize: 8, pageSizes: true
  };
  const dataBound = () => {
    if (initialGridLoad && gridInstance) {
      initialGridLoad = false;
      const pager = document.getElementsByClassName('e-gridpager');
      let topElement = document.getElementsByClassName('e-gridheader');
      gridInstance.element.insertBefore(pager[0], topElement[0]);
    }
  }
}
```

```

    return (<GridComponent dataSource={data} ref={grid => gridInstance =
grid} allowPaging={true} height={300}
    pageSettings={pageOptions} dataBound={dataBound}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign="Right"/>
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
        <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
        <ColumnDirective field='ShipName' headerText='Ship Name'
width='150' />
      </ColumnsDirective>
      <Inject services={[Page]} />
    </GridComponent>)
  };
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),

```

```

      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),

```

```

      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
      'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
      Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }
  ]
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',

```

```

    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
    Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
    Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
    Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
    'Carrera 22 con Ave. Carlos Soublette #8-35',

```

```

        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ];

```

During the paging action, the pager component triggers the below three events.

- * The [created](#) event triggers when Pager is created.
- * The [click](#) event triggers when the numeric items in the pager is clicked.
- * The [dropDownChanged](#) event triggers when pageSize DropDownList value is selected.

Pager events

The Syncfusion Grid component triggers two pager events during paging actions:

[actionBegin](#)- This event triggered before any paging action (such as changing the page, changing the page size and etc) is initiated. You can use this event to customize or control the behavior of paging actions.

[actionComplete](#)- This event triggered after a pager action is completed. It provides information about the action, such as the new page number, page size, and the total number of records. You can use this event to perform actions or update the UI after the operation has been executed.

The following example that example demonstrates how to use these events to display notification messages to indicate the current and next page during paging actions in the Syncfusion React Grid:

APP.JSX

```
import { ColumnDirective, ColumnsDirective, Grid, GridComponent, Inject,
Page, PageEventArgs, PageSettingsModel } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    const pageSettings = { pageSize: 5 };
    const [currentMessage, setCurrentMessage] = React.useState('');
    const [nextMessage, setNextMessage] = React.useState('');
    const actionBegin = (args) => {
        if (args.requestType === 'paging') {
            const pageMessage = (args.currentPage) > (args.previousPage)
                ? `You are going to switch to page
${parseInt((args.currentPage), 10) + 1}`
                : `You are going to switch to page ${args.previousPage}`;
            setNextMessage(pageMessage);
        }
    }
    const actionComplete = (args) => {
        if (args.requestType === 'paging') {
            setCurrentMessage('Now you are in page ' + args.currentPage);
        }
    }
    return (<div>
        <p id='message1' className='message'>{currentMessage}</p>
        <p id='message2' className='message'>{nextMessage}</p>
        <GridComponent dataSource={data} allowPaging={true}
pageSettings={pageSettings} actionBegin={actionBegin}
actionComplete={actionComplete}>
            <ColumnsDirective>
                <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign="Right" isPrimaryKey={true} />
                <ColumnDirective field='CustomerID' headerText='Customer ID'
width='140' />
                <ColumnDirective field='Freight' headerText='Freight'
width='120' format="C" textAlign="Right" />
                <ColumnDirective field='ShipCountry' headerText='Ship
Country' width='150' />
                <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
                <ColumnDirective field='Verified' headerText='Verified'
width='150' displayAsCheckBox={true} />
            </ColumnsDirective>
            <Inject services={[Page]} />
        </GridComponent></div>
    )
}
```

```
};
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, Grid, GridComponent, Inject,
Page, PageEventArgs, PageSettingsModel } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const pageSettings: PageSettingsModel = { pageSize: 5 };
  const [currentMessage, setCurrentMessage] = React.useState('');
  const [nextMessage, setNextMessage] = React.useState('');
  const actionBegin = (args: PageEventArgs) => {
    if (args.requestType === 'paging') {
      const pageMessage = (args.currentPage as string) > (args.previousPage
as string)
        ? `You are going to switch to page ${parseInt((args.currentPage as
string), 10) + 1}`
        : `You are going to switch to page ${args.previousPage}`;
      setNextMessage(pageMessage);
    }
  }
  const actionComplete = (args: PageEventArgs) => {
    if (args.requestType === 'paging') {
      setCurrentMessage('Now you are in page ' + args.currentPage);
    }
  }
  return (
    <div>
      <p id='message1' className='message'>{currentMessage}</p>
      <p id='message2' className='message'>{nextMessage}</p>
      <GridComponent dataSource={data} allowPaging={true}
pageSettings={pageSettings} actionBegin={actionBegin}
actionComplete={actionComplete}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" isPrimaryKey={true} />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
width='140' />
          <ColumnDirective field='Freight' headerText='Freight' width='120'
format="C" textAlign="Right" />
          <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' />
          <ColumnDirective field='ShipCity' headerText='Ship City' width='150'
/>
          <ColumnDirective field='Verified' headerText='Verified' width='150'
displayAsCheckBox={true} />
        </ColumnsDirective>
        <Inject services={[Page]} />
      </GridComponent></div>
    );
};
export default App;
```

DATASOURCE.JSX

```
export let data = [
```



```

    {
      OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
      ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
      ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
      OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
      ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {

```

```

    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
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        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
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'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
        },
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            {
                OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
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6',
                ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
                },
                {
                    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
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ShipAddress: 'Sierras de Granada 9993',
                    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
                    },
                    {
                        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
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                        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
                        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
                        },
                        {
                            OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
                            ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
                            ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
                            },
                            {

```

```

    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
    Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
    ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
    Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
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    Date(8364186e5),
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    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
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    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
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    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
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  {
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    Date(8367642e5),
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  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),

```

```

      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
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      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
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      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
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      Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
      'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
      Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
      'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
      Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
      'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
      'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
      Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
      Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
      Date(8377146e5),

```

```

      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
  ]];

```

See also

- [Group with Paging](#)
- [How to change loading indicator in React Grid](#)

Selection in React Grid component

Selection in the Grid component allows you to interactively select specific cells, rows, or columns within the grid. This selection can be done through mouse clicks or arrow keys (up, down, left, and right) or touch. This feature is useful when you want to highlight, manipulate, or perform actions on specific cells, rows, or columns within the Grid.

To disable selection in the Grid, set the [allowSelection](#) to **false**.

The grid supports two types of selection that can be set by using the [selectionSettings.type](#). They are:

- **Single** - The **Single** value is set by default. Allows you to select only a single row or cell or column.
- **Multiple** - Allows you to select multiple rows or cells or columns.

To perform the multi-selection, press and hold CTRL key and click the desired rows or cells or columns.

To select range of rows or cells or columns, press and hold the SHIFT key and click the rows or cells or columns.

APP.JSX

```

import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {

```

```

let grid;
const dropdownData = [
  { text: 'Single', value: 'Single' },
  { text: 'Multiple', value: 'Multiple' }
];
const valueChange = (args) => {
  grid.selectionSettings.type = args.value;
}
return (<div>
  <label style={{ padding: "30px 17px 0 0" }}>Choose selection
type:</label>
  <DropDownListComponent index={0} width={150} dataSource={dropdownData}
change={valueChange}></DropDownListComponent>
  <GridComponent ref={g => grid = g} dataSource={data} height={315}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
      <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
/>
      <ColumnDirective field='ShipName' headerText='Ship Name' width='150'
/>
    </ColumnsDirective>
  </GridComponent></div>)
};
export default App;

```

APP.TSX

```

import { ChangeEventArgs, DropDownListComponent } from '@syncfusion/ej2-
react-dropdowns';
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  let grid: GridComponent | null;
  const dropdownData: { [key: string]: Object; }[] = [
    { text: 'Single', value: 'Single' },
    { text: 'Multiple', value: 'Multiple' }
  ];
  const valueChange = (args: ChangeEventArgs) => {
    (grid as GridComponent).selectionSettings.type = args.value;
  }
  return (<div>
    <label style={{ padding: "30px 17px 0 0" }}>Choose selection
type:</label>
    <DropDownListComponent index={0} width={150} dataSource={dropdownData}
change={valueChange}></DropDownListComponent>
    <GridComponent ref={g => grid = g} dataSource={data} height={315}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />

```

```

        <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
    />
        <ColumnDirective field='ShipName' headerText='Ship Name' width='150'
    />
    </ColumnsDirective>
</GridComponent></div>
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),

```

```

    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
    Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
    Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
    Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
    'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
    'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
    Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
    6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
    Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
    Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
    ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
    Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
    Date(8377146e5),

```



```

      ShipName: 'Ottillies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
  ]
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]
  };

```

By default, the Grid will be rendered with only the basic features such as Grid rendering and selection. The default module, including the **Selection**, is automatically loaded. Therefore, there is no need to inject the **Selection** module separately as it will be injected by default.

Selection mode

The selection mode feature allows you to choose between different modes for selecting rows or cells or both within the Grid based on your specific requirements. This feature is particularly useful when you want to highlight and manipulate specific rows or cells in the Grid.

To enable selection mode, you can set the [selectionSettings.mode](#) property. The Grid component supports three types of selection modes:

- **Row** - The row value is set by default. Allows you to select rows only.
- **Cell** - Allows you to select cells only.
- **Both** - Allows you to select rows and cells at the same time.

The following example, demonstrates how to dynamically enable and change the `selectionSettings.mode` using the `DropDownList` component:

APP.JSX

```
import { ChangeEventArgs, DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { ColumnDirective, ColumnsDirective, GridComponent } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    let grid;
    const dropdownData = [
        { text: 'Row', value: 'Row' },
        { text: 'Cell', value: 'Cell' },
        { text: 'Both', value: 'Both' }
    ];
    const valueChange = (args) => {
        grid.selectionSettings.mode = args.value;
    }
    return (
        <div>
            <label style={{ padding: "30px 17px 0 0" }}>Choose selection mode:</label>
            <DropDownListComponent index={0} width={150} dataSource={dropdownData} change={valueChange}></DropDownListComponent>
            <GridComponent ref={g => grid = g} dataSource={data} height={315}>
                <ColumnsDirective>
                    <ColumnDirective field='OrderID' headerText='Order ID' width='120' textAlign="Right" />
                    <ColumnDirective field='CustomerID' headerText='Customer ID' width='150' />
                    <ColumnDirective field='ShipCity' headerText='Ship City' width='100' />
                    <ColumnDirective field='ShipName' headerText='Ship Name' width='150' />
                </ColumnsDirective>
            </GridComponent></div>
        );
}
export default App;
```

APP.TSX

```
import { ChangeEventArgs, DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { ColumnDirective, ColumnsDirective, GridComponent } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    let grid: GridComponent | null;
    const dropdownData: { [key: string]: Object; }[] = [
        { text: 'Row', value: 'Row' },
        { text: 'Cell', value: 'Cell' },
        { text: 'Both', value: 'Both' }
    ];
};
```

```

const valueChange = (args: ChangeEventArgs) => {
  (grid as GridComponent).selectionSettings.mode = args.value;
}
return (<div>
  <label style={{ padding: "30px 17px 0 0" }}>Choose selection
mode:</label>
  <DropDownListComponent index={0} width={150} dataSource={dropdownData}
change={valueChange}></DropDownListComponent>
  <GridComponent ref={g => grid = g} dataSource={data} height={315}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
      <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
/>
      <ColumnDirective field='ShipName' headerText='Ship Name' width='150'
/>
    </ColumnsDirective>
  </GridComponent></div>)
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]
  ];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },

```

```

    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
  ]
}

```



```

    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

Touch interaction

The touch interaction feature in Grid allows you to easily interact with the grid on touch screen devices. This feature is particularly useful for improving the user experience on mobile devices and tablets, making it easier to navigate and interact with the grid's content using touch gestures.

Single Row Selection

When you tap on a grid row using a touch screen, the tapped row is automatically selected. This provides a straightforward way to select single rows with a touch interface.

Multi-Row Selection

To select multiple rows in the grid, you can utilize the multi-row selection feature. When you tap on a row, a popup is displayed, indicating the option for multi-row selection. You can tap on the popup, and then proceed to tap on the desired rows that you want to select. This allows you to select and interact with multiple rows simultaneously, as shown in the following image:



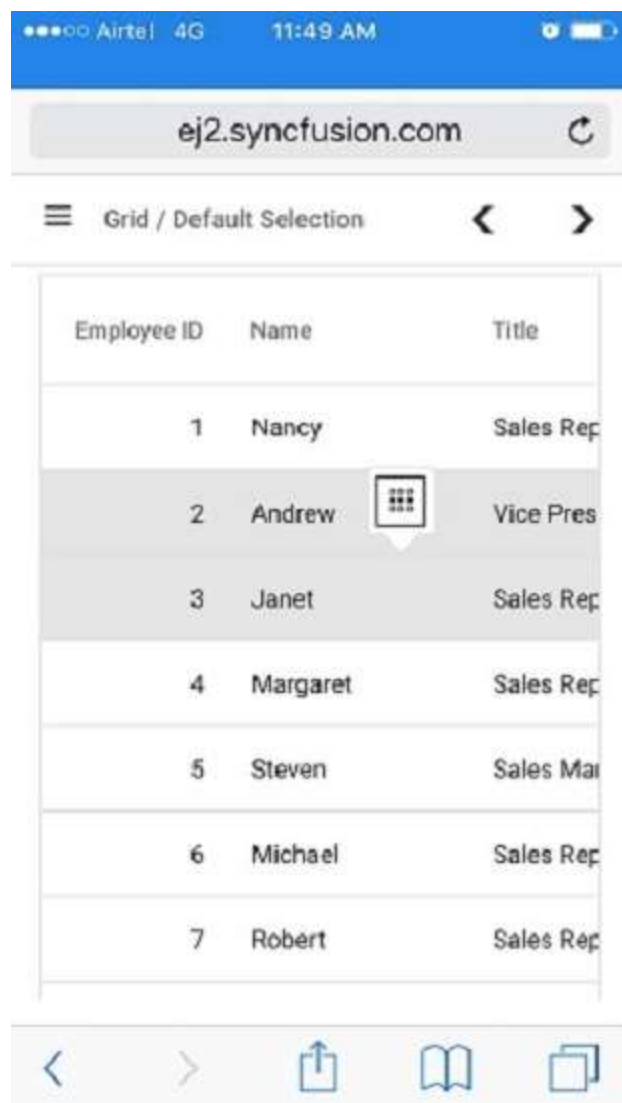
Multi-Row or Cell Selection

In addition to selecting multiple rows, you can also perform multi-row or cell selection in the grid. By tapping on the popup, you can choose the option for multi-row or cell selection. Once selected, you can then tap on the desired rows or cells to make the selection, as shown in the following image:



For multi-selection, it requires the selection [type](#) to be **Multiple**.

The following screenshot represents a Grid touch selection in the device.



Toggle selection

The toggle selection feature in the Grid component allows you to easily select and unselect specific rows, cells, or columns. With toggle selection enabled, you can easily switch the selection state of an item by clicking on it. This means that if you click on a selected row, cell, or column, it will become unselected, and vice versa.

To enable the toggle selection feature, you need to set the [selectionSettings.enableToggle](#) property to **true**.

The following example demonstrates how to enable the toggle selection for both cells and rows in a Grid using the `selectionSettings.enableToggle` property.

APP.JSX

```
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { SwitchComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, GridComponent,
SelectionSettingsModel } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
```

```

import { data } from './datasource';
function App() {
  let grid;
  const selectionSettings = { type: 'Multiple' };
  const dropdownData = [
    { text: 'Row', value: 'Row' },
    { text: 'Cell', value: 'Cell' },
    { text: 'Both', value: 'Both' }
  ];
  const valueChange = (args) => {
    grid.selectionSettings.mode = args.value;
  }
  const toggleColumnSelection = (args) => {
    grid.selectionSettings.enableToggle = args.checked;
  }
  return (<div>
    <label style={{ padding: "30px 17px 0 0" }}>Choose cell selection
mode:</label>
    <DropDownListComponent index={0} width={150}
dataSource={dropdownData} change={valueChange}></DropDownListComponent><br />
    <label style={{ padding: "30px 17px 0 0" }}>Enable/Disable Toggle
selection</label>
    <SwitchComponent change={toggleColumnSelection}></SwitchComponent>
    <GridComponent ref={g => grid = g} dataSource={data} height={315}
selectionSettings={selectionSettings}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' width='120'
textAlign="Right" />
        <ColumnDirective field='CustomerID' width='150' />
        <ColumnDirective field='ShipCity' width='100' />
        <ColumnDirective field='ShipName' width='150' />
      </ColumnsDirective>
    </GridComponent></div>)
};
export default App;

```

APP.TSX

```

import { ChangeEventArgs, DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { SwitchComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, GridComponent,
SelectionSettingsModel } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid: GridComponent | null;
  const selectionSettings: SelectionSettingsModel = { type: 'Multiple' };
  const dropdownData: { [key: string]: Object; }[] = [
    { text: 'Row', value: 'Row' },
    { text: 'Cell', value: 'Cell' },
    { text: 'Both', value: 'Both' }
  ];
  const valueChange = (args: ChangeEventArgs) => {
    (grid as GridComponent).selectionSettings.mode = args.value;
  }
}

```

```

const toggleColumnSelection = (args: ChangeEventArgs) => {
  (grid as GridComponent).selectionSettings.enableToggle = args.checked;
}
return (<div>
  <label style={{ padding: "30px 17px 0 0" }}>Choose cell selection
mode:</label>
  <DropDownListComponent index={0} width={150} dataSource={dropdownData}
change={valueChange}></DropDownListComponent><br />
  <label style={{ padding: "30px 17px 0 0" }}>Enable/Disable Toggle
selection</label>
  <SwitchComponent change={toggleColumnSelection}></SwitchComponent>
  <GridComponent ref={g => grid = g} dataSource={data} height={315}
selectionSettings={selectionSettings}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' width='120' textAlign="Right" />
      <ColumnDirective field='CustomerID' width='150' />
      <ColumnDirective field='ShipCity' width='100' />
      <ColumnDirective field='ShipName' width='150' />
    </ColumnsDirective>
  </GridComponent></div>)
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]
  };

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },

```

```

    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
  ]
}

```



```

    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

* If multi selection is enabled, then first click on any selected row (without pressing Ctrl key), it will clear the multi selection and in second click on the same row, it will be unselected.

* Toggle selection is a feature that can be applied to all types of selections. When the `checkboxOnly` property is set to `true`, it restricts the ability to select or deselect rows or cells by clicking on them.

Clear all selection programmatically

The clear selection programmatically feature is particularly useful when you need to remove the selected rows or cells or columns from the Grid component.

To clear the selection in the component programmatically, you can use the [clearSelection](#) method.

In the following example, it demonstrates how to clear all selection by calling the [clearSelection](#) method in the button click event.

APP.JSX

```
import { ButtonComponent } from '@syncfusion/ej2-react-buttons'
import { ColumnDirective, ColumnsDirective, GridComponent, Page, Inject }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  const selectionSettings = { mode: 'Both', allowColumnSelection: true, type:
'Multiple' };
  const pageOptions = { pageSize: 5 };
  const clearSelection = () => {
    grid.clearSelection();
  }
  return (<div>
    <ButtonComponent onClick={clearSelection}>Clear
Selection</ButtonComponent>
    <GridComponent ref={g => grid = g} dataSource={data}
selectionSettings={selectionSettings} allowPaging={true}
pageSettings={pageOptions}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='100' />
        <ColumnDirective field='Freight' headerText='Freight' width='150'
format='C2' />
      </ColumnsDirective>
      <Inject services={[Page]} />
    </GridComponent></div>)
};
export default App;
```

APP.TSX

```
import { ButtonComponent } from '@syncfusion/ej2-react-buttons'
import { ColumnDirective, ColumnsDirective, GridComponent, Page,
PageSettingsModel, SelectionSettingsModel, Inject } from '@syncfusion/ej2-
react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid: GridComponent | null;
  const selectionSettings: SelectionSettingsModel = { mode: 'Both',
allowColumnSelection: true, type: 'Multiple' };
}
```

```

const pageOptions: PageSettingsModel = { pageSize: 5 };
const clearSelection = () => {
  (grid as GridComponent).clearSelection();
}
return (<div>
  <ButtonComponent onClick={clearSelection}>Clear
Selection</ButtonComponent>
  <GridComponent ref={g => grid = g} dataSource={data}
selectionSettings={selectionSettings} allowPaging={true}
pageSettings={pageOptions}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
      <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='100' />
      <ColumnDirective field='Freight' headerText='Freight' width='150'
format='C2' />
    </ColumnsDirective>
    <Inject services={[Page]} />
  </GridComponent></div>)
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),

```

```

        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),

```

```

        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
      },
      {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',

```

```

        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ];

```

In **Both** mode, if you call `clearCellSelection` first, it will clear cell selections, and then if you call `clearRowSelection`, it will clear row selections. The order of method calls determines which type of selection is cleared first.

To remove a specific selection in a row, cell, or column, utilize the following methods: `clearRowSelection` for clearing row selections, `clearCellSelection` for clearing cell selections, and `clearColumnSelection` for clearing column selections.

Persist selection

Persist selection feature in the Grid allows you to retain the selected items even after data manipulation or refreshing the grid. This feature is useful when you want to keep track of the selected items across different grid operations.

To enable persist selection, set the [selectionSettings.persistSelection](#) property to **true**.

* While using persist selection feature, at least one column in your grid should be enabled as a primary key. This ensures that the grid can identify and persist the selected items correctly.

* The `persistSelection` feature is not supported for cell selections in the Syncfusion React Grid component

In the following example, it demonstrates how to enable the persist selection feature for both rows and columns using the `selectionSettings.persistSelection` property :

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Page, Inject }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  const selectionSettings = { mode: 'Both', allowColumnSelection: true, type:
'Multiple', persistSelection: true };
  const pageOptions = { pageSize: 5 };
  return (<div>
    <GridComponent dataSource={data} selectionSettings={selectionSettings}
allowPaging={true} pageSettings={pageOptions}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
        <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
/>>
        <ColumnDirective field='ShipName' headerText='Ship Name' width='150'
/>>
      </ColumnsDirective>
      <Inject services={[Page]} />
    </GridComponent></div>)
};
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Page,
PageSettingsModel, SelectionSettingsModel, Inject } from '@syncfusion/ej2-
react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
```



```

const selectionSettings: SelectionSettingsModel = { mode: 'Both',
allowColumnSelection: true, type: 'Multiple', persistSelection: true };
const pageOptions: PageSettingsModel = { pageSize: 5 };
return (<div>
  <GridComponent dataSource={data} selectionSettings={selectionSettings}
allowPaging={true} pageSettings={pageOptions}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
      <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
/>
      <ColumnDirective field='ShipName' headerText='Ship Name' width='150'
/>
    </ColumnsDirective>
    <Inject services={[Page]} />
  </GridComponent></div>)
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },

```

```

{
  OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
  ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
  ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
},
{
  OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
  ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
  ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
},
{
  OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
  ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
  ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
},
{
  OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
  ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
  ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
},
{
  OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
  ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
  ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
},
{
  OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
  ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
  ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
},
{
  OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
  ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
  ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
},
{

```

```

    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),

```

```

    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
    Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
    Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
    Date(8374554e5),

```

```

      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
      'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
      'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
      Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
      Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
      'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
      Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }
  ]];

```

Aggregates in React Grid component

The Aggregates feature in the Syncfusion React Grid component allows you to display aggregate values in the footer, group footer, and group caption of the grid. With this feature, you can easily perform calculations on specific columns and show summary information. This feature can be configured using the **e-aggregates** directive. To represent an aggregate column, you need to specify the minimum required properties, such as [field](#) and [type](#).

To use aggregate feature, you need to inject the **Aggregate** module into the grid.

Displaying aggregate values

By default, the aggregate values are displayed in the footer, group, and caption cells of the grid. However, you can choose to display the aggregate value in any of these cells by using the following properties:

- **[footerTemplate](#)**: Use this property to display the aggregate value in the footer cell. You can define a custom template to format the aggregate value as per your requirements.
- **[groupFooterTemplate](#)**: Use this property to display the aggregate value in the group footer cell. Similar to the footerTemplate, you can provide a custom template to format the aggregate value.
- **[groupCaptionTemplate](#)**: Use this property to display the aggregate value in the group caption cell. You can define a custom template to format the aggregate value.

APP.JSX

```
import { AggregateColumnDirective, ColumnDirective, ColumnsDirective,
GridComponent, Inject } from '@syncfusion/ej2-react-grids';
import { AggregateColumnsDirective, AggregateDirective, AggregatesDirective }
from '@syncfusion/ej2-react-grids';
import { Aggregate, Group, Page } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  const groupOptions = {
    columns: ['ShipCountry'],
    showDropArea: false
  };
  const footerSum = (props) => {
    return (<span>Sum: {props.Sum}</span>);
  };
  const footerMax = (props) => {
    return (<span>Max: {props.Max}</span>);
  };
  return (<GridComponent dataSource={data} allowPaging={true}
allowGrouping={true} groupSettings={groupOptions} height={268}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign='Right' />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
      <ColumnDirective field='OrderDate' headerText='OrderDate' format='yMd'
width='150' />
      <ColumnDirective field='Freight' headerText='Freight' format='C2'
textAlign='Right' width='150' />
      <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' />
    </ColumnsDirective>
    <AggregatesDirective>
      <AggregateDirective>
        <AggregateColumnsDirective>
          <AggregateColumnDirective field='Freight' type='Sum' format='C2'
groupFooterTemplate={footerSum} />
        </AggregateColumnsDirective>
      </AggregateDirective>
    </AggregatesDirective>
  </GridComponent>);
}
```

```

        <AggregateDirective>
            <AggregateColumnsDirective>
                <AggregateColumnDirective field='Freight' type='Max' format='C2'
groupCaptionTemplate={footerMax} />
            </AggregateColumnsDirective>
        </AggregateDirective>
    </AggregatesDirective>
    <Inject services={[Page, Aggregate, Group]} />
</GridComponent>);
}
export default App;

```

APP.TSX

```

import { AggregateColumnDirective, ColumnDirective, ColumnsDirective,
GridComponent, Inject } from '@syncfusion/ej2-react-grids';
import { AggregateColumnsDirective, AggregateDirective, AggregatesDirective }
from '@syncfusion/ej2-react-grids';
import { Aggregate, Group, GroupSettingsModel, Page } from '@syncfusion/ej2-
react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
    const groupOptions: GroupSettingsModel = {
        columns: ['ShipCountry'],
        showDropArea: false
    };
    const footerSum = (props) => {
        return (<span>Sum: {props.Sum}</span>)
    }
    const footerMax = (props) => {
        return (<span>Max: {props.Max}</span>)
    }
    return (<GridComponent dataSource={data} allowPaging={true}
allowGrouping={true}
groupSettings={groupOptions} height={268}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign='Right' />
            <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
            <ColumnDirective field='OrderDate' headerText='OrderDate' format='yMd'
width='150' />
            <ColumnDirective field='Freight' headerText='Freight' format='C2'
textAlign='Right' width='150' />
            <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' />
        </ColumnsDirective>
        <AggregatesDirective>
            <AggregateDirective>
                <AggregateColumnsDirective>
                    <AggregateColumnDirective field='Freight' type='Sum' format='C2'
groupFooterTemplate={footerSum} />
                </AggregateColumnsDirective>
            </AggregateDirective>
            <AggregateDirective>

```

```

    <AggregateColumnsDirective>
      <AggregateColumnDirective field='Freight' type='Max' format='C2'
groupCaptionTemplate={footerMax} />
    </AggregateColumnsDirective>
  </AggregateDirective>
</AggregatesDirective>
<Inject services={[Page, Aggregate, Group]} />
</GridComponent>
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {

```



```

    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {

```

```

    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),

```

```

        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),

```

```

        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]
};

```

* When using local data, the total summary is calculated based on the entire dataset available in the grid. The aggregate values will reflect calculations across all the rows in the grid.

* When working with remote data, the total summary is calculated based on the current page records. This means that if you have enabled pagination and are displaying data in pages, the aggregate values in the footer will represent calculations only for the visible page.

Built-in aggregate types

The Syncfusion React Grid component provides several built-in aggregate types that can be specified in the [type](#) property to configure an aggregate column.

The available built-in aggregate types are:

- **Sum:** Calculates the sum of the values in the column.
- **Average:** Calculates the average of the values in the column.
- **Min:** Finds the minimum value in the column.

- **Max:** Finds the maximum value in the column.
- **Count:** Counts the number of values in the column.
- **TrueCount:** Counts the number of true values in the column.
- **FalseCount:** Counts the number of false values in the column.

Here is an example that demonstrates how to use built-in aggregates types in the Syncfusion Grid:

APP.JSX

```
import { AggregateColumnDirective, ColumnDirective, ColumnsDirective,
GridComponent, Group, Inject } from '@syncfusion/ej2-react-grids';
import { AggregateColumnsDirective, AggregateDirective, AggregatesDirective }
from '@syncfusion/ej2-react-grids';
import { Aggregate } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  const groupSettings = { showDropArea: false, columns: ['ShipCountry'] };
  const freightTemplate = (props) => {
    return (<span>Max: {props.Max}</span>)
  }
  const shippedDateTemplate = (props) => {
    return (<span>Max: {(new Date(props.Max)).toLocaleDateString()}</span>)
  }
  const orderDateTemplate = (props) => {
    return (<span>Min: {(new Date(props.Min)).toLocaleDateString()}</span>)
  }
  const verifiedTemplate = (props) => {
    return (<span>TrueCount: {props.TrueCount}</span>)
  }
  return (<GridComponent dataSource={data} height={315} allowGrouping={true}
groupSettings={groupSettings}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign='Right' />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
      <ColumnDirective field='OrderDate' headerText='Order Date' type='date'
width='150' format='yMd' />
      <ColumnDirective field='ShippedDate' headerText='ShippedDate'
type='date' width='150' format='yMd' />
      <ColumnDirective field='Freight' headerText='Freight' width='150'
format='C2' />
      <ColumnDirective field='isVerified' headerText='Verified' width='150'
type='boolean' />
      <ColumnDirective field='ShipCity' headerText='Ship City' width='150' />
      <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' />
    </ColumnsDirective>
    <AggregatesDirective>
      <AggregateDirective>
        <AggregateColumnsDirective>
          <AggregateColumnDirective field='Freight' type='Max' format='C2'
footerTemplate={freightTemplate} />
          <AggregateColumnDirective field='ShippedDate' type='Max'
footerTemplate={shippedDateTemplate} />
        </AggregateColumnsDirective>
      </AggregateDirective>
    </AggregatesDirective>
  </GridComponent>
)
```

```

        <AggregateColumnDirective field='OrderDate' type='Min'
        footerTemplate={orderDateTemplate} />
        <AggregateColumnDirective field='isVerified' type='TrueCount'
        footerTemplate={verifiedTemplate} />
    </AggregateColumnsDirective>
  </AggregateDirective>
</AggregatesDirective>
<Inject services={[Aggregate, Group]} />
</GridComponent>
}
export default App;

```

APP.TSX

```

import { AggregateColumnDirective, ColumnDirective, ColumnsDirective,
GridComponent, Group, GroupSettingsModel, Inject } from '@syncfusion/ej2-
react-grids';
import { AggregateColumnsDirective, AggregateDirective, AggregatesDirective }
from '@syncfusion/ej2-react-grids';
import { Aggregate } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  const groupSettings: GroupSettingsModel = { showDropArea: false, columns:
['ShipCountry'] };
  const freightTemplate = (props) => {
    return (<span>Max: {props.Max}</span>)
  }
  const shippedDateTemplate = (props) => {
    return (<span>Max: {(new Date(props.Max)).toLocaleDateString()}</span>)
  }
  const orderDateTemplate = (props) => {
    return (<span>Min: {(new Date(props.Min)).toLocaleDateString()}</span>)
  }
  const verifiedTemplate = (props) => {
    return (<span>TrueCount: {props.TrueCount}</span>)
  }
  return (<GridComponent dataSource={data} height={315} allowGrouping={true}
groupSettings={groupSettings}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign='Right' />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
      <ColumnDirective field='OrderDate' headerText='Order Date' type='date'
width='150' format='yMd' />
      <ColumnDirective field='ShippedDate' headerText='ShippedDate'
type='date' width='150' format='yMd' />
      <ColumnDirective field='Freight' headerText='Freight' width='150'
format='C2' />
      <ColumnDirective field='isVerified' headerText='Verified' width='150'
type='boolean' />
      <ColumnDirective field='ShipCity' headerText='Ship City' width='150' />
      <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' />
    </ColumnsDirective>

```

```

    <AggregatesDirective>
      <AggregateDirective>
        <AggregateColumnsDirective>
          <AggregateColumnDirective field='Freight' type='Max' format='C2'
            footerTemplate={freightTemplate} />
          <AggregateColumnDirective field='ShippedDate' type='Max'
            footerTemplate={shippedDateTemplate} />
          <AggregateColumnDirective field='OrderDate' type='Min'
            footerTemplate={orderDateTemplate} />
          <AggregateColumnDirective field='isVerified' type='TrueCount'
            footerTemplate={verifiedTemplate} />
        </AggregateColumnsDirective>
      </AggregateDirective>
    </AggregatesDirective>
    <Inject services={[Aggregate, Group]} />
  </GridComponent>
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248,
    CustomerID: 'VINET',
    OrderDate: '1996-07-04T00:00:00.000Z',
    ShippedDate: '1996-07-16T00:00:00.000Z',
    Freight: 32.38,
    ShipName: 'Vins et alcools Chevalier',
    ShipAddress: '59 rue de l'Abbaye',
    ShipCity: 'Reims',
    ShipRegion: null,
    isVerified: true,
    ShipCountry: 'France',
  },
  {
    OrderID: 10249,
    CustomerID: 'TOMSP',
    OrderDate: '1996-07-05T00:00:00.000Z',
    ShippedDate: '1996-07-10T00:00:00.000Z',
    Freight: 11.61,
    ShipName: 'Toms Spezialitäten',
    ShipAddress: 'Luisenstr. 48',
    ShipCity: 'Münster',
    ShipRegion: null,
    isVerified: false,
    ShipCountry: 'Germany',
  },
  {
    OrderID: 10250,
    CustomerID: 'HANAR',
    OrderDate: '1996-07-08T00:00:00.000Z',
    ShippedDate: '1996-07-12T00:00:00.000Z',
    Freight: 65.83,
    ShipName: 'Hanari Carnes',
    ShipAddress: 'Rua do Paço, 67',
  },

```

```

    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    isVerified:true,
    ShipCountry: 'Brazil',
  },
  {
    OrderID: 10251,
    CustomerID: 'VICTE',
    OrderDate: '1996-07-08T00:00:00.000Z',
    ShippedDate: '1996-07-15T00:00:00.000Z',
    Freight: 41.34,
    ShipName: 'Victuailles en stock',
    ShipAddress: '2, rue du Commerce',
    ShipCity: 'Lyon',
    ShipRegion: null,
    isVerified:true,
    ShipCountry: 'France',
  },
  {
    OrderID: 10252,
    CustomerID: 'SUPRD',
    OrderDate: '1996-07-09T00:00:00.000Z',
    ShippedDate: '1996-07-11T00:00:00.000Z',
    Freight: 51.3,
    ShipName: 'Suprêmes délices',
    ShipAddress: 'Boulevard Tirou, 255',
    ShipCity: 'Charleroi',
    isVerified:true,
    ShipRegion: null,
    ShipCountry: 'Belgium',
  },
  {
    OrderID: 10253,
    CustomerID: 'HANAR',
    OrderDate: '1996-07-10T00:00:00.000Z',
    ShippedDate: '1996-07-16T00:00:00.000Z',
    Freight: 58.17,
    ShipName: 'Hanari Carnes',
    ShipAddress: 'Rua do Paço, 67',
    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    isVerified:true,
    ShipCountry: 'Brazil',
  },
  {
    OrderID: 10254,
    CustomerID: 'CHOPS',
    OrderDate: '1996-07-11T00:00:00.000Z',
    ShippedDate: '1996-07-23T00:00:00.000Z',
    Freight: 22.98,
    ShipName: 'Chop-suey Chinese',
    ShipAddress: 'Hauptstr. 31',
    ShipCity: 'Bern',
    ShipRegion: null,
    isVerified:false,
    ShipCountry: 'Switzerland',
  },
},

```



```

{
  OrderID: 10255,
  CustomerID: 'RICSU',
  OrderDate: '1996-07-12T00:00:00.000Z',
  ShippedDate: '1996-07-15T00:00:00.000Z',
  Freight: 148.33,
  ShipName: 'Richter Supermarkt',
  ShipAddress: 'Starenweg 5',
  ShipCity: 'Genève',
  ShipRegion: null,
  isVerified: true,
  ShipCountry: 'Switzerland',
},
{
  OrderID: 10256,
  CustomerID: 'WELLI',
  OrderDate: '1996-07-15T00:00:00.000Z',
  ShippedDate: '1996-07-17T00:00:00.000Z',
  Freight: 13.97,
  ShipName: 'Wellington Importadora',
  ShipAddress: 'Rua do Mercado, 12',
  ShipCity: 'Resende',
  ShipRegion: 'SP',
  isVerified: true,
  ShipCountry: 'Brazil',
},
{
  OrderID: 10257,
  CustomerID: 'HILAA',
  OrderDate: '1996-07-16T00:00:00.000Z',
  ShippedDate: '1996-07-22T00:00:00.000Z',
  Freight: 81.91,
  isVerified: true,
  ShipName: 'HILARION-Abastos',
  ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
  ShipCity: 'San Cristóbal',
  ShipRegion: 'Táchira',
  ShipCountry: 'Venezuela',
},
{
  OrderID: 10258,
  CustomerID: 'ERNSH',
  OrderDate: '1996-07-17T00:00:00.000Z',
  ShippedDate: '1996-07-23T00:00:00.000Z',
  Freight: 140.51,
  ShipName: 'Ernst Handel',
  ShipAddress: 'Kirchgasse 6',
  ShipCity: 'Graz',
  ShipRegion: null,
  isVerified: false,
  ShipCountry: 'Austria',
},
{
  OrderID: 10259,
  CustomerID: 'CENTC',
  OrderDate: '1996-07-18T00:00:00.000Z',
  ShippedDate: '1996-07-25T00:00:00.000Z',

```

```

    Freight: 3.25,
    ShipName: 'Centro comercial Moctezuma',
    ShipAddress: 'Sierras de Granada 9993',
    ShipCity: 'México D.F.',
    ShipRegion: null,
    isVerified: true,
    ShipCountry: 'Mexico',
  },
  {
    OrderID: 10260,
    CustomerID: 'OTTIK',
    OrderDate: '1996-07-19T00:00:00.000Z',
    ShippedDate: '1996-07-29T00:00:00.000Z',
    Freight: 55.09,
    ShipName: 'Ottilies Käseladen',
    ShipAddress: 'Mehrheimerstr. 369',
    ShipCity: 'Köln',
    ShipRegion: null,
    isVerified: false,
    ShipCountry: 'Germany',
  },
  {
    OrderID: 10261,
    CustomerID: 'QUEDE',
    OrderDate: '1996-07-19T00:00:00.000Z',
    ShippedDate: '1996-07-30T00:00:00.000Z',
    Freight: 3.05,
    ShipName: 'Que Delícia',
    ShipAddress: 'Rua da Panificadora, 12',
    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    isVerified: true,
    ShipCountry: 'Brazil',
  },
  {
    OrderID: 10262,
    CustomerID: 'RATTC',
    OrderDate: '1996-07-22T00:00:00.000Z',
    ShippedDate: '1996-07-25T00:00:00.000Z',
    Freight: 48.29,
    isVerified: true,
    ShipName: 'Rattlesnake Canyon Grocery',
    ShipAddress: '2817 Milton Dr.',
    ShipCity: 'Albuquerque',
    ShipRegion: 'NM',
    ShipCountry: 'USA',
  },
],
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248,
    CustomerID: 'VINET',
    OrderDate: '1996-07-04T00:00:00.000Z',

```

```
ShippedDate: '1996-07-16T00:00:00.000Z',
Freight: 32.38,
ShipName: 'Vins et alcools Chevalier',
ShipAddress: '59 rue de l'Abbaye',
ShipCity: 'Reims',
ShipRegion: null,
isVerified:true,
ShipCountry: 'France',
},
{
  OrderID: 10249,
  CustomerID: 'TOMSP',
  OrderDate: '1996-07-05T00:00:00.000Z',
  ShippedDate: '1996-07-10T00:00:00.000Z',
  Freight: 11.61,
  ShipName: 'Toms Spezialitäten',
  ShipAddress: 'Luisenstr. 48',
  ShipCity: 'Münster',
  ShipRegion: null,
  isVerified:false,
  ShipCountry: 'Germany',
},
{
  OrderID: 10250,
  CustomerID: 'HANAR',
  OrderDate: '1996-07-08T00:00:00.000Z',
  ShippedDate: '1996-07-12T00:00:00.000Z',
  Freight: 65.83,
  ShipName: 'Hanari Carnes',
  ShipAddress: 'Rua do Paço, 67',
  ShipCity: 'Rio de Janeiro',
  ShipRegion: 'RJ',
  isVerified:true,
  ShipCountry: 'Brazil',
},
{
  OrderID: 10251,
  CustomerID: 'VICTE',
  OrderDate: '1996-07-08T00:00:00.000Z',
  ShippedDate: '1996-07-15T00:00:00.000Z',
  Freight: 41.34,
  ShipName: 'Victuailles en stock',
  ShipAddress: '2, rue du Commerce',
  ShipCity: 'Lyon',
  ShipRegion: null,
  isVerified:true,
  ShipCountry: 'France',
},
{
  OrderID: 10252,
  CustomerID: 'SUPRD',
  OrderDate: '1996-07-09T00:00:00.000Z',
  ShippedDate: '1996-07-11T00:00:00.000Z',
  Freight: 51.3,
  ShipName: 'Suprêmes délices',
  ShipAddress: 'Boulevard Tirou, 255',
  ShipCity: 'Charleroi',
```

```
    isVerified:true,
    ShipRegion: null,
    ShipCountry: 'Belgium',
  },
  {
    OrderID: 10253,
    CustomerID: 'HANAR',
    OrderDate: '1996-07-10T00:00:00.000Z',
    ShippedDate: '1996-07-16T00:00:00.000Z',
    Freight: 58.17,
    ShipName: 'Hanari Carnes',
    ShipAddress: 'Rua do Paço, 67',
    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    isVerified:true,
    ShipCountry: 'Brazil',
  },
  {
    OrderID: 10254,
    CustomerID: 'CHOPS',
    OrderDate: '1996-07-11T00:00:00.000Z',
    ShippedDate: '1996-07-23T00:00:00.000Z',
    Freight: 22.98,
    ShipName: 'Chop-suey Chinese',
    ShipAddress: 'Hauptstr. 31',
    ShipCity: 'Bern',
    ShipRegion: null,
    isVerified:false,
    ShipCountry: 'Switzerland',
  },
  {
    OrderID: 10255,
    CustomerID: 'RICSU',
    OrderDate: '1996-07-12T00:00:00.000Z',
    ShippedDate: '1996-07-15T00:00:00.000Z',
    Freight: 148.33,
    ShipName: 'Richter Supermarkt',
    ShipAddress: 'Starenweg 5',
    ShipCity: 'Genève',
    ShipRegion: null,
    isVerified:true,
    ShipCountry: 'Switzerland',
  },
  {
    OrderID: 10256,
    CustomerID: 'WELLI',
    OrderDate: '1996-07-15T00:00:00.000Z',
    ShippedDate: '1996-07-17T00:00:00.000Z',
    Freight: 13.97,
    ShipName: 'Wellington Importadora',
    ShipAddress: 'Rua do Mercado, 12',
    ShipCity: 'Resende',
    ShipRegion: 'SP',
    isVerified:true,
    ShipCountry: 'Brazil',
  },
  {
```

```
    OrderID: 10257,
    CustomerID: 'HILAA',
    OrderDate: '1996-07-16T00:00:00.000Z',
    ShippedDate: '1996-07-22T00:00:00.000Z',
    Freight: 81.91,
    isVerified:true,
    ShipName: 'HILARION-Abastos',
    ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipCity: 'San Cristóbal',
    ShipRegion: 'Táchira',
    ShipCountry: 'Venezuela',
  },
  {
    OrderID: 10258,
    CustomerID: 'ERNSH',
    OrderDate: '1996-07-17T00:00:00.000Z',
    ShippedDate: '1996-07-23T00:00:00.000Z',
    Freight: 140.51,
    ShipName: 'Ernst Handel',
    ShipAddress: 'Kirchgasse 6',
    ShipCity: 'Graz',
    ShipRegion: null,
    isVerified:false,
    ShipCountry: 'Austria',
  },
  {
    OrderID: 10259,
    CustomerID: 'CENTC',
    OrderDate: '1996-07-18T00:00:00.000Z',
    ShippedDate: '1996-07-25T00:00:00.000Z',
    Freight: 3.25,
    ShipName: 'Centro comercial Moctezuma',
    ShipAddress: 'Sierras de Granada 9993',
    ShipCity: 'México D.F.',
    ShipRegion: null,
    isVerified:true,
    ShipCountry: 'Mexico',
  },
  {
    OrderID: 10260,
    CustomerID: 'OTTIK',
    OrderDate: '1996-07-19T00:00:00.000Z',
    ShippedDate: '1996-07-29T00:00:00.000Z',
    Freight: 55.09,
    ShipName: 'Ottilies Käseladen',
    ShipAddress: 'Mehrheimerstr. 369',
    ShipCity: 'Köln',
    ShipRegion: null,
    isVerified:false,
    ShipCountry: 'Germany',
  },
  {
    OrderID: 10261,
    CustomerID: 'QUEDE',
    OrderDate: '1996-07-19T00:00:00.000Z',
    ShippedDate: '1996-07-30T00:00:00.000Z',
    Freight: 3.05,
```

```

    ShipName: 'Que Delícia',
    ShipAddress: 'Rua da Panificadora, 12',
    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    isVerified: true,
    ShipCountry: 'Brazil',
  },
  {
    OrderID: 10262,
    CustomerID: 'RATTC',
    OrderDate: '1996-07-22T00:00:00.000Z',
    ShippedDate: '1996-07-25T00:00:00.000Z',
    Freight: 48.29,
    isVerified: true,
    ShipName: 'Rattlesnake Canyon Grocery',
    ShipAddress: '2817 Milton Dr.',
    ShipCity: 'Albuquerque',
    ShipRegion: 'NM',
    ShipCountry: 'USA',
  },
];

```

Multiple aggregates for a column

Multiple aggregates for a column allows you to calculate and display different summary values simultaneously for a single column in a grid. Normally, a column is associated with a single aggregate function, such as sum, average, count and etc., which provides a single summary value for the entire column.

However, in scenarios where you need to display multiple summary values for the same column, multiple aggregates come into play. This feature enables you to calculate and display various aggregate values, such as sum, average, minimum, maximum, or custom calculations, concurrently for a specific column.

You can use multiple aggregates for a single column in the Syncfusion React Grid by specifying the aggregate [type](#) as an array.

Here's an example of how to use multiple aggregates in the Syncfusion React Grid:

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject } from '@syncfusion/ej2-react-grids';
import { Aggregate, Page } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  const aggregate = [{
    columns: [
      {
        type: ['Sum', 'Max', 'Min'],
        field: 'Freight',
        columnName: 'Freight',
        format: 'C2',
        footerTemplate: 'Sum: ${Sum}, Min:${Min}, Max:${Max}',
      },
    ],
  }],
};

```

```

    },]
    return (<GridComponent dataSource={data} allowPaging={true} height={315}
    aggregates={aggregate}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='120'
        textAlign='Right' />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
        width='150' />
        <ColumnDirective field='Freight' headerText='Freight' width='150'
        format='C2' />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
        width='150' />
      </ColumnsDirective>
      <Inject services={[Page, Aggregate]} />
    </GridComponent>)
  }
  export default App;

```

APP.TSX

```

import { AggregateRowModel, ColumnDirective, ColumnsDirective, GridComponent,
Inject } from '@syncfusion/ej2-react-grids';
import { Aggregate, Page } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const aggregate: AggregateRowModel[] = [{
    columns: [
      {
        type: ['Sum', 'Max', 'Min'],
        field: 'Freight',
        columnName: 'Freight',
        format: 'C2',
        footerTemplate: 'Sum: ${Sum}, Min:${Min}, Max:${Max}',
      },
    ],
  },]
  return (<GridComponent dataSource={data} allowPaging={true} height={315}
  aggregates={aggregate}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='120'
      textAlign='Right' />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
      width='150' />
      <ColumnDirective field='Freight' headerText='Freight' width='150'
      format='C2' />
      <ColumnDirective field='ShipCountry' headerText='Ship Country'
      width='150' />
    </ColumnsDirective>
    <Inject services={[Page, Aggregate]} />
  </GridComponent>)
}
export default App;

```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
]
```



```

{
  OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
  ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
  ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
},
{
  OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
  ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
  ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
},
{
  OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
  ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
  ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
},
{
  OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
  ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
  ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
},
{
  OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
  ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
  ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
},
{
  OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
  ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
  ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
},
{
  OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
  ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
  ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
},
{

```

```

    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
    Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
    ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
    Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),

```

```

    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
    Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
    Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
    Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
    'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
    'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
    Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
    6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
    Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
    Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
    ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
    Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
    Date(8377146e5),

```

```

      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
  ]];

```

Print in React Grid component

The printing feature in Syncfusion Grid allows you to easily generate and print a representation of the grid's content for better offline accessibility and documentation. You can enable this feature using either the grid's toolbar or the programmatically available `print` method.

To add the printing option to the grid's toolbar, simply include the `toolbar` property in your grid configuration and add the **Print** as toolbar item. This will allow you to directly initiate the printing process while click on the Print item from the toolbar.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Toolbar }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  return (<GridComponent dataSource={data} toolbar={['Print']}
height={272}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign='Right' />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
      <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
      <ColumnDirective field='ShipName' headerText='Ship Name'
width='150' />
    </ColumnsDirective>
    <Inject services={['Toolbar']} />
  </GridComponent>);
}
;
export default App;

```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Toolbar}
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    return (<GridComponent dataSource={data} toolbar={['Print']} height={272}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign='Right' />
            <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
            <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
            <ColumnDirective field='ShipName' headerText='Ship Name'
width='150' />
        </ColumnsDirective>
        <Inject services={['Toolbar']} />
    </GridComponent >)
};
export default App;
```

DATASOURCE.JSX

```
export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
```

```

        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]
  ];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },

```

```

{
  OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
  ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
  ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
},
{
  OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
  ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
  ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
},
{
  OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
  ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
  ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
},
{
  OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
  ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
  ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
},
{
  OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
  ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
  ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
},
{
  OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
  ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
  ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
},
{
  OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
  ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
  ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
},
{

```



```

    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

Page setup

When printing a webpage, some print options, such as layout, paper size, and margin settings, cannot be configured through JavaScript code. Instead, you need to customize these settings using the browser's page setup dialog. Below are links to the page setup guides for popular web browsers:

- [Chrome](#)

- [Firefox](#)
- [Safari](#)
- [IE](#)

Print by external button

You can print the grid's content using an external button by utilizing the [print](#) method. This method allows you to trigger the printing process programmatically.

APP.JSX

```
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { employeeData } from '../datasource';
function App() {
  let grid;
  const clickHandler = () => {
    if (grid) {
      grid.print();
    }
  };
  return (<div>
    <ButtonComponent onClick={clickHandler}>Print</ButtonComponent>
    <GridComponent dataSource={employeeData} height={280} ref={g => grid =
g}>
      <ColumnsDirective>
        <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='120' textAlign="Right"/>
        <ColumnDirective field='FirstName' headerText='First Name'
width='150' />
        <ColumnDirective field='City' headerText='City' width='150' />
        <ColumnDirective field='Country' headerText='Country' width='150' />
      </ColumnsDirective>
    </GridComponent></div>);
}
;
export default App;
```

APP.TSX

```
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, Grid, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { employeeData } from '../datasource';
function App() {
  let grid: Grid | null;
  const clickHandler = () => {
    if (grid) {
      grid.print();
    }
  }
  return (<div>
    <ButtonComponent onClick= { clickHandler }>Print</ButtonComponent>
```

```

<GridComponent dataSource={employeeData} height={280} ref={g => grid =
g}>
  <ColumnsDirective>
    <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='120' textAlign="Right"/>
    <ColumnDirective field='FirstName' headerText='First Name'
width='150' />
    <ColumnDirective field='City' headerText='City' width='150' />
    <ColumnDirective field='Country' headerText='Country' width='150' />
  </ColumnsDirective>
</GridComponent></div>
};
export default App;

```

DATASOURCE.JSX

```

export let employeeData = [{
  'EmployeeID': 1,
  'LastName': 'Davolio',
  'FirstName': 'Nancy',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-664743600000),
  'HireDate': new Date(704692800000),
  'Address': '507 - 20th Ave. E.\r\nApt. 2A',
  'City': 'Seattle',
  'Region': 'WA',
  'PostalCode': '98122',
  'Country': 'USA',
  'HomePhone': '(206) 555-9857',
  'Extension': '5467',
  'Photo': { 'Length': 21626 },
  'Notes': 'Education includes a BA in psychology from Colorado State
University in 1970. She also completed\
\'The Art of the Cold Call.\' Nancy is a member of Toastmasters
International.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
  'EmployeeID': 2,
  'LastName': 'Fuller',
  'FirstName': 'Andrew',
  'Title': 'Vice President, Sales',
  'TitleOfCourtesy': 'Dr.',
  'BirthDate': new Date(-563828400000),
  'HireDate': new Date(713764800000),
  'Address': '908 W. Capital Way',
  'City': 'Tacoma',
  'Region': 'WA',
  'PostalCode': '98401',
  'Country': 'USA',
  'HomePhone': '(206) 555-9482',
  'Extension': '3457',
  'Photo': { 'Length': 21626 },

```

```

      'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
      Dallas in 1981. He is fluent in French and Italian and reads German. He
joined the company as a sales representative, \
      was promoted to sales manager in January 1992 and to vice president of
sales in March 1993. Andrew is a member of the \
      Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.',
      'ReportsTo': 0,
      'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
    },
    {
      'EmployeeID': 3,
      'LastName': 'Leverling',
      'FirstName': 'Janet',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-200088000000),
      'HireDate': new Date(702104400000),
      'Address': '722 Moss Bay Blvd.',
      'City': 'Kirkland',
      'Region': 'WA',
      'PostalCode': '98033',
      'Country': 'USA',
      'HomePhone': '(206) 555-3412',
      'Extension': '3355',
      'Photo': { 'Length': 21722 },
      'Notes': 'Janet has a BS degree in chemistry from Boston College
(1984). \
      She has also completed a certificate program in food retailing
management.\
      Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
    },
    {
      'EmployeeID': 4,
      'LastName': 'Peacock',
      'FirstName': 'Margaret',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mrs.',
      'BirthDate': new Date(-1018814400000),
      'HireDate': new Date(736401600000),
      'Address': '4110 Old Redmond Rd.',
      'City': 'Redmond',
      'Region': 'WA',
      'PostalCode': '98052',
      'Country': 'USA',
      'HomePhone': '(206) 555-8122',
      'Extension': '5176',
      'Photo': { 'Length': 21626 },
      'Notes': 'Margaret holds a BA in English literature from Concordia
College (1958) and an MA from the American \
      Institute of Culinary Arts (1966). She was assigned to the London office
temporarily from July through November 1992.',
      'ReportsTo': 2,

```

```

    'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
  },
  {
    'EmployeeID': 5,
    'LastName': 'Buchanan',
    'FirstName': 'Steven',
    'Title': 'Sales Manager',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-468010800000),
    'HireDate': new Date(750830400000),
    'Address': '14 Garrett Hill',
    'City': 'London',
    'Region': null,
    'PostalCode': 'SW1 8JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-4848',
    'Extension': '3453',
    'Photo': { 'Length': 21626 },
    'Notes': 'Steven Buchanan graduated from St. Andrews University,
    Scotland, with a BSC degree in 1976. Upon joining the company as \
    a sales representative in 1992, he spent 6 months in an orientation
    program at the Seattle office and then returned to his permanent \
    post in London. He was promoted to sales manager in March 1993. Mr.
    Buchanan has completed the courses \'Successful \
    Telemarketing\' and \'International Sales Management.\' He is fluent in
    French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
  },
  {
    'EmployeeID': 6,
    'LastName': 'Suyama',
    'FirstName': 'Michael',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-205185600000),
    'HireDate': new Date(750830400000),
    'Address': 'Coventry House\r\nMiner Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'EC2 7JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-7773',
    'Extension': '428',
    'Photo': { 'Length': 21626 },
    'Notes': 'Michael is a graduate of Sussex University (MA, economics,
    1983) and the University of California at Los Angeles \
    (MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
    Selling\' and \'Time Management for the Sales Professional.\' \
    He is fluent in Japanese and can read and write French, Portuguese, and
    Spanish.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 7,
    'LastName': 'King',

```

```

      'FirstName': 'Robert',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-302731200000),
      'HireDate': new Date(757486800000),
      'Address': 'Edgeham Hollow\r\nWinchester Way',
      'City': 'London',
      'Region': null,
      'PostalCode': 'RG1 9SP',
      'Country': 'UK',
      'HomePhone': '(71) 555-5598',
      'Extension': '465',
      'Photo': { 'Length': 21626 },
      'Notes': 'Robert King served in the Peace Corps and traveled
extensively before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
      'ReportsTo': 5,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 8,
      'LastName': 'Callahan',
      'FirstName': 'Laura',
      'Title': 'Inside Sales Coordinator',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-377982000000),
      'HireDate': new Date(762843600000),
      'Address': '4726 - 11th Ave. N.E.',
      'City': 'Seattle',
      'Region': 'WA',
      'PostalCode': '98105',
      'Country': 'USA',
      'HomePhone': '(206) 555-1189',
      'Extension': '2344',
      'Photo': { 'Length': 21626 },
      'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 9,
      'LastName': 'Dodsworth',
      'FirstName': 'Anne',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-123966000000),
      'HireDate': new Date(784875600000),
      'Address': '7 Houndstooth Rd.',
      'City': 'London',
      'Region': null,
      'PostalCode': 'WG2 7LT',
      'Country': 'UK',
      'HomePhone': '(71) 555-4444',

```

```

        'Extension': '452',
        'Photo': { 'Length': 21626 },
        'Notes': 'Anne has a BA degree in English from St. Lawrence College.
She is fluent in French and German.',
        'ReportsTo': 5,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    }
};

```

DATASOURCE.TSX

```

export let employeeData: Object[] = [{
    'EmployeeID': 1,
    'LastName': 'Davolio',
    'FirstName': 'Nancy',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-664743600000),
    'HireDate': new Date(704692800000),
    'Address': '507 - 20th Ave. E.\r\nApt. 2A',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98122',
    'Country': 'USA',
    'HomePhone': '(206) 555-9857',
    'Extension': '5467',
    'Photo': { 'Length': 21626 },
    'Notes': 'Education includes a BA in psychology from Colorado State
University in 1970. She also completed\
    \'The Art of the Cold Call.\' Nancy is a member of Toastmasters
International.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
    'EmployeeID': 2,
    'LastName': 'Fuller',
    'FirstName': 'Andrew',
    'Title': 'Vice President, Sales',
    'TitleOfCourtesy': 'Dr.',
    'BirthDate': new Date(-563828400000),
    'HireDate': new Date(713764800000),
    'Address': '908 W. Capital Way',
    'City': 'Tacoma',
    'Region': 'WA',
    'PostalCode': '98401',
    'Country': 'USA',
    'HomePhone': '(206) 555-9482',
    'Extension': '3457',
    'Photo': { 'Length': 21626 },
    'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
    Dallas in 1981. He is fluent in French and Italian and reads German. He
joined the company as a sales representative, \
    was promoted to sales manager in January 1992 and to vice president of
sales in March 1993. Andrew is a member of the \

```

```

    Sales Management Roundtable, the Seattle Chamber of Commerce, and the
    Pacific Rim Importers Association.',
    'ReportsTo': 0,
    'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
  },
  {
    'EmployeeID': 3,
    'LastName': 'Leverling',
    'FirstName': 'Janet',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-200088000000),
    'HireDate': new Date(702104400000),
    'Address': '722 Moss Bay Blvd.',
    'City': 'Kirkland',
    'Region': 'WA',
    'PostalCode': '98033',
    'Country': 'USA',
    'HomePhone': '(206) 555-3412',
    'Extension': '3355',
    'Photo': { 'Length': 21722 },
    'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
    \
    She has also completed a certificate program in food retailing
    management.\
    Janet was hired as a sales associate in 1991 and promoted to sales
    representative in February 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
  },
  {
    'EmployeeID': 4,
    'LastName': 'Peacock',
    'FirstName': 'Margaret',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mrs.',
    'BirthDate': new Date(-1018814400000),
    'HireDate': new Date(736401600000),
    'Address': '4110 Old Redmond Rd.',
    'City': 'Redmond',
    'Region': 'WA',
    'PostalCode': '98052',
    'Country': 'USA',
    'HomePhone': '(206) 555-8122',
    'Extension': '5176',
    'Photo': { 'Length': 21626 },
    'Notes': 'Margaret holds a BA in English literature from Concordia
    College (1958) and an MA from the American \
    Institute of Culinary Arts (1966). She was assigned to the London office
    temporarily from July through November 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
  },
  {
    'EmployeeID': 5,
    'LastName': 'Buchanan',
    'FirstName': 'Steven',

```



```

        'Title': 'Sales Manager',
        'TitleOfCourtesy': 'Mr.',
        'BirthDate': new Date(-468010800000),
        'HireDate': new Date(750830400000),
        'Address': '14 Garrett Hill',
        'City': 'London',
        'Region': null,
        'PostalCode':
        'SW1 8JR',
        'Country': 'UK',
        'HomePhone': '(71) 555-4848',
        'Extension': '3453',
        'Photo': { 'Length': 21626 },
        'Notes': 'Steven Buchanan graduated from St. Andrews University,
        Scotland, with a BSC degree in 1976. Upon joining the company as \
        a sales representative in 1992, he spent 6 months in an orientation
        program at the Seattle office and then returned to his permanent \
        post in London. He was promoted to sales manager in March 1993. Mr.
        Buchanan has completed the courses \'Successful \
        Telemarketing\' and \'International Sales Management.\' He is fluent in
        French.',
        'ReportsTo': 2,
        'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
    },
    {
        'EmployeeID': 6,
        'LastName': 'Suyama',
        'FirstName': 'Michael',
        'Title': 'Sales Representative',
        'TitleOfCourtesy': 'Mr.',
        'BirthDate': new Date(-205185600000),
        'HireDate': new Date(750830400000),
        'Address': 'Coventry House\r\nMiner Rd.',
        'City': 'London',
        'Region': null,
        'PostalCode': 'EC2 7JR',
        'Country': 'UK',
        'HomePhone': '(71) 555-7773',
        'Extension': '428',
        'Photo': { 'Length': 21626 },
        'Notes': 'Michael is a graduate of Sussex University (MA, economics,
        1983) and the University of California at Los Angeles \
        (MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
        Selling\' and \'Time Management for the Sales Professional.\' \
        He is fluent in Japanese and can read and write French, Portuguese, and
        Spanish.',
        'ReportsTo': 5,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
        'EmployeeID': 7,
        'LastName': 'King',
        'FirstName': 'Robert',
        'Title': 'Sales Representative',
        'TitleOfCourtesy': 'Mr.',
        'BirthDate': new Date(-302731200000),
        'HireDate': new Date(757486800000),

```

```

    'Address': 'Edgeham Hollow\r\nWinchester Way',
    'City': 'London',
    'Region': null,
    'PostalCode': 'RG1 9SP',
    'Country': 'UK',
    'HomePhone': '(71) 555-5598',
    'Extension': '465',
    'Photo': { 'Length': 21626 },
    'Notes': 'Robert King served in the Peace Corps and traveled extensively
before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 8,
    'LastName': 'Callahan',
    'FirstName': 'Laura',
    'Title': 'Inside Sales Coordinator',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-377982000000),
    'HireDate': new Date(762843600000),
    'Address': '4726 - 11th Ave. N.E.',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98105',
    'Country': 'USA',
    'HomePhone': '(206) 555-1189',
    'Extension': '2344',
    'Photo': { 'Length': 21626 },
    'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 9,
    'LastName': 'Dodsworth',
    'FirstName': 'Anne',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-123966000000),
    'HireDate': new Date(784875600000),
    'Address': '7 Houndstooth Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'WG2 7LT',
    'Country': 'UK',
    'HomePhone': '(71) 555-4444',
    'Extension': '452',
    'Photo': { 'Length': 21626 },
    'Notes': 'Anne has a BA degree in English from St. Lawrence College. She
is fluent in French and German.',
    'ReportsTo': 5,
  }

```

```
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  }];
```

Print visible Page

By default, the Syncfusion React Grid prints all the pages of the grid. The [printMode](#) property within the grid grants you control over the printing process. However, if you want to print only the current visible page, you can achieve this by setting the [printMode](#) property to **CurrentPage**.

APP.JSX

```
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Inject, Page, Toolbar } from '@syncfusion/ej2-react-grids';
import React, { useState } from 'react';
import { data } from './datasource';
function App() {
  const pageOptions = { pageSize: 6 };
  const [printMode, setPrintMode] = useState();
  const dropdownlist = ['AllPages', 'CurrentPage'];
  const onChange = (args) => {
    setPrintMode(args.value);
  }
  return ((<div>
    <label style={{ padding: "10px 10px 26px 0" }}><b>Select Print Mode
  </b></label>
    <DropDownListComponent index={0} width={200} dataSource={dropdownlist}
  change={onChange}></DropDownListComponent>
    <GridComponent dataSource={data} printMode={printMode}
  toolbar={['Print']} allowPaging={true} pageSettings={pageOptions}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='120'
  textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
  width='150' />
        <ColumnDirective field='ShipCity' headerText='Ship City' width='150'
  />
        <ColumnDirective field='ShipName' headerText='Ship Name' width='150'
  />
      </ColumnsDirective>
      <Inject services={['Toolbar', Page]} />
    </GridComponent ></div>))
};
export default App;
```

APP.TSX

```
import { ChangeEventArgs, DropDownListComponent } from '@syncfusion/ej2-
react-dropdowns';
import { ColumnDirective, ColumnsDirective, GridComponent, PageSettingsModel,
PrintMode } from '@syncfusion/ej2-react-grids';
import { Inject, Page, Toolbar } from '@syncfusion/ej2-react-grids';
import React, { useState } from 'react';
import { data } from './datasource';
function App() {
```

```

const pageOptions: PageSettingsModel = { pageSize: 6 };
const [printMode, setPrintMode] = useState<PrintMode>();
const dropdownlist: string[] = ['AllPages', 'CurrentPage'];
const onChange = (args: ChangeEventArgs) => {
    setPrintMode(args.value);
}
return ((<div>
    <label style={{ padding: "10px 10px 26px 0" }}><b>Select Print Mode
</b></label>
    <DropDownListComponent index={0} width={200} dataSource={dropdownlist}
change={onChange}></DropDownListComponent>
    <GridComponent dataSource={data} printMode={printMode}
toolbar={['Print']} allowPaging={true} pageSettings={pageOptions}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
            <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
            <ColumnDirective field='ShipCity' headerText='Ship City' width='150'
/>
            <ColumnDirective field='ShipName' headerText='Ship Name' width='150'
/>
        </ColumnsDirective>
        <Inject services={['Toolbar', Page]} />
    </GridComponent ></div>))
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {

```

```

    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {

```

```

    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),

```

```

        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),

```

```

        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]];

```


Print only selected records

By default, the Syncfusion React Grid prints all the data bound to its dataSource. However, there might be cases where you want to print only the selected records from the grid. The React Grid provides an option to achieve this by binding to the [beforePrint](#) event, where you can replace the rows of the printing grid with the selected rows.

Below is an example code that demonstrates how to print only the selected records from the React Grid:

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, PageSettingsModel,
SelectionSettingsModel, PrintEventArgs } from '@syncfusion/ej2-react-grids';
import { Inject, Page, Toolbar } from '@syncfusion/ej2-react-grids';
import React, { useState } from 'react';
import { createElement } from '@syncfusion/ej2-base';
import { data } from './datasource';
function App() {
    let grid;
    const pageOptions = { pageSize: 6 };
    const selectionSettings = { type: 'Multiple' };
    const beforePrint = (e) => {
        var rows = grid.getSelectedRows();
        if (rows.length) {
            e.element.ej2_instances[0].getContent().querySelector('tbody').remove();
            var tbody = createElement('tbody');
            rows = [...rows];
            for (var r = 0; r < rows.length; r++) {
                tbody.appendChild(rows[r].cloneNode(true));
            }
            e.element.ej2_instances[0].getContentTable().appendChild(tbody);
        }
    }
    return ((<div>
        <GridComponent ref={g => grid = g} dataSource={data}
        toolbar={['Print']} allowPaging={true} pageSettings={pageOptions}
        selectionSettings={selectionSettings} beforePrint={beforePrint}>
            <ColumnsDirective>
                <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign="Right" />
                <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
                <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
                <ColumnDirective field='ShipName' headerText='Ship Name'
width='150' />
            </ColumnsDirective>
            <Inject services={['Toolbar', Page]} />
        </GridComponent ></div>))
    );
};
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, PageSettingsModel,
SelectionSettingsModel, PrintEventArgs } from '@syncfusion/ej2-react-grids';
```

```

import { Inject, Page, Toolbar } from '@syncfusion/ej2-react-grids';
import React, { useState } from 'react';
import { createElement } from '@syncfusion/ej2-base';
import { data } from './datasource';
interface CustomElement extends Element {
  ej2_instances: any[];
}
function App() {
  let grid: GridComponent | null;
  const pageOptions: PageSettingsModel = { pageSize: 6 };
  const selectionSettings: SelectionSettingsModel = { type: 'Multiple' };
  const beforePrint = (e: PrintEventArgs) => {
    var rows = (grid as GridComponent).getSelectedRows();
    if (rows.length) {
      (e.element as
CustomElement).ej2_instances[0].getContent().querySelector('tbody').remove();
      var tbody = createElement('tbody');
      rows = [...rows];
      for (var r = 0; r < rows.length; r++) {
        tbody.appendChild(rows[r].cloneNode(true));
      }
      (e.element as
CustomElement).ej2_instances[0].getContentTable().appendChild(tbody);
    }
  }
  return ((<div>
    <GridComponent ref={g => grid = g} dataSource={data} toolbar={['Print']}
allowPaging={true} pageSettings={pageOptions}
selectionSettings={selectionSettings} beforePrint={beforePrint}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
        <ColumnDirective field='ShipCity' headerText='Ship City' width='150'
/>
        <ColumnDirective field='ShipName' headerText='Ship Name' width='150'
/>
      </ColumnsDirective>
      <Inject services={['Toolbar', Page]} />
    </GridComponent ></div>))
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {

```

```

    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {

```

```

    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```
export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
```

```

        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),

```

```

        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]];

```

Print the hierarchy grid

The Syncfusion React Grid allows you to print hierarchy grids, which consist of a parent grid and its child grids. By default, when you print a hierarchy grid, it includes the parent grid and expanded child grids only. However, you can customize the print behavior using the [hierarchyPrintMode](#) property.

The `hierarchyPrintMode` property in the React Grid lets you control the printing behavior for hierarchy grids. You can choose from three options:

Mode	Behavior
Expanded	Prints the parent grid with expanded child grids.
All	Prints the parent grid with all the child grids, whether expanded or collapsed.
None	Prints the parent grid alone.

APP.JSX

```

import { ChangeEventArgs, DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { ColumnDirective, ColumnsDirective, GridComponent, HierarchyGridPrintMode } from '@syncfusion/ej2-react-grids';
import { DetailRow, GridModel, Inject, Toolbar, ToolbarItems } from '@syncfusion/ej2-react-grids';
import React, { useState } from 'react';
import { data, employeeData } from '../datasource';

function App() {
  const dropdownData = ['All', 'Expanded', 'None'];
  const [hierarchyPrintMode, setHierarchyPrintMode] = useState('All');
  const onModeChange = (args) => {
    setHierarchyPrintMode(args.value);
  }
  const childGridOptions = {
    columns: [
      { field: 'OrderID', headerText: 'Order ID', textAlign: 'Right', width: 120 },
      { field: 'CustomerID', headerText: 'Customer ID', width: 150 },
      { field: 'ShipCity', headerText: 'Ship City', width: 150 },
      { field: 'ShipName', headerText: 'Ship Name', width: 150 }
    ],
    dataSource: data,

```

```

    queryString: 'EmployeeID'
  };
  const toolbaroptions = ['Print'];
  return (<div>
    <label style={{ padding: "10px 10px 26px 0" }}><b>Select Mode
  </b></label>
    <DropDownListComponent index={0} width={200} dataSource={dropdownData}
  change={onModeChange}></DropDownListComponent>
    <GridComponent toolbar={toolbaroptions}
  hierarchyPrintMode={hierarchyPrintMode} dataSource={employeeData}
  childGrid={childGridOptions}>
      <ColumnsDirective>
        <ColumnDirective field='EmployeeID' headerText='Employee ID'
  width='120' textAlign="Right" />
        <ColumnDirective field='FirstName' headerText='First Name'
  width='150' />
        <ColumnDirective field='City' headerText='City' width='150' />
        <ColumnDirective field='Country' headerText='Country' width='150' />
      </ColumnsDirective>
      <Inject services={[DetailRow, Toolbar]} />
    </GridComponent ></div>)
  };
  export default App;

```

APP.TSX

```

import { ChangeEventArgs, DropDownListComponent } from '@syncfusion/ej2-
react-dropdowns';
import { ColumnDirective, ColumnsDirective, GridComponent,
HierarchyGridPrintMode } from '@syncfusion/ej2-react-grids';
import { DetailRow, GridModel, Inject, Toolbar, ToolbarItems } from
 '@syncfusion/ej2-react-grids';
import React, { useState } from 'react';
import { data, employeeData } from './datasource';
function App() {
  const dropdownData: string[] = ['All', 'Expanded', 'None'];
  const [hierarchyPrintMode, setHierarchyPrintMode] =
  useState<HierarchyGridPrintMode>('All');
  const onModeChange = (args: ChangeEventArgs) => {
    setHierarchyPrintMode(args.value);
  }
  const childGridOptions: GridModel = {
    columns: [
      { field: 'OrderID', headerText: 'Order ID', textAlign: 'Right', width:
  120 },
      { field: 'CustomerID', headerText: 'Customer ID', width: 150 },
      { field: 'ShipCity', headerText: 'Ship City', width: 150 },
      { field: 'ShipName', headerText: 'Ship Name', width: 150 }
    ],
    dataSource: data,
    queryString: 'EmployeeID'
  };
  const toolbaroptions: ToolbarItems[] = ['Print'];
  return (<div>
    <label style={{ padding: "10px 10px 26px 0" }}><b>Select Mode
  </b></label>

```



```

    <DropDownListComponent index={0} width={200} dataSource={dropdownData}
    change={onModeChange}></DropDownListComponent>
    <GridComponent toolbar={toolbaroptions}
    hierarchyPrintMode={hierarchyPrintMode} dataSource={employeeData}
    childGrid={childGridOptions}>
      <ColumnsDirective>
        <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='120' textAlign="Right" />
        <ColumnDirective field='FirstName' headerText='First Name'
width='150' />
        <ColumnDirective field='City' headerText='City' width='150' />
        <ColumnDirective field='Country' headerText='Country' width='150' />
      </ColumnsDirective>
      <Inject services={[DetailRow, Toolbar]} />
    </GridComponent ></div>
  };
  export default App;

```

DATASOURCE.JSX

```

export let employeeData = [{
  'EmployeeID': 1,
  'LastName': 'Davolio',
  'FirstName': 'Nancy',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-664743600000),
  'HireDate': new Date(704692800000),
  'Address': '507 - 20th Ave. E.\r\nApt. 2A',
  'City': 'Seattle',
  'Region': 'WA',
  'PostalCode': '98122',
  'Country': 'USA',
  'HomePhone': '(206) 555-9857',
  'Extension': '5467',
  'Photo': { 'Length': 21626 },
  'Notes': 'Education includes a BA in psychology from Colorado State
University in 1970. She also completed\
\'The Art of the Cold Call.\' Nancy is a member of Toastmasters
International.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
  'EmployeeID': 2,
  'LastName': 'Fuller',
  'FirstName': 'Andrew',
  'Title': 'Vice President, Sales',
  'TitleOfCourtesy': 'Dr.',
  'BirthDate': new Date(-563828400000),
  'HireDate': new Date(713764800000),
  'Address': '908 W. Capital Way',
  'City': 'Tacoma',
  'Region': 'WA',
  'PostalCode': '98401',
  'Country': 'USA',

```

```

      'HomePhone': '(206) 555-9482',
      'Extension': '3457',
      'Photo': { 'Length': 21626 },
      'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
      Dallas in 1981. He is fluent in French and Italian and reads German. He
joined the company as a sales representative, \
      was promoted to sales manager in January 1992 and to vice president of
sales in March 1993. Andrew is a member of the \
      Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.',
      'ReportsTo': 0,
      'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
    },
    {
      'EmployeeID': 3,
      'LastName': 'Leverling',
      'FirstName': 'Janet',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-200088000000),
      'HireDate': new Date(702104400000),
      'Address': '722 Moss Bay Blvd.',
      'City': 'Kirkland',
      'Region': 'WA',
      'PostalCode': '98033',
      'Country': 'USA',
      'HomePhone': '(206) 555-3412',
      'Extension': '3355',
      'Photo': { 'Length': 21722 },
      'Notes': 'Janet has a BS degree in chemistry from Boston College
(1984). \
      She has also completed a certificate program in food retailing
management.\
      Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
    },
    {
      'EmployeeID': 4,
      'LastName': 'Peacock',
      'FirstName': 'Margaret',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mrs.',
      'BirthDate': new Date(-1018814400000),
      'HireDate': new Date(736401600000),
      'Address': '4110 Old Redmond Rd.',
      'City': 'Redmond',
      'Region': 'WA',
      'PostalCode': '98052',
      'Country': 'USA',
      'HomePhone': '(206) 555-8122',
      'Extension': '5176',
      'Photo': { 'Length': 21626 },
      'Notes': 'Margaret holds a BA in English literature from Concordia
College (1958) and an MA from the American \

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    Institute of Culinary Arts (1966). She was assigned to the London office
    temporarily from July through November 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
  },
  {
    'EmployeeID': 5,
    'LastName': 'Buchanan',
    'FirstName': 'Steven',
    'Title': 'Sales Manager',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-468010800000),
    'HireDate': new Date(750830400000),
    'Address': '14 Garrett Hill',
    'City': 'London',
    'Region': null,
    'PostalCode': 'SW1 8JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-4848',
    'Extension': '3453',
    'Photo': { 'Length': 21626 },
    'Notes': 'Steven Buchanan graduated from St. Andrews University,
    Scotland, with a BSC degree in 1976. Upon joining the company as \
    a sales representative in 1992, he spent 6 months in an orientation
    program at the Seattle office and then returned to his permanent \
    post in London. He was promoted to sales manager in March 1993. Mr.
    Buchanan has completed the courses \'Successful \
    Telemarketing\' and \'International Sales Management.\' He is fluent in
    French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
  },
  {
    'EmployeeID': 6,
    'LastName': 'Suyama',
    'FirstName': 'Michael',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-205185600000),
    'HireDate': new Date(750830400000),
    'Address': 'Coventry House\r\nMiner Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'EC2 7JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-7773',
    'Extension': '428',
    'Photo': { 'Length': 21626 },
    'Notes': 'Michael is a graduate of Sussex University (MA, economics,
    1983) and the University of California at Los Angeles \
    (MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
    Selling\' and \'Time Management for the Sales Professional.\' \
    He is fluent in Japanese and can read and write French, Portuguese, and
    Spanish.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
}

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{
  'EmployeeID': 7,
  'LastName': 'King',
  'FirstName': 'Robert',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Mr.',
  'BirthDate': new Date(-302731200000),
  'HireDate': new Date(757486800000),
  'Address': 'Edgeham Hollow\r\nWinchester Way',
  'City': 'London',
  'Region': null,
  'PostalCode': 'RG1 9SP',
  'Country': 'UK',
  'HomePhone': '(71) 555-5598',
  'Extension': '465',
  'Photo': { 'Length': 21626 },
  'Notes': 'Robert King served in the Peace Corps and traveled
extensively before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
  'ReportsTo': 5,
  'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
  'EmployeeID': 8,
  'LastName': 'Callahan',
  'FirstName': 'Laura',
  'Title': 'Inside Sales Coordinator',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-377982000000),
  'HireDate': new Date(762843600000),
  'Address': '4726 - 11th Ave. N.E.',
  'City': 'Seattle',
  'Region': 'WA',
  'PostalCode': '98105',
  'Country': 'USA',
  'HomePhone': '(206) 555-1189',
  'Extension': '2344',
  'Photo': { 'Length': 21626 },
  'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
  'EmployeeID': 9,
  'LastName': 'Dodsworth',
  'FirstName': 'Anne',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-123966000000),
  'HireDate': new Date(784875600000),
  'Address': '7 Houndstooth Rd.',
  'City': 'London',
  'Region': null,

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        'PostalCode': 'WG2 7LT',
        'Country': 'UK',
        'HomePhone': '(71) 555-4444',
        'Extension': '452',
        'Photo': { 'Length': 21626 },
        'Notes': 'Anne has a BA degree in English from St. Lawrence College.
She is fluent in French and German.',
        'ReportsTo': 5,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    }
  ];
  export let data = [
    {
      OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
      Date(8364186e5),
      ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
      ShipAddress: '59 rue de l Abbaye',
      ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
      Freight: 32.38, Verified: !0
    },
    {
      OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
      Date(836505e6),
      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
      'Luisenstr. 48',
      ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
      Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
      Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
      Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',

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        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',

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        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]
  ];

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DATASOURCE.TSX

```

export let employeeData: Object[] = [{
  'EmployeeID': 1,
  'LastName': 'Davolio',
  'FirstName': 'Nancy',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-664743600000),
  'HireDate': new Date(704692800000),
  'Address': '507 - 20th Ave. E.\r\nApt. 2A',
  'City': 'Seattle',
  'Region': 'WA',
  'PostalCode': '98122',
  'Country': 'USA',
  'HomePhone': '(206) 555-9857',
  'Extension': '5467',
  'Photo': { 'Length': 21626 },
  'Notes': 'Education includes a BA in psychology from Colorado State
  University in 1970. She also completed\
  \'The Art of the Cold Call.\' Nancy is a member of Toastmasters
  International.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
  'EmployeeID': 2,
  'LastName': 'Fuller',
  'FirstName': 'Andrew',
  'Title': 'Vice President, Sales',
  'TitleOfCourtesy': 'Dr.',
  'BirthDate': new Date(-563828400000),
  'HireDate': new Date(713764800000),
  'Address': '908 W. Capital Way',
  'City': 'Tacoma',

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      'Region': 'WA',
      'PostalCode': '98401',
      'Country': 'USA',
      'HomePhone': '(206) 555-9482',
      'Extension': '3457',
      'Photo': { 'Length': 21626 },
      'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
      Dallas in 1981. He is fluent in French and Italian and reads German. He
joined the company as a sales representative, \
      was promoted to sales manager in January 1992 and to vice president of
sales in March 1993. Andrew is a member of the \
      Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.',
      'ReportsTo': 0,
      'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
    },
    {
      'EmployeeID': 3,
      'LastName': 'Leverling',
      'FirstName': 'Janet',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-200088000000),
      'HireDate': new Date(702104400000),
      'Address': '722 Moss Bay Blvd.',
      'City': 'Kirkland',
      'Region': 'WA',
      'PostalCode': '98033',
      'Country': 'USA',
      'HomePhone': '(206) 555-3412',
      'Extension': '3355',
      'Photo': { 'Length': 21722 },
      'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
\
      She has also completed a certificate program in food retailing
management.\
      Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
    },
    {
      'EmployeeID': 4,
      'LastName': 'Peacock',
      'FirstName': 'Margaret',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mrs.',
      'BirthDate': new Date(-1018814400000),
      'HireDate': new Date(736401600000),
      'Address': '4110 Old Redmond Rd.',
      'City': 'Redmond',
      'Region': 'WA',
      'PostalCode': '98052',
      'Country': 'USA',
      'HomePhone': '(206) 555-8122',
      'Extension': '5176',

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    'Photo': { 'Length': 21626 },
    'Notes': 'Margaret holds a BA in English literature from Concordia
College (1958) and an MA from the American \
Institute of Culinary Arts (1966). She was assigned to the London office
temporarily from July through November 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
},
{
    'EmployeeID': 5,
    'LastName': 'Buchanan',
    'FirstName': 'Steven',
    'Title': 'Sales Manager',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-468010800000),
    'HireDate': new Date(750830400000),
    'Address': '14 Garrett Hill',
    'City': 'London',
    'Region': null,
    'PostalCode':
    'SW1 8JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-4848',
    'Extension': '3453',
    'Photo': { 'Length': 21626 },
    'Notes': 'Steven Buchanan graduated from St. Andrews University,
Scotland, with a BSC degree in 1976. Upon joining the company as \
a sales representative in 1992, he spent 6 months in an orientation
program at the Seattle office and then returned to his permanent \
post in London. He was promoted to sales manager in March 1993. Mr.
Buchanan has completed the courses \'Successful \
Telemarketing\' and \'International Sales Management.\' He is fluent in
French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
},
{
    'EmployeeID': 6,
    'LastName': 'Suyama',
    'FirstName': 'Michael',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-205185600000),
    'HireDate': new Date(750830400000),
    'Address': 'Coventry House\r\nMiner Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'EC2 7JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-7773',
    'Extension': '428',
    'Photo': { 'Length': 21626 },
    'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \

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    He is fluent in Japanese and can read and write French, Portuguese, and
    Spanish.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 7,
    'LastName': 'King',
    'FirstName': 'Robert',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-302731200000),
    'HireDate': new Date(757486800000),
    'Address': 'Edgeham Hollow\r\nWinchester Way',
    'City': 'London',
    'Region': null,
    'PostalCode': 'RG1 9SP',
    'Country': 'UK',
    'HomePhone': '(71) 555-5598',
    'Extension': '465',
    'Photo': { 'Length': 21626 },
    'Notes': 'Robert King served in the Peace Corps and traveled extensively
before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 8,
    'LastName': 'Callahan',
    'FirstName': 'Laura',
    'Title': 'Inside Sales Coordinator',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-377982000000),
    'HireDate': new Date(762843600000),
    'Address': '4726 - 11th Ave. N.E.',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98105',
    'Country': 'USA',
    'HomePhone': '(206) 555-1189',
    'Extension': '2344',
    'Photo': { 'Length': 21626 },
    'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 9,
    'LastName': 'Dodsworth',
    'FirstName': 'Anne',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',

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    'BirthDate': new Date(-123966000000),
    'HireDate': new Date(784875600000),
    'Address': '7 Houndstooth Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'WG2 7LT',
    'Country': 'UK',
    'HomePhone': '(71) 555-4444',
    'Extension': '452',
    'Photo': { 'Length': 21626 },
    'Notes': 'Anne has a BA degree in English from St. Lawrence College. She
is fluent in French and German.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  }];
export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {

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    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {

```

```

    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

Print the master detail grid

The Syncfusion React Grid provides the option to visualize details of a record in another grid in a master-detail manner. By default, when you print a master-detail grid, only the master grid is included in the print output. However, you can customize the print behavior to include both the master and detail grids using the `beforePrint` event of the grid.

The `beforePrint` event in the React Grid is triggered before the actual printing process begins. You can handle this event to customize the print output. By adding the detail grid to the `element` argument of the `beforePrint` event, you can ensure that both the master and detail grids are printed on the page.

APP.JSX

```

import * as React from 'react';
import { GridComponent, ColumnsDirective, ColumnDirective,
RowSelectEventArgs, Selection, Inject, Toolbar, PrintEventArgs, Print } from
'@syncfusion/ej2-react-grids';
import { customerData, data } from './datasource';
function MasterDetail() {
  let detailGrid;
  const names = ['AROUT', 'BERGS', 'BLONP', 'CHOPS', 'ERNSH'];
  const master = customerData.filter((e) => names.indexOf(e.CustomerID) !==
-1);
  const rowselect = (args) => {
    let selRecord = args.data;
    let selecteMessage = document.getElementsByClassName('e-
statustext')[0];
    let message = selecteMessage.querySelector('b')
    message.textContent = selRecord.ContactName;
    detailGrid.dataSource = data.filter((record) => record.CustomerName
=== selRecord.ContactName).slice(0, 5);
  }
}

```

```

const beforePrint = (args) => {
    let customElement = document.createElement('div');
    customElement.innerHTML = document.getElementsByClassName('e-
statustext')[0].innerHTML + (detailGrid).element.innerHTML;
    customElement.appendChild(document.createElement('br'));
    args.element.append(customElement);
}
return (
    <div className='control-pane'>
        <div className='control-section'>
            <GridComponent dataSource={master} selectedRowIndex={2}
rowSelected={rowselect} toolbar={['Print']} beforePrint={beforePrint}>
                <ColumnsDirective>
                    <ColumnDirective field='ContactName'
headerText='Customer Name' width='150'></ColumnDirective>
                    <ColumnDirective field='CompanyName'
headerText='Company Name' width='150'></ColumnDirective>
                    <ColumnDirective field='Address' headerText='Address'
width='150' />
                    <ColumnDirective field='Country' headerText='Country'
width='130' />
                </ColumnsDirective>
                <Inject services={[Selection, Toolbar, Print]} />
            </GridComponent>
            <div className='e-statustext'> Showing orders of Customer:
<b></b></div>
            <GridComponent allowSelection={false} ref={grid => detailGrid
= grid}>
                <ColumnsDirective>
                    <ColumnDirective field='OrderID' headerText='Order
ID' width='100' ></ColumnDirective>
                    <ColumnDirective field='Freight' headerText='Freight'
width='100' format='C2' type='number' />
                    <ColumnDirective field='ShipName' headerText='Ship
Name' width='150'></ColumnDirective>
                    <ColumnDirective field='ShipCountry' headerText='Ship
Country' width='150'></ColumnDirective>
                    <ColumnDirective field='ShipAddress' headerText='Ship
Address' width='150'></ColumnDirective>
                </ColumnsDirective>
            </GridComponent>
        </div>
    </div>
)
}
export default MasterDetail;

```

APP.TSX

```

import * as React from 'react';
import { GridComponent, ColumnsDirective, ColumnDirective,
RowSelectEventArgs, Selection, Inject, Toolbar, PrintEventArgs, Print } from
'@syncfusion/ej2-react-grids';
import { customerData, data } from './datasource';
function MasterDetail() {
    let detailGrid: GridComponent | null;

```

```

const names: string[] = ['AROUT', 'BERGS', 'BLONP', 'CHOPS', 'ERNSH'];
const master: Object = customerData.filter((e:any) =>
names.indexOf(e.CustomerID) !== -1);;
const rowselect = (args: RowSelectEventArgs) => {
    let selRecord = args.data;
    let selecteMessage:any = document.getElementsByClassName('e-
statustext')[0];
    let message: HTMLElement = selecteMessage.querySelector('b')
    message.textContent = selRecord.ContactName;
    (detailGrid as GridComponent).dataSource = data.filter((record: any)
=> record.CustomerName === selRecord.ContactName).slice(0, 5);
}
const beforePrint = (args: PrintEventArgs) => {
    let customElement = document.createElement('div');
    customElement.innerHTML = document.getElementsByClassName('e-
statustext')[0].innerHTML + (detailGrid).element.innerHTML;
    customElement.appendChild(document.createElement('br'));
    args.element.append(customElement);
}
return (
    <div className='control-pane'>
        <div className='control-section'>
            <GridComponent dataSource={master} selectedRowIndex={2}
rowSelected={rowselect} toolbar={['Print']} beforePrint={beforePrint}>
                <ColumnsDirective>
                    <ColumnDirective field='ContactName'
headerText='Customer Name' width='150'></ColumnDirective>
                    <ColumnDirective field='CompanyName'
headerText='Company Name' width='150'></ColumnDirective>
                    <ColumnDirective field='Address' headerText='Address'
width='150' />
                    <ColumnDirective field='Country' headerText='Country'
width='130' />
                </ColumnsDirective>
                <Inject services={[Selection, Toolbar, Print]} />
            </GridComponent>
            <div className='e-statustext'> Showing orders of Customer:
<b></b></div>
            <GridComponent allowSelection={false} ref={grid => detailGrid
= grid}>
                <ColumnsDirective>
                    <ColumnDirective field='OrderID' headerText='Order
ID' width='100' ></ColumnDirective>
                    <ColumnDirective field='Freight' headerText='Freight'
width='100' format='C2' type='number' />
                    <ColumnDirective field='ShipName' headerText='Ship
Name' width='150'></ColumnDirective>
                    <ColumnDirective field='ShipCountry' headerText='Ship
Country' width='150'></ColumnDirective>
                    <ColumnDirective field='ShipAddress' headerText='Ship
Address' width='150'></ColumnDirective>
                </ColumnsDirective>
            </GridComponent>
        </div>
    </div>
)
}

```

```
export default MasterDetail;
```

DATASOURCE.JSX

```
let stringData = JSON.stringify([
  {
    OrderID: 10248,
    CustomerID: 'VINET',
    OrderDate: '1996-07-04T00:00:00.000Z',
    ShippedDate: '1996-07-16T00:00:00.000Z',
    Freight: 32.38,
    ShipName: 'Vins et alcools Chevalier',
    ShipAddress: '59 rue de l'Abbaye',
    ShipCity: 'Reims',
    ShipRegion: null,
    ShipCountry: 'France',
  },
  {
    OrderID: 10249,
    CustomerID: 'TOMSP',
    OrderDate: '1996-07-05T00:00:00.000Z',
    ShippedDate: '1996-07-10T00:00:00.000Z',
    Freight: 11.61,
    ShipName: 'Toms Spezialitäten',
    ShipAddress: 'Luisenstr. 48',
    ShipCity: 'Münster',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },
  {
    OrderID: 10250,
    CustomerID: 'HANAR',
    OrderDate: '1996-07-08T00:00:00.000Z',
    ShippedDate: '1996-07-12T00:00:00.000Z',
    Freight: 65.83,
    ShipName: 'Hanari Carnes',
    ShipAddress: 'Rua do Paço, 67',
    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    ShipCountry: 'Brazil',
  },
  {
    OrderID: 10251,
    CustomerID: 'VICTE',
    OrderDate: '1996-07-08T00:00:00.000Z',
    ShippedDate: '1996-07-15T00:00:00.000Z',
    Freight: 41.34,
    ShipName: 'Victuailles en stock',
    ShipAddress: '2, rue du Commerce',
    ShipCity: 'Lyon',
    ShipRegion: null,
    ShipCountry: 'France',
  },
],
```



```
{
  OrderID: 10252,
  CustomerID: 'SUPRD',
  OrderDate: '1996-07-09T00:00:00.000Z',
  ShippedDate: '1996-07-11T00:00:00.000Z',
  Freight: 51.3,
  ShipName: 'Suprêmes délices',
  ShipAddress: 'Boulevard Tirou, 255',
  ShipCity: 'Charleroi',
  ShipRegion: null,
  ShipCountry: 'Belgium',
},

{
  OrderID: 10253,
  CustomerID: 'HANAR',
  OrderDate: '1996-07-10T00:00:00.000Z',
  ShippedDate: '1996-07-16T00:00:00.000Z',
  Freight: 58.17,
  ShipName: 'Hanari Carnes',
  ShipAddress: 'Rua do Paço, 67',
  ShipCity: 'Rio de Janeiro',
  ShipRegion: 'RJ',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10254,
  CustomerID: 'CHOPS',
  OrderDate: '1996-07-11T00:00:00.000Z',
  ShippedDate: '1996-07-23T00:00:00.000Z',
  Freight: 22.98,
  ShipName: 'Chop-suey Chinese',
  ShipAddress: 'Hauptstr. 31',
  ShipCity: 'Bern',
  ShipRegion: null,
  ShipCountry: 'Switzerland',
},

{
  OrderID: 10255,
  CustomerID: 'RICSU',
  OrderDate: '1996-07-12T00:00:00.000Z',
  ShippedDate: '1996-07-15T00:00:00.000Z',
  Freight: 148.33,
  ShipName: 'Richter Supermarkt',
  ShipAddress: 'Starenweg 5',
  ShipCity: 'Genève',
  ShipRegion: null,
  ShipCountry: 'Switzerland',
},

{
  OrderID: 10256,
  CustomerID: 'WELLI',
  OrderDate: '1996-07-15T00:00:00.000Z',
```

```
ShippedDate: '1996-07-17T00:00:00.000Z',
Freight: 13.97,
ShipName: 'Wellington Importadora',
ShipAddress: 'Rua do Mercado, 12',
ShipCity: 'Resende',
ShipRegion: 'SP',
ShipCountry: 'Brazil',
},

{
  OrderID: 10257,
  CustomerID: 'HILAA',
  OrderDate: '1996-07-16T00:00:00.000Z',
  ShippedDate: '1996-07-22T00:00:00.000Z',
  Freight: 81.91,
  ShipName: 'HILARION-Abastos',
  ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
  ShipCity: 'San Cristóbal',
  ShipRegion: 'Táchira',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10258,
  CustomerID: 'ERNSH',
  OrderDate: '1996-07-17T00:00:00.000Z',
  ShippedDate: '1996-07-23T00:00:00.000Z',
  Freight: 140.51,
  ShipName: 'Ernst Handel',
  ShipAddress: 'Kirchgasse 6',
  ShipCity: 'Graz',
  ShipRegion: null,
  ShipCountry: 'Austria',
},

{
  OrderID: 10259,
  CustomerID: 'CENTC',
  OrderDate: '1996-07-18T00:00:00.000Z',
  ShippedDate: '1996-07-25T00:00:00.000Z',
  Freight: 3.25,
  ShipName: 'Centro comercial Moctezuma',
  ShipAddress: 'Sierras de Granada 9993',
  ShipCity: 'México D.F.',
  ShipRegion: null,
  ShipCountry: 'Mexico',
},

{
  OrderID: 10260,
  CustomerID: 'OTTIK',
  OrderDate: '1996-07-19T00:00:00.000Z',
  ShippedDate: '1996-07-29T00:00:00.000Z',
  Freight: 55.09,
  ShipName: 'Ottilies Käseladen',
  ShipAddress: 'Mehrheimerstr. 369',
  ShipCity: 'Köln',
```

```
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10261,
    CustomerID: 'QUEDE',
    OrderDate: '1996-07-19T00:00:00.000Z',
    ShippedDate: '1996-07-30T00:00:00.000Z',
    Freight: 3.05,
    ShipName: 'Que Delícia',
    ShipAddress: 'Rua da Panificadora, 12',
    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10262,
    CustomerID: 'RATTC',
    OrderDate: '1996-07-22T00:00:00.000Z',
    ShippedDate: '1996-07-25T00:00:00.000Z',
    Freight: 48.29,
    ShipName: 'Rattlesnake Canyon Grocery',
    ShipAddress: '2817 Milton Dr.',
    ShipCity: 'Albuquerque',
    ShipRegion: 'NM',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10263,
    CustomerID: 'ERNSH',
    OrderDate: '1996-07-23T00:00:00.000Z',
    ShippedDate: '1996-07-31T00:00:00.000Z',
    Freight: 146.06,
    ShipName: 'Ernst Handel',
    ShipAddress: 'Kirchgasse 6',
    ShipCity: 'Graz',
    ShipRegion: null,
    ShipCountry: 'Austria',
  },

  {
    OrderID: 10264,
    CustomerID: 'FOLKO',
    OrderDate: '1996-07-24T00:00:00.000Z',
    ShippedDate: '1996-08-23T00:00:00.000Z',
    Freight: 3.67,
    ShipName: 'Folk och fä HB',
    ShipAddress: 'Åkergatan 24',
    ShipCity: 'Bräcke',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },

  {
```

```
OrderID: 10265,
CustomerID: 'BLONP',
OrderDate: '1996-07-25T00:00:00.000Z',
ShippedDate: '1996-08-12T00:00:00.000Z',
Freight: 55.28,
ShipName: 'Blondel père et fils',
ShipAddress: '24, place Kléber',
ShipCity: 'Strasbourg',
ShipRegion: null,
ShipCountry: 'France',
},

{
  OrderID: 10266,
  CustomerID: 'WARTH',
  OrderDate: '1996-07-26T00:00:00.000Z',
  ShippedDate: '1996-07-31T00:00:00.000Z',
  Freight: 25.73,
  ShipName: 'Wartian Herkku',
  ShipAddress: 'Torikatu 38',
  ShipCity: 'Oulu',
  ShipRegion: null,
  ShipCountry: 'Finland',
},

{
  OrderID: 10267,
  CustomerID: 'FRANK',
  OrderDate: '1996-07-29T00:00:00.000Z',
  ShippedDate: '1996-08-06T00:00:00.000Z',
  Freight: 208.58,
  ShipName: 'Frankenversand',
  ShipAddress: 'Berliner Platz 43',
  ShipCity: 'München',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10268,
  CustomerID: 'GROSR',
  OrderDate: '1996-07-30T00:00:00.000Z',
  ShippedDate: '1996-08-02T00:00:00.000Z',
  Freight: 66.29,
  ShipName: 'GROSELLA-Restaurante',
  ShipAddress: '5a Ave. Los Palos Grandes',
  ShipCity: 'Caracas',
  ShipRegion: 'DF',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10269,
  CustomerID: 'WHITC',
  OrderDate: '1996-07-31T00:00:00.000Z',
  ShippedDate: '1996-08-09T00:00:00.000Z',
  Freight: 4.56,
```

```
    ShipName: 'White Clover Markets',
    ShipAddress: '1029 - 12th Ave. S.',
    ShipCity: 'Seattle',
    ShipRegion: 'WA',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10270,
    CustomerID: 'WARTH',
    OrderDate: '1996-08-01T00:00:00.000Z',
    ShippedDate: '1996-08-02T00:00:00.000Z',
    Freight: 136.54,
    ShipName: 'Wartian Herkku',
    ShipAddress: 'Torikatu 38',
    ShipCity: 'Oulu',
    ShipRegion: null,
    ShipCountry: 'Finland',
  },

  {
    OrderID: 10271,
    CustomerID: 'SPLIR',
    OrderDate: '1996-08-01T00:00:00.000Z',
    ShippedDate: '1996-08-30T00:00:00.000Z',
    Freight: 4.54,
    ShipName: 'Split Rail Beer & Ale',
    ShipAddress: 'P.O. Box 555',
    ShipCity: 'Lander',
    ShipRegion: 'WY',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10272,
    CustomerID: 'RATTC',
    OrderDate: '1996-08-02T00:00:00.000Z',
    ShippedDate: '1996-08-06T00:00:00.000Z',
    Freight: 98.03,
    ShipName: 'Rattlesnake Canyon Grocery',
    ShipAddress: '2817 Milton Dr.',
    ShipCity: 'Albuquerque',
    ShipRegion: 'NM',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10273,
    CustomerID: 'QUICK',
    OrderDate: '1996-08-05T00:00:00.000Z',
    ShippedDate: '1996-08-12T00:00:00.000Z',
    Freight: 76.07,
    ShipName: 'QUICK-Stop',
    ShipAddress: 'Taucherstraße 10',
    ShipCity: 'Cunewalde',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },
```

```
},  
  
{  
  OrderID: 10274,  
  CustomerID: 'VINET',  
  OrderDate: '1996-08-06T00:00:00.000Z',  
  ShippedDate: '1996-08-16T00:00:00.000Z',  
  Freight: 6.01,  
  ShipName: 'Vins et alcools Chevalier',  
  ShipAddress: '59 rue de l'Abbaye',  
  ShipCity: 'Reims',  
  ShipRegion: null,  
  ShipCountry: 'France',  
},  
  
{  
  OrderID: 10275,  
  CustomerID: 'MAGAA',  
  OrderDate: '1996-08-07T00:00:00.000Z',  
  ShippedDate: '1996-08-09T00:00:00.000Z',  
  Freight: 26.93,  
  ShipName: 'Magazzini Alimentari Riuniti',  
  ShipAddress: 'Via Ludovico il Moro 22',  
  ShipCity: 'Bergamo',  
  ShipRegion: null,  
  ShipCountry: 'Italy',  
},  
  
{  
  OrderID: 10276,  
  CustomerID: 'TORTU',  
  OrderDate: '1996-08-08T00:00:00.000Z',  
  ShippedDate: '1996-08-14T00:00:00.000Z',  
  Freight: 13.84,  
  ShipName: 'Tortuga Restaurante',  
  ShipAddress: 'Avda. Azteca 123',  
  ShipCity: 'México D.F.',  
  ShipRegion: null,  
  ShipCountry: 'Mexico',  
},  
  
{  
  OrderID: 10277,  
  CustomerID: 'MORGK',  
  OrderDate: '1996-08-09T00:00:00.000Z',  
  ShippedDate: '1996-08-13T00:00:00.000Z',  
  Freight: 125.77,  
  ShipName: 'Morgenstern Gesundkost',  
  ShipAddress: 'Heerstr. 22',  
  ShipCity: 'Leipzig',  
  ShipRegion: null,  
  ShipCountry: 'Germany',  
},  
  
{  
  OrderID: 10278,  
  CustomerID: 'BERGS',
```

```
OrderDate: '1996-08-12T00:00:00.000Z',
ShippedDate: '1996-08-16T00:00:00.000Z',
Freight: 92.69,
ShipName: 'Berglunds snabbköp',
ShipAddress: 'Berguvsvägen 8',
ShipCity: 'Luleå',
ShipRegion: null,
ShipCountry: 'Sweden',
},

{
  OrderID: 10279,
  CustomerID: 'LEHMS',
  OrderDate: '1996-08-13T00:00:00.000Z',
  ShippedDate: '1996-08-16T00:00:00.000Z',
  Freight: 25.83,
  ShipName: 'Lehmanns Marktstand',
  ShipAddress: 'Magazinweg 7',
  ShipCity: 'Frankfurt a.M.',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10280,
  CustomerID: 'BERGS',
  OrderDate: '1996-08-14T00:00:00.000Z',
  ShippedDate: '1996-09-12T00:00:00.000Z',
  Freight: 8.98,
  ShipName: 'Berglunds snabbköp',
  ShipAddress: 'Berguvsvägen 8',
  ShipCity: 'Luleå',
  ShipRegion: null,
  ShipCountry: 'Sweden',
},

{
  OrderID: 10281,
  CustomerID: 'ROMEY',
  OrderDate: '1996-08-14T00:00:00.000Z',
  ShippedDate: '1996-08-21T00:00:00.000Z',
  Freight: 2.94,
  ShipName: 'Romero y tomillo',
  ShipAddress: 'Gran Vía, 1',
  ShipCity: 'Madrid',
  ShipRegion: null,
  ShipCountry: 'Spain',
},

{
  OrderID: 10282,
  CustomerID: 'ROMEY',
  OrderDate: '1996-08-15T00:00:00.000Z',
  ShippedDate: '1996-08-21T00:00:00.000Z',
  Freight: 12.69,
  ShipName: 'Romero y tomillo',
  ShipAddress: 'Gran Vía, 1',
```

```
    ShipCity: 'Madrid',
    ShipRegion: null,
    ShipCountry: 'Spain',
  },

  {
    OrderID: 10283,
    CustomerID: 'LILAS',
    OrderDate: '1996-08-16T00:00:00.000Z',
    ShippedDate: '1996-08-23T00:00:00.000Z',
    Freight: 84.81,
    ShipName: 'LILA-Supermercado',
    ShipAddress: 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    ShipCity: 'Barquisimeto',
    ShipRegion: 'Lara',
    ShipCountry: 'Venezuela',
  },

  {
    OrderID: 10284,
    CustomerID: 'LEHMS',
    OrderDate: '1996-08-19T00:00:00.000Z',
    ShippedDate: '1996-08-27T00:00:00.000Z',
    Freight: 76.56,
    ShipName: 'Lehmanns Marktstand',
    ShipAddress: 'Magazinweg 7',
    ShipCity: 'Frankfurt a.M.',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10285,
    CustomerID: 'QUICK',
    OrderDate: '1996-08-20T00:00:00.000Z',
    ShippedDate: '1996-08-26T00:00:00.000Z',
    Freight: 76.83,
    ShipName: 'QUICK-Stop',
    ShipAddress: 'Taucherstraße 10',
    ShipCity: 'Cunewalde',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10286,
    CustomerID: 'QUICK',
    OrderDate: '1996-08-21T00:00:00.000Z',
    ShippedDate: '1996-08-30T00:00:00.000Z',
    Freight: 229.24,
    ShipName: 'QUICK-Stop',
    ShipAddress: 'Taucherstraße 10',
    ShipCity: 'Cunewalde',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },
}
```



```
{
  OrderID: 10287,
  CustomerID: 'RICAR',
  OrderDate: '1996-08-22T00:00:00.000Z',
  ShippedDate: '1996-08-28T00:00:00.000Z',
  Freight: 12.76,
  ShipName: 'Ricardo Adocicados',
  ShipAddress: 'Av. Copacabana, 267',
  ShipCity: 'Rio de Janeiro',
  ShipRegion: 'RJ',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10288,
  CustomerID: 'REGGC',
  OrderDate: '1996-08-23T00:00:00.000Z',
  ShippedDate: '1996-09-03T00:00:00.000Z',
  Freight: 7.45,
  ShipName: 'Reggiani Caseifici',
  ShipAddress: 'Strada Provinciale 124',
  ShipCity: 'Reggio Emilia',
  ShipRegion: null,
  ShipCountry: 'Italy',
},

{
  OrderID: 10289,
  CustomerID: 'BSBEV',
  OrderDate: '1996-08-26T00:00:00.000Z',
  ShippedDate: '1996-08-28T00:00:00.000Z',
  Freight: 22.77,
  ShipName: "B' Beverages",
  ShipAddress: 'Fauntleroy Circus',
  ShipCity: 'London',
  ShipRegion: null,
  ShipCountry: 'UK',
},

{
  OrderID: 10290,
  CustomerID: 'COMMI',
  OrderDate: '1996-08-27T00:00:00.000Z',
  ShippedDate: '1996-09-03T00:00:00.000Z',
  Freight: 79.7,
  ShipName: 'Comércio Mineiro',
  ShipAddress: 'Av. dos Lusíadas, 23',
  ShipCity: 'Sao Paulo',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10291,
  CustomerID: 'QUEDE',
  OrderDate: '1996-08-27T00:00:00.000Z',
  ShippedDate: '1996-09-04T00:00:00.000Z',
```

```
Freight: 6.4,
ShipName: 'Que Delícia',
ShipAddress: 'Rua da Panificadora, 12',
ShipCity: 'Rio de Janeiro',
ShipRegion: 'RJ',
ShipCountry: 'Brazil',
},

{
  OrderID: 10292,
  CustomerID: 'TRADH',
  OrderDate: '1996-08-28T00:00:00.000Z',
  ShippedDate: '1996-09-02T00:00:00.000Z',
  Freight: 1.35,
  ShipName: 'Tradição Hipermercados',
  ShipAddress: 'Av. Inês de Castro, 414',
  ShipCity: 'Sao Paulo',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10293,
  CustomerID: 'TORTU',
  OrderDate: '1996-08-29T00:00:00.000Z',
  ShippedDate: '1996-09-11T00:00:00.000Z',
  Freight: 21.18,
  ShipName: 'Tortuga Restaurante',
  ShipAddress: 'Avda. Azteca 123',
  ShipCity: 'México D.F.',
  ShipRegion: null,
  ShipCountry: 'Mexico',
},

{
  OrderID: 10294,
  CustomerID: 'RATTC',
  OrderDate: '1996-08-30T00:00:00.000Z',
  ShippedDate: '1996-09-05T00:00:00.000Z',
  Freight: 147.26,
  ShipName: 'Rattlesnake Canyon Grocery',
  ShipAddress: '2817 Milton Dr.',
  ShipCity: 'Albuquerque',
  ShipRegion: 'NM',
  ShipCountry: 'USA',
},

{
  OrderID: 10295,
  CustomerID: 'VINET',
  OrderDate: '1996-09-02T00:00:00.000Z',
  ShippedDate: '1996-09-10T00:00:00.000Z',
  Freight: 1.15,
  ShipName: 'Vins et alcools Chevalier',
  ShipAddress: '59 rue de l'Abbaye',
  ShipCity: 'Reims',
  ShipRegion: null,
```

```
    ShipCountry: 'France',
  },
  {
    OrderID: 10296,
    CustomerID: 'LILAS',
    OrderDate: '1996-09-03T00:00:00.000Z',
    ShippedDate: '1996-09-11T00:00:00.000Z',
    Freight: 0.12,
    ShipName: 'LILA-Supermercado',
    ShipAddress: 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    ShipCity: 'Barquisimeto',
    ShipRegion: 'Lara',
    ShipCountry: 'Venezuela',
  },
  {
    OrderID: 10297,
    CustomerID: 'BLONP',
    OrderDate: '1996-09-04T00:00:00.000Z',
    ShippedDate: '1996-09-10T00:00:00.000Z',
    Freight: 5.74,
    ShipName: 'Blondel père et fils',
    ShipAddress: '24, place Kléber',
    ShipCity: 'Strasbourg',
    ShipRegion: null,
    ShipCountry: 'France',
  },
  {
    OrderID: 10298,
    CustomerID: 'HUNGO',
    OrderDate: '1996-09-05T00:00:00.000Z',
    ShippedDate: '1996-09-11T00:00:00.000Z',
    Freight: 168.22,
    ShipName: 'Hungry Owl All-Night Grocers',
    ShipAddress: '8 Johnstown Road',
    ShipCity: 'Cork',
    ShipRegion: 'Co. Cork',
    ShipCountry: 'Ireland',
  },
  {
    OrderID: 10299,
    CustomerID: 'RICAR',
    OrderDate: '1996-09-06T00:00:00.000Z',
    ShippedDate: '1996-09-13T00:00:00.000Z',
    Freight: 29.76,
    ShipName: 'Ricardo Adocicados',
    ShipAddress: 'Av. Copacabana, 267',
    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    ShipCountry: 'Brazil',
  },
  {
    OrderID: 10300,
```

```
CustomerID: 'MAGAA',
OrderDate: '1996-09-09T00:00:00.000Z',
ShippedDate: '1996-09-18T00:00:00.000Z',
Freight: 17.68,
ShipName: 'Magazzini Alimentari Riuniti',
ShipAddress: 'Via Ludovico il Moro 22',
ShipCity: 'Bergamo',
ShipRegion: null,
ShipCountry: 'Italy',
},

{
  OrderID: 10301,
  CustomerID: 'WANDK',
  OrderDate: '1996-09-09T00:00:00.000Z',
  ShippedDate: '1996-09-17T00:00:00.000Z',
  Freight: 45.08,
  ShipName: 'Die Wandernde Kuh',
  ShipAddress: 'Adenauerallee 900',
  ShipCity: 'Stuttgart',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10302,
  CustomerID: 'SUPRD',
  OrderDate: '1996-09-10T00:00:00.000Z',
  ShippedDate: '1996-10-09T00:00:00.000Z',
  Freight: 6.27,
  ShipName: 'Suprêmes délices',
  ShipAddress: 'Boulevard Tirou, 255',
  ShipCity: 'Charleroi',
  ShipRegion: null,
  ShipCountry: 'Belgium',
},

{
  OrderID: 10303,
  CustomerID: 'GODOS',
  OrderDate: '1996-09-11T00:00:00.000Z',
  ShippedDate: '1996-09-18T00:00:00.000Z',
  Freight: 107.83,
  ShipName: 'Godos Cocina Típica',
  ShipAddress: 'C/ Romero, 33',
  ShipCity: 'Sevilla',
  ShipRegion: null,
  ShipCountry: 'Spain',
},

{
  OrderID: 10304,
  CustomerID: 'TORTU',
  OrderDate: '1996-09-12T00:00:00.000Z',
  ShippedDate: '1996-09-17T00:00:00.000Z',
  Freight: 63.79,
  ShipName: 'Tortuga Restaurante',
```

```
    ShipAddress: 'Avda. Azteca 123',
    ShipCity: 'México D.F.',
    ShipRegion: null,
    ShipCountry: 'Mexico',
  },

  {
    OrderID: 10305,
    CustomerID: 'OLDWO',
    OrderDate: '1996-09-13T00:00:00.000Z',
    ShippedDate: '1996-10-09T00:00:00.000Z',
    Freight: 257.62,
    ShipName: 'Old World Delicatessen',
    ShipAddress: '2743 Bering St.',
    ShipCity: 'Anchorage',
    ShipRegion: 'AK',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10306,
    CustomerID: 'ROMEY',
    OrderDate: '1996-09-16T00:00:00.000Z',
    ShippedDate: '1996-09-23T00:00:00.000Z',
    Freight: 7.56,
    ShipName: 'Romero y tomillo',
    ShipAddress: 'Gran Vía, 1',
    ShipCity: 'Madrid',
    ShipRegion: null,
    ShipCountry: 'Spain',
  },

  {
    OrderID: 10307,
    CustomerID: 'LONEP',
    OrderDate: '1996-09-17T00:00:00.000Z',
    ShippedDate: '1996-09-25T00:00:00.000Z',
    Freight: 0.56,
    ShipName: 'Lonesome Pine Restaurant',
    ShipAddress: '89 Chiaroscuro Rd.',
    ShipCity: 'Portland',
    ShipRegion: 'OR',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10308,
    CustomerID: 'ANATR',
    OrderDate: '1996-09-18T00:00:00.000Z',
    ShippedDate: '1996-09-24T00:00:00.000Z',
    Freight: 1.61,
    ShipName: 'Ana Trujillo Emparedados y helados',
    ShipAddress: 'Avda. de la Constitución 2222',
    ShipCity: 'México D.F.',
    ShipRegion: null,
    ShipCountry: 'Mexico',
  },
},
```

```
{
  OrderID: 10309,
  CustomerID: 'HUNGO',
  OrderDate: '1996-09-19T00:00:00.000Z',
  ShippedDate: '1996-10-23T00:00:00.000Z',
  Freight: 47.3,
  ShipName: 'Hungry Owl All-Night Grocers',
  ShipAddress: '8 Johnstown Road',
  ShipCity: 'Cork',
  ShipRegion: 'Co. Cork',
  ShipCountry: 'Ireland',
},

{
  OrderID: 10310,
  CustomerID: 'THEBI',
  OrderDate: '1996-09-20T00:00:00.000Z',
  ShippedDate: '1996-09-27T00:00:00.000Z',
  Freight: 17.52,
  ShipName: 'The Big Cheese',
  ShipAddress: '89 Jefferson Way Suite 2',
  ShipCity: 'Portland',
  ShipRegion: 'OR',
  ShipCountry: 'USA',
},

{
  OrderID: 10311,
  CustomerID: 'DUMON',
  OrderDate: '1996-09-20T00:00:00.000Z',
  ShippedDate: '1996-09-26T00:00:00.000Z',
  Freight: 24.69,
  ShipName: 'Du monde entier',
  ShipAddress: '67, rue des Cinquante Otages',
  ShipCity: 'Nantes',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10312,
  CustomerID: 'WANDK',
  OrderDate: '1996-09-23T00:00:00.000Z',
  ShippedDate: '1996-10-03T00:00:00.000Z',
  Freight: 40.26,
  ShipName: 'Die Wandernde Kuh',
  ShipAddress: 'Adenauerallee 900',
  ShipCity: 'Stuttgart',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10313,
  CustomerID: 'QUICK',
  OrderDate: '1996-09-24T00:00:00.000Z',
```

```
ShippedDate: '1996-10-04T00:00:00.000Z',
Freight: 1.96,
ShipName: 'QUICK-Stop',
ShipAddress: 'Taucherstraße 10',
ShipCity: 'Cunewalde',
ShipRegion: null,
ShipCountry: 'Germany',
},

{
  OrderID: 10314,
  CustomerID: 'RATTC',
  OrderDate: '1996-09-25T00:00:00.000Z',
  ShippedDate: '1996-10-04T00:00:00.000Z',
  Freight: 74.16,
  ShipName: 'Rattlesnake Canyon Grocery',
  ShipAddress: '2817 Milton Dr.',
  ShipCity: 'Albuquerque',
  ShipRegion: 'NM',
  ShipCountry: 'USA',
},

{
  OrderID: 10315,
  CustomerID: 'ISLAT',
  OrderDate: '1996-09-26T00:00:00.000Z',
  ShippedDate: '1996-10-03T00:00:00.000Z',
  Freight: 41.76,
  ShipName: 'Island Trading',
  ShipAddress: 'Garden House Crowther Way',
  ShipCity: 'Cowes',
  ShipRegion: 'Isle of Wight',
  ShipCountry: 'UK',
},

{
  OrderID: 10316,
  CustomerID: 'RATTC',
  OrderDate: '1996-09-27T00:00:00.000Z',
  ShippedDate: '1996-10-08T00:00:00.000Z',
  Freight: 150.15,
  ShipName: 'Rattlesnake Canyon Grocery',
  ShipAddress: '2817 Milton Dr.',
  ShipCity: 'Albuquerque',
  ShipRegion: 'NM',
  ShipCountry: 'USA',
},

{
  OrderID: 10317,
  CustomerID: 'LONEP',
  OrderDate: '1996-09-30T00:00:00.000Z',
  ShippedDate: '1996-10-10T00:00:00.000Z',
  Freight: 12.69,
  ShipName: 'Lonesome Pine Restaurant',
  ShipAddress: '89 Chiaroscuro Rd.',
  ShipCity: 'Portland',
```

```
    ShipRegion: 'OR',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10318,
    CustomerID: 'ISLAT',
    OrderDate: '1996-10-01T00:00:00.000Z',
    ShippedDate: '1996-10-04T00:00:00.000Z',
    Freight: 4.73,
    ShipName: 'Island Trading',
    ShipAddress: 'Garden House Crowther Way',
    ShipCity: 'Cowes',
    ShipRegion: 'Isle of Wight',
    ShipCountry: 'UK',
  },

  {
    OrderID: 10319,
    CustomerID: 'TORTU',
    OrderDate: '1996-10-02T00:00:00.000Z',
    ShippedDate: '1996-10-11T00:00:00.000Z',
    Freight: 64.5,
    ShipName: 'Tortuga Restaurante',
    ShipAddress: 'Avda. Azteca 123',
    ShipCity: 'México D.F.',
    ShipRegion: null,
    ShipCountry: 'Mexico',
  },

  {
    OrderID: 10320,
    CustomerID: 'WARTH',
    OrderDate: '1996-10-03T00:00:00.000Z',
    ShippedDate: '1996-10-18T00:00:00.000Z',
    Freight: 34.57,
    ShipName: 'Wartian Herkku',
    ShipAddress: 'Torikatu 38',
    ShipCity: 'Oulu',
    ShipRegion: null,
    ShipCountry: 'Finland',
  },

  {
    OrderID: 10321,
    CustomerID: 'ISLAT',
    OrderDate: '1996-10-03T00:00:00.000Z',
    ShippedDate: '1996-10-11T00:00:00.000Z',
    Freight: 3.43,
    ShipName: 'Island Trading',
    ShipAddress: 'Garden House Crowther Way',
    ShipCity: 'Cowes',
    ShipRegion: 'Isle of Wight',
    ShipCountry: 'UK',
  },

  {
```



```
OrderID: 10322,
CustomerID: 'PERIC',
OrderDate: '1996-10-04T00:00:00.000Z',
ShippedDate: '1996-10-23T00:00:00.000Z',
Freight: 0.4,
ShipName: 'Pericles Comidas clásicas',
ShipAddress: 'Calle Dr. Jorge Cash 321',
ShipCity: 'México D.F.',
ShipRegion: null,
ShipCountry: 'Mexico',
},

{
  OrderID: 10323,
  CustomerID: 'KOENE',
  OrderDate: '1996-10-07T00:00:00.000Z',
  ShippedDate: '1996-10-14T00:00:00.000Z',
  Freight: 4.88,
  ShipName: 'Königlich Essen',
  ShipAddress: 'Maubelstr. 90',
  ShipCity: 'Brandenburg',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10324,
  CustomerID: 'SAVEA',
  OrderDate: '1996-10-08T00:00:00.000Z',
  ShippedDate: '1996-10-10T00:00:00.000Z',
  Freight: 214.27,
  ShipName: 'Save-a-lot Markets',
  ShipAddress: '187 Suffolk Ln.',
  ShipCity: 'Boise',
  ShipRegion: 'ID',
  ShipCountry: 'USA',
},

{
  OrderID: 10325,
  CustomerID: 'KOENE',
  OrderDate: '1996-10-09T00:00:00.000Z',
  ShippedDate: '1996-10-14T00:00:00.000Z',
  Freight: 64.86,
  ShipName: 'Königlich Essen',
  ShipAddress: 'Maubelstr. 90',
  ShipCity: 'Brandenburg',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10326,
  CustomerID: 'BOLID',
  OrderDate: '1996-10-10T00:00:00.000Z',
  ShippedDate: '1996-10-14T00:00:00.000Z',
  Freight: 77.92,
```

```
    ShipName: 'Bólido Comidas preparadas',
    ShipAddress: 'C/ Araquil, 67',
    ShipCity: 'Madrid',
    ShipRegion: null,
    ShipCountry: 'Spain',
  },

  {
    OrderID: 10327,
    CustomerID: 'FOLKO',
    OrderDate: '1996-10-11T00:00:00.000Z',
    ShippedDate: '1996-10-14T00:00:00.000Z',
    Freight: 63.36,
    ShipName: 'Folk och fä HB',
    ShipAddress: 'Åkergatan 24',
    ShipCity: 'Bräcke',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },

  {
    OrderID: 10328,
    CustomerID: 'FURIB',
    OrderDate: '1996-10-14T00:00:00.000Z',
    ShippedDate: '1996-10-17T00:00:00.000Z',
    Freight: 87.03,
    ShipName: 'Furia Bacalhau e Frutos do Mar',
    ShipAddress: 'Jardim das rosas n. 32',
    ShipCity: 'Lisboa',
    ShipRegion: null,
    ShipCountry: 'Portugal',
  },

  {
    OrderID: 10329,
    CustomerID: 'SPLIR',
    OrderDate: '1996-10-15T00:00:00.000Z',
    ShippedDate: '1996-10-23T00:00:00.000Z',
    Freight: 191.67,
    ShipName: 'Split Rail Beer & Ale',
    ShipAddress: 'P.O. Box 555',
    ShipCity: 'Lander',
    ShipRegion: 'WY',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10330,
    CustomerID: 'LILAS',
    OrderDate: '1996-10-16T00:00:00.000Z',
    ShippedDate: '1996-10-28T00:00:00.000Z',
    Freight: 12.75,
    ShipName: 'LILA-Supermercado',
    ShipAddress: 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    ShipCity: 'Barquisimeto',
    ShipRegion: 'Lara',
    ShipCountry: 'Venezuela',
```

```
},  
  
{  
  OrderID: 10331,  
  CustomerID: 'BONAP',  
  OrderDate: '1996-10-16T00:00:00.000Z',  
  ShippedDate: '1996-10-21T00:00:00.000Z',  
  Freight: 10.19,  
  ShipName: 'Bon app',  
  ShipAddress: '12, rue des Bouchers',  
  ShipCity: 'Marseille',  
  ShipRegion: null,  
  ShipCountry: 'France',  
},  
  
{  
  OrderID: 10332,  
  CustomerID: 'MEREP',  
  OrderDate: '1996-10-17T00:00:00.000Z',  
  ShippedDate: '1996-10-21T00:00:00.000Z',  
  Freight: 52.84,  
  ShipName: 'Mère Paillarde',  
  ShipAddress: '43 rue St. Laurent',  
  ShipCity: 'Montréal',  
  ShipRegion: 'Québec',  
  ShipCountry: 'Canada',  
},  
  
{  
  OrderID: 10333,  
  CustomerID: 'WARTH',  
  OrderDate: '1996-10-18T00:00:00.000Z',  
  ShippedDate: '1996-10-25T00:00:00.000Z',  
  Freight: 0.59,  
  ShipName: 'Wartian Herkku',  
  ShipAddress: 'Torikatu 38',  
  ShipCity: 'Oulu',  
  ShipRegion: null,  
  ShipCountry: 'Finland',  
},  
  
{  
  OrderID: 10334,  
  CustomerID: 'VICTE',  
  OrderDate: '1996-10-21T00:00:00.000Z',  
  ShippedDate: '1996-10-28T00:00:00.000Z',  
  Freight: 8.56,  
  ShipName: 'Victuailles en stock',  
  ShipAddress: '2, rue du Commerce',  
  ShipCity: 'Lyon',  
  ShipRegion: null,  
  ShipCountry: 'France',  
},  
  
{  
  OrderID: 10335,  
  CustomerID: 'HUNGO',
```

```
OrderDate: '1996-10-22T00:00:00.000Z',
ShippedDate: '1996-10-24T00:00:00.000Z',
Freight: 42.11,
ShipName: 'Hungry Owl All-Night Grocers',
ShipAddress: '8 Johnstown Road',
ShipCity: 'Cork',
ShipRegion: 'Co. Cork',
ShipCountry: 'Ireland',
},

{
  OrderID: 10336,
  CustomerID: 'PRINI',
  OrderDate: '1996-10-23T00:00:00.000Z',
  ShippedDate: '1996-10-25T00:00:00.000Z',
  Freight: 15.51,
  ShipName: 'Princesa Isabel Vinhos',
  ShipAddress: 'Estrada da saúde n. 58',
  ShipCity: 'Lisboa',
  ShipRegion: null,
  ShipCountry: 'Portugal',
},

{
  OrderID: 10337,
  CustomerID: 'FRANK',
  OrderDate: '1996-10-24T00:00:00.000Z',
  ShippedDate: '1996-10-29T00:00:00.000Z',
  Freight: 108.26,
  ShipName: 'Frankenversand',
  ShipAddress: 'Berliner Platz 43',
  ShipCity: 'München',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10338,
  CustomerID: 'OLDWO',
  OrderDate: '1996-10-25T00:00:00.000Z',
  ShippedDate: '1996-10-29T00:00:00.000Z',
  Freight: 84.21,
  ShipName: 'Old World Delicatessen',
  ShipAddress: '2743 Bering St.',
  ShipCity: 'Anchorage',
  ShipRegion: 'AK',
  ShipCountry: 'USA',
},

{
  OrderID: 10339,
  CustomerID: 'MEREP',
  OrderDate: '1996-10-28T00:00:00.000Z',
  ShippedDate: '1996-11-04T00:00:00.000Z',
  Freight: 15.66,
  ShipName: 'Mère Paillarde',
  ShipAddress: '43 rue St. Laurent',
```

```
    ShipCity: 'Montréal',
    ShipRegion: 'Québec',
    ShipCountry: 'Canada',
  },

  {
    OrderID: 10340,
    CustomerID: 'BONAP',
    OrderDate: '1996-10-29T00:00:00.000Z',
    ShippedDate: '1996-11-08T00:00:00.000Z',
    Freight: 166.31,
    ShipName: 'Bon app',
    ShipAddress: '12, rue des Bouchers',
    ShipCity: 'Marseille',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10341,
    CustomerID: 'SIMOB',
    OrderDate: '1996-10-29T00:00:00.000Z',
    ShippedDate: '1996-11-05T00:00:00.000Z',
    Freight: 26.78,
    ShipName: 'Simons bistro',
    ShipAddress: 'Vinbæltet 34',
    ShipCity: 'Kobenhavn',
    ShipRegion: null,
    ShipCountry: 'Denmark',
  },

  {
    OrderID: 10342,
    CustomerID: 'FRANK',
    OrderDate: '1996-10-30T00:00:00.000Z',
    ShippedDate: '1996-11-04T00:00:00.000Z',
    Freight: 54.83,
    ShipName: 'Frankenversand',
    ShipAddress: 'Berliner Platz 43',
    ShipCity: 'München',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10343,
    CustomerID: 'LEHMS',
    OrderDate: '1996-10-31T00:00:00.000Z',
    ShippedDate: '1996-11-06T00:00:00.000Z',
    Freight: 110.37,
    ShipName: 'Lehmanns Marktstand',
    ShipAddress: 'Magazinweg 7',
    ShipCity: 'Frankfurt a.M.',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },
}
```

```
{
  OrderID: 10344,
  CustomerID: 'WHITC',
  OrderDate: '1996-11-01T00:00:00.000Z',
  ShippedDate: '1996-11-05T00:00:00.000Z',
  Freight: 23.29,
  ShipName: 'White Clover Markets',
  ShipAddress: '1029 - 12th Ave. S.',
  ShipCity: 'Seattle',
  ShipRegion: 'WA',
  ShipCountry: 'USA',
},

{
  OrderID: 10345,
  CustomerID: 'QUICK',
  OrderDate: '1996-11-04T00:00:00.000Z',
  ShippedDate: '1996-11-11T00:00:00.000Z',
  Freight: 249.06,
  ShipName: 'QUICK-Stop',
  ShipAddress: 'Taucherstraße 10',
  ShipCity: 'Cunewalde',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10346,
  CustomerID: 'RATTC',
  OrderDate: '1996-11-05T00:00:00.000Z',
  ShippedDate: '1996-11-08T00:00:00.000Z',
  Freight: 142.08,
  ShipName: 'Rattlesnake Canyon Grocery',
  ShipAddress: '2817 Milton Dr.',
  ShipCity: 'Albuquerque',
  ShipRegion: 'NM',
  ShipCountry: 'USA',
},

{
  OrderID: 10347,
  CustomerID: 'FAMIA',
  OrderDate: '1996-11-06T00:00:00.000Z',
  ShippedDate: '1996-11-08T00:00:00.000Z',
  Freight: 3.1,
  ShipName: 'Familia Arquibaldo',
  ShipAddress: 'Rua Orós, 92',
  ShipCity: 'Sao Paulo',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10348,
  CustomerID: 'WANDK',
  OrderDate: '1996-11-07T00:00:00.000Z',
  ShippedDate: '1996-11-15T00:00:00.000Z',
```

```
Freight: 0.78,
ShipName: 'Die Wandernde Kuh',
ShipAddress: 'Adenauerallee 900',
ShipCity: 'Stuttgart',
ShipRegion: null,
ShipCountry: 'Germany',
},

{
  OrderID: 10349,
  CustomerID: 'SPLIR',
  OrderDate: '1996-11-08T00:00:00.000Z',
  ShippedDate: '1996-11-15T00:00:00.000Z',
  Freight: 8.63,
  ShipName: 'Split Rail Beer & Ale',
  ShipAddress: 'P.O. Box 555',
  ShipCity: 'Lander',
  ShipRegion: 'WY',
  ShipCountry: 'USA',
},

{
  OrderID: 10350,
  CustomerID: 'LAMAI',
  OrderDate: '1996-11-11T00:00:00.000Z',
  ShippedDate: '1996-12-03T00:00:00.000Z',
  Freight: 64.19,
  ShipName: 'La maison d'Asie',
  ShipAddress: '1 rue Alsace-Lorraine',
  ShipCity: 'Toulouse',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10351,
  CustomerID: 'ERNSH',
  OrderDate: '1996-11-11T00:00:00.000Z',
  ShippedDate: '1996-11-20T00:00:00.000Z',
  Freight: 162.33,
  ShipName: 'Ernst Handel',
  ShipAddress: 'Kirchgasse 6',
  ShipCity: 'Graz',
  ShipRegion: null,
  ShipCountry: 'Austria',
},

{
  OrderID: 10352,
  CustomerID: 'FURIB',
  OrderDate: '1996-11-12T00:00:00.000Z',
  ShippedDate: '1996-11-18T00:00:00.000Z',
  Freight: 1.3,
  ShipName: 'Furia Bacalhau e Frutos do Mar',
  ShipAddress: 'Jardim das rosas n. 32',
  ShipCity: 'Lisboa',
  ShipRegion: null,
```

```
    ShipCountry: 'Portugal',
  },

  {
    OrderID: 10353,
    CustomerID: 'PICCO',
    OrderDate: '1996-11-13T00:00:00.000Z',
    ShippedDate: '1996-11-25T00:00:00.000Z',
    Freight: 360.63,
    ShipName: 'Piccolo und mehr',
    ShipAddress: 'Geislweg 14',
    ShipCity: 'Salzburg',
    ShipRegion: null,
    ShipCountry: 'Austria',
  },

  {
    OrderID: 10354,
    CustomerID: 'PERIC',
    OrderDate: '1996-11-14T00:00:00.000Z',
    ShippedDate: '1996-11-20T00:00:00.000Z',
    Freight: 53.8,
    ShipName: 'Pericles Comidas clásicas',
    ShipAddress: 'Calle Dr. Jorge Cash 321',
    ShipCity: 'México D.F.',
    ShipRegion: null,
    ShipCountry: 'Mexico',
  },

  {
    OrderID: 10355,
    CustomerID: 'AROUT',
    OrderDate: '1996-11-15T00:00:00.000Z',
    ShippedDate: '1996-11-20T00:00:00.000Z',
    Freight: 41.95,
    ShipName: 'Around the Horn',
    ShipAddress: 'Brook Farm Stratford St. Mary',
    ShipCity: 'Colchester',
    ShipRegion: 'Essex',
    ShipCountry: 'UK',
  },

  {
    OrderID: 10356,
    CustomerID: 'WANDK',
    OrderDate: '1996-11-18T00:00:00.000Z',
    ShippedDate: '1996-11-27T00:00:00.000Z',
    Freight: 36.71,
    ShipName: 'Die Wandernde Kuh',
    ShipAddress: 'Adenauerallee 900',
    ShipCity: 'Stuttgart',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10357,
```



```
CustomerID: 'LILAS',
OrderDate: '1996-11-19T00:00:00.000Z',
ShippedDate: '1996-12-02T00:00:00.000Z',
Freight: 34.88,
ShipName: 'LILA-Supermercado',
ShipAddress: 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
ShipCity: 'Barquisimeto',
ShipRegion: 'Lara',
ShipCountry: 'Venezuela',
},

{
  OrderID: 10358,
  CustomerID: 'LAMAI',
  OrderDate: '1996-11-20T00:00:00.000Z',
  ShippedDate: '1996-11-27T00:00:00.000Z',
  Freight: 19.64,
  ShipName: "La maison d'Asie",
  ShipAddress: '1 rue Alsace-Lorraine',
  ShipCity: 'Toulouse',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10359,
  CustomerID: 'SEVES',
  OrderDate: '1996-11-21T00:00:00.000Z',
  ShippedDate: '1996-11-26T00:00:00.000Z',
  Freight: 288.43,
  ShipName: 'Seven Seas Imports',
  ShipAddress: '90 Wadhurst Rd.',
  ShipCity: 'London',
  ShipRegion: null,
  ShipCountry: 'UK',
},

{
  OrderID: 10360,
  CustomerID: 'BLONP',
  OrderDate: '1996-11-22T00:00:00.000Z',
  ShippedDate: '1996-12-02T00:00:00.000Z',
  Freight: 131.7,
  ShipName: 'Blondel père et fils',
  ShipAddress: '24, place Kléber',
  ShipCity: 'Strasbourg',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10361,
  CustomerID: 'QUICK',
  OrderDate: '1996-11-22T00:00:00.000Z',
  ShippedDate: '1996-12-03T00:00:00.000Z',
  Freight: 183.17,
  ShipName: 'QUICK-Stop',
```

```
    ShipAddress: 'Taucherstraße 10',
    ShipCity: 'Cunewalde',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10362,
    CustomerID: 'BONAP',
    OrderDate: '1996-11-25T00:00:00.000Z',
    ShippedDate: '1996-11-28T00:00:00.000Z',
    Freight: 96.04,
    ShipName: 'Bon app',
    ShipAddress: '12, rue des Bouchers',
    ShipCity: 'Marseille',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10363,
    CustomerID: 'DRACD',
    OrderDate: '1996-11-26T00:00:00.000Z',
    ShippedDate: '1996-12-04T00:00:00.000Z',
    Freight: 30.54,
    ShipName: 'Drachenblut Delikatessen',
    ShipAddress: 'Walserweg 21',
    ShipCity: 'Aachen',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10364,
    CustomerID: 'EASTC',
    OrderDate: '1996-11-26T00:00:00.000Z',
    ShippedDate: '1996-12-04T00:00:00.000Z',
    Freight: 71.97,
    ShipName: 'Eastern Connection',
    ShipAddress: '35 King George',
    ShipCity: 'London',
    ShipRegion: null,
    ShipCountry: 'UK',
  },

  {
    OrderID: 10365,
    CustomerID: 'ANTON',
    OrderDate: '1996-11-27T00:00:00.000Z',
    ShippedDate: '1996-12-02T00:00:00.000Z',
    Freight: 22,
    ShipName: 'Antonio Moreno Taquería',
    ShipAddress: 'Mataderos 2312',
    ShipCity: 'México D.F.',
    ShipRegion: null,
    ShipCountry: 'Mexico',
  },
},
```

```
{
  OrderID: 10366,
  CustomerID: 'GALED',
  OrderDate: '1996-11-28T00:00:00.000Z',
  ShippedDate: '1996-12-30T00:00:00.000Z',
  Freight: 10.14,
  ShipName: 'Galería del gastronómo',
  ShipAddress: 'Rambla de Cataluña, 23',
  ShipCity: 'Barcelona',
  ShipRegion: null,
  ShipCountry: 'Spain',
},

{
  OrderID: 10367,
  CustomerID: 'VAFFE',
  OrderDate: '1996-11-28T00:00:00.000Z',
  ShippedDate: '1996-12-02T00:00:00.000Z',
  Freight: 13.55,
  ShipName: 'Vaffeljernet',
  ShipAddress: 'Smagsloget 45',
  ShipCity: 'Århus',
  ShipRegion: null,
  ShipCountry: 'Denmark',
},

{
  OrderID: 10368,
  CustomerID: 'ERNSH',
  OrderDate: '1996-11-29T00:00:00.000Z',
  ShippedDate: '1996-12-02T00:00:00.000Z',
  Freight: 101.95,
  ShipName: 'Ernst Handel',
  ShipAddress: 'Kirchgasse 6',
  ShipCity: 'Graz',
  ShipRegion: null,
  ShipCountry: 'Austria',
},

{
  OrderID: 10369,
  CustomerID: 'SPLIR',
  OrderDate: '1996-12-02T00:00:00.000Z',
  ShippedDate: '1996-12-09T00:00:00.000Z',
  Freight: 195.68,
  ShipName: 'Split Rail Beer & Ale',
  ShipAddress: 'P.O. Box 555',
  ShipCity: 'Lander',
  ShipRegion: 'WY',
  ShipCountry: 'USA',
},

{
  OrderID: 10370,
  CustomerID: 'CHOPS',
  OrderDate: '1996-12-03T00:00:00.000Z',
```

```
ShippedDate: '1996-12-27T00:00:00.000Z',
Freight: 1.17,
ShipName: 'Chop-suey Chinese',
ShipAddress: 'Hauptstr. 31',
ShipCity: 'Bern',
ShipRegion: null,
ShipCountry: 'Switzerland',
},

{
  OrderID: 10371,
  CustomerID: 'LAMAI',
  OrderDate: '1996-12-03T00:00:00.000Z',
  ShippedDate: '1996-12-24T00:00:00.000Z',
  Freight: 0.45,
  ShipName: 'La maison d'Asie',
  ShipAddress: '1 rue Alsace-Lorraine',
  ShipCity: 'Toulouse',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10372,
  CustomerID: 'QUEEN',
  OrderDate: '1996-12-04T00:00:00.000Z',
  ShippedDate: '1996-12-09T00:00:00.000Z',
  Freight: 890.78,
  ShipName: 'Queen Cozinha',
  ShipAddress: 'Alameda dos Canários, 891',
  ShipCity: 'Sao Paulo',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10373,
  CustomerID: 'HUNGO',
  OrderDate: '1996-12-05T00:00:00.000Z',
  ShippedDate: '1996-12-11T00:00:00.000Z',
  Freight: 124.12,
  ShipName: 'Hungry Owl All-Night Grocers',
  ShipAddress: '8 Johnstown Road',
  ShipCity: 'Cork',
  ShipRegion: 'Co. Cork',
  ShipCountry: 'Ireland',
},

{
  OrderID: 10374,
  CustomerID: 'WOLZA',
  OrderDate: '1996-12-05T00:00:00.000Z',
  ShippedDate: '1996-12-09T00:00:00.000Z',
  Freight: 3.94,
  ShipName: 'Wolski Zajazd',
  ShipAddress: 'ul. Filtrowa 68',
  ShipCity: 'Warszawa',
```

```
    ShipRegion: null,
    ShipCountry: 'Poland',
  },

  {
    OrderID: 10375,
    CustomerID: 'HUNGC',
    OrderDate: '1996-12-06T00:00:00.000Z',
    ShippedDate: '1996-12-09T00:00:00.000Z',
    Freight: 20.12,
    ShipName: 'Hungry Coyote Import Store',
    ShipAddress: 'City Center Plaza 516 Main St.',
    ShipCity: 'Elgin',
    ShipRegion: 'OR',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10376,
    CustomerID: 'MEREP',
    OrderDate: '1996-12-09T00:00:00.000Z',
    ShippedDate: '1996-12-13T00:00:00.000Z',
    Freight: 20.39,
    ShipName: 'Mère Paillarde',
    ShipAddress: '43 rue St. Laurent',
    ShipCity: 'Montréal',
    ShipRegion: 'Québec',
    ShipCountry: 'Canada',
  },

  {
    OrderID: 10377,
    CustomerID: 'SEVES',
    OrderDate: '1996-12-09T00:00:00.000Z',
    ShippedDate: '1996-12-13T00:00:00.000Z',
    Freight: 22.21,
    ShipName: 'Seven Seas Imports',
    ShipAddress: '90 Wadhurst Rd.',
    ShipCity: 'London',
    ShipRegion: null,
    ShipCountry: 'UK',
  },

  {
    OrderID: 10378,
    CustomerID: 'FOLKO',
    OrderDate: '1996-12-10T00:00:00.000Z',
    ShippedDate: '1996-12-19T00:00:00.000Z',
    Freight: 5.44,
    ShipName: 'Folk och fä HB',
    ShipAddress: 'Åkergatan 24',
    ShipCity: 'Bräcke',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },

  {
```

```
OrderID: 10379,
CustomerID: 'QUEDE',
OrderDate: '1996-12-11T00:00:00.000Z',
ShippedDate: '1996-12-13T00:00:00.000Z',
Freight: 45.03,
ShipName: 'Que Delícia',
ShipAddress: 'Rua da Panificadora, 12',
ShipCity: 'Rio de Janeiro',
ShipRegion: 'RJ',
ShipCountry: 'Brazil',
},

{
  OrderID: 10380,
  CustomerID: 'HUNGO',
  OrderDate: '1996-12-12T00:00:00.000Z',
  ShippedDate: '1997-01-16T00:00:00.000Z',
  Freight: 35.03,
  ShipName: 'Hungry Owl All-Night Grocers',
  ShipAddress: '8 Johnstown Road',
  ShipCity: 'Cork',
  ShipRegion: 'Co. Cork',
  ShipCountry: 'Ireland',
},

{
  OrderID: 10381,
  CustomerID: 'LILAS',
  OrderDate: '1996-12-12T00:00:00.000Z',
  ShippedDate: '1996-12-13T00:00:00.000Z',
  Freight: 7.99,
  ShipName: 'LILA-Supermercado',
  ShipAddress: 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
  ShipCity: 'Barquisimeto',
  ShipRegion: 'Lara',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10382,
  CustomerID: 'ERNSH',
  OrderDate: '1996-12-13T00:00:00.000Z',
  ShippedDate: '1996-12-16T00:00:00.000Z',
  Freight: 94.77,
  ShipName: 'Ernst Handel',
  ShipAddress: 'Kirchgasse 6',
  ShipCity: 'Graz',
  ShipRegion: null,
  ShipCountry: 'Austria',
},

{
  OrderID: 10383,
  CustomerID: 'AROUT',
  OrderDate: '1996-12-16T00:00:00.000Z',
  ShippedDate: '1996-12-18T00:00:00.000Z',
  Freight: 34.24,
```

```
    ShipName: 'Around the Horn',
    ShipAddress: 'Brook Farm Stratford St. Mary',
    ShipCity: 'Colchester',
    ShipRegion: 'Essex',
    ShipCountry: 'UK',
  },

  {
    OrderID: 10384,
    CustomerID: 'BERGS',
    OrderDate: '1996-12-16T00:00:00.000Z',
    ShippedDate: '1996-12-20T00:00:00.000Z',
    Freight: 168.64,
    ShipName: 'Berglunds snabbköp',
    ShipAddress: 'Berguvsvägen 8',
    ShipCity: 'Luleå',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },

  {
    OrderID: 10385,
    CustomerID: 'SPLIR',
    OrderDate: '1996-12-17T00:00:00.000Z',
    ShippedDate: '1996-12-23T00:00:00.000Z',
    Freight: 30.96,
    ShipName: 'Split Rail Beer & Ale',
    ShipAddress: 'P.O. Box 555',
    ShipCity: 'Lander',
    ShipRegion: 'WY',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10386,
    CustomerID: 'FAMIA',
    OrderDate: '1996-12-18T00:00:00.000Z',
    ShippedDate: '1996-12-25T00:00:00.000Z',
    Freight: 13.99,
    ShipName: 'Familia Arquibaldo',
    ShipAddress: 'Rua Orós, 92',
    ShipCity: 'Sao Paulo',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10387,
    CustomerID: 'SANTG',
    OrderDate: '1996-12-18T00:00:00.000Z',
    ShippedDate: '1996-12-20T00:00:00.000Z',
    Freight: 93.63,
    ShipName: 'Santé Gourmet',
    ShipAddress: 'Erling Skakkes gate 78',
    ShipCity: 'Stavern',
    ShipRegion: null,
    ShipCountry: 'Norway',
```

```
},  
  
{  
  OrderID: 10388,  
  CustomerID: 'SEVES',  
  OrderDate: '1996-12-19T00:00:00.000Z',  
  ShippedDate: '1996-12-20T00:00:00.000Z',  
  Freight: 34.86,  
  ShipName: 'Seven Seas Imports',  
  ShipAddress: '90 Wadhurst Rd.',  
  ShipCity: 'London',  
  ShipRegion: null,  
  ShipCountry: 'UK',  
},  
  
{  
  OrderID: 10389,  
  CustomerID: 'BOTTM',  
  OrderDate: '1996-12-20T00:00:00.000Z',  
  ShippedDate: '1996-12-24T00:00:00.000Z',  
  Freight: 47.42,  
  ShipName: 'Bottom-Dollar Markets',  
  ShipAddress: '23 Tsawassen Blvd.',  
  ShipCity: 'Tsawassen',  
  ShipRegion: 'BC',  
  ShipCountry: 'Canada',  
},  
  
{  
  OrderID: 10390,  
  CustomerID: 'ERNSH',  
  OrderDate: '1996-12-23T00:00:00.000Z',  
  ShippedDate: '1996-12-26T00:00:00.000Z',  
  Freight: 126.38,  
  ShipName: 'Ernst Handel',  
  ShipAddress: 'Kirchgasse 6',  
  ShipCity: 'Graz',  
  ShipRegion: null,  
  ShipCountry: 'Austria',  
},  
  
{  
  OrderID: 10391,  
  CustomerID: 'DRACD',  
  OrderDate: '1996-12-23T00:00:00.000Z',  
  ShippedDate: '1996-12-31T00:00:00.000Z',  
  Freight: 5.45,  
  ShipName: 'Drachenblut Delikatessen',  
  ShipAddress: 'Walserweg 21',  
  ShipCity: 'Aachen',  
  ShipRegion: null,  
  ShipCountry: 'Germany',  
},  
  
{  
  OrderID: 10392,  
  CustomerID: 'PICCO',
```



```
OrderDate: '1996-12-24T00:00:00.000Z',
ShippedDate: '1997-01-01T00:00:00.000Z',
Freight: 122.46,
ShipName: 'Piccolo und mehr',
ShipAddress: 'Geislweg 14',
ShipCity: 'Salzburg',
ShipRegion: null,
ShipCountry: 'Austria',
},

{
  OrderID: 10393,
  CustomerID: 'SAVEA',
  OrderDate: '1996-12-25T00:00:00.000Z',
  ShippedDate: '1997-01-03T00:00:00.000Z',
  Freight: 126.56,
  ShipName: 'Save-a-lot Markets',
  ShipAddress: '187 Suffolk Ln.',
  ShipCity: 'Boise',
  ShipRegion: 'ID',
  ShipCountry: 'USA',
},

{
  OrderID: 10394,
  CustomerID: 'HUNGC',
  OrderDate: '1996-12-25T00:00:00.000Z',
  ShippedDate: '1997-01-03T00:00:00.000Z',
  Freight: 30.34,
  ShipName: 'Hungry Coyote Import Store',
  ShipAddress: 'City Center Plaza 516 Main St.',
  ShipCity: 'Elgin',
  ShipRegion: 'OR',
  ShipCountry: 'USA',
},

{
  OrderID: 10395,
  CustomerID: 'HILAA',
  OrderDate: '1996-12-26T00:00:00.000Z',
  ShippedDate: '1997-01-03T00:00:00.000Z',
  Freight: 184.41,
  ShipName: 'HILARION-Abastos',
  ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
  ShipCity: 'San Cristóbal',
  ShipRegion: 'Táchira',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10396,
  CustomerID: 'FRANK',
  OrderDate: '1996-12-27T00:00:00.000Z',
  ShippedDate: '1997-01-06T00:00:00.000Z',
  Freight: 135.35,
  ShipName: 'Frankenversand',
  ShipAddress: 'Berliner Platz 43',
```

```
    ShipCity: 'München',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10397,
    CustomerID: 'PRINI',
    OrderDate: '1996-12-27T00:00:00.000Z',
    ShippedDate: '1997-01-02T00:00:00.000Z',
    Freight: 60.26,
    ShipName: 'Princesa Isabel Vinhos',
    ShipAddress: 'Estrada da saúde n. 58',
    ShipCity: 'Lisboa',
    ShipRegion: null,
    ShipCountry: 'Portugal',
  },

  {
    OrderID: 10398,
    CustomerID: 'SAVEA',
    OrderDate: '1996-12-30T00:00:00.000Z',
    ShippedDate: '1997-01-09T00:00:00.000Z',
    Freight: 89.16,
    ShipName: 'Save-a-lot Markets',
    ShipAddress: '187 Suffolk Ln.',
    ShipCity: 'Boise',
    ShipRegion: 'ID',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10399,
    CustomerID: 'VAFFE',
    OrderDate: '1996-12-31T00:00:00.000Z',
    ShippedDate: '1997-01-08T00:00:00.000Z',
    Freight: 27.36,
    ShipName: 'Vaffeljernet',
    ShipAddress: 'Smagsloget 45',
    ShipCity: 'Århus',
    ShipRegion: null,
    ShipCountry: 'Denmark',
  },

  {
    OrderID: 10400,
    CustomerID: 'EASTC',
    OrderDate: '1997-01-01T00:00:00.000Z',
    ShippedDate: '1997-01-16T00:00:00.000Z',
    Freight: 83.93,
    ShipName: 'Eastern Connection',
    ShipAddress: '35 King George',
    ShipCity: 'London',
    ShipRegion: null,
    ShipCountry: 'UK',
  },
},
```

```
{
  OrderID: 10401,
  CustomerID: 'RATTC',
  OrderDate: '1997-01-01T00:00:00.000Z',
  ShippedDate: '1997-01-10T00:00:00.000Z',
  Freight: 12.51,
  ShipName: 'Rattlesnake Canyon Grocery',
  ShipAddress: '2817 Milton Dr.',
  ShipCity: 'Albuquerque',
  ShipRegion: 'NM',
  ShipCountry: 'USA',
},

{
  OrderID: 10402,
  CustomerID: 'ERNSH',
  OrderDate: '1997-01-02T00:00:00.000Z',
  ShippedDate: '1997-01-10T00:00:00.000Z',
  Freight: 67.88,
  ShipName: 'Ernst Handel',
  ShipAddress: 'Kirchgasse 6',
  ShipCity: 'Graz',
  ShipRegion: null,
  ShipCountry: 'Austria',
},

{
  OrderID: 10403,
  CustomerID: 'ERNSH',
  OrderDate: '1997-01-03T00:00:00.000Z',
  ShippedDate: '1997-01-09T00:00:00.000Z',
  Freight: 73.79,
  ShipName: 'Ernst Handel',
  ShipAddress: 'Kirchgasse 6',
  ShipCity: 'Graz',
  ShipRegion: null,
  ShipCountry: 'Austria',
},

{
  OrderID: 10404,
  CustomerID: 'MAGAA',
  OrderDate: '1997-01-03T00:00:00.000Z',
  ShippedDate: '1997-01-08T00:00:00.000Z',
  Freight: 155.97,
  ShipName: 'Magazzini Alimentari Riuniti',
  ShipAddress: 'Via Ludovico il Moro 22',
  ShipCity: 'Bergamo',
  ShipRegion: null,
  ShipCountry: 'Italy',
},

{
  OrderID: 10405,
  CustomerID: 'LINOD',
  OrderDate: '1997-01-06T00:00:00.000Z',
  ShippedDate: '1997-01-22T00:00:00.000Z',
```

```
Freight: 34.82,
ShipName: 'LINO-Delicateses',
ShipAddress: 'Ave. 5 de Mayo Porlamar',
ShipCity: 'I. de Margarita',
ShipRegion: 'Nueva Esparta',
ShipCountry: 'Venezuela',
},

{
  OrderID: 10406,
  CustomerID: 'QUEEN',
  OrderDate: '1997-01-07T00:00:00.000Z',
  ShippedDate: '1997-01-13T00:00:00.000Z',
  Freight: 108.04,
  ShipName: 'Queen Cozinha',
  ShipAddress: 'Alameda dos Canários, 891',
  ShipCity: 'Sao Paulo',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10407,
  CustomerID: 'OTTIK',
  OrderDate: '1997-01-07T00:00:00.000Z',
  ShippedDate: '1997-01-30T00:00:00.000Z',
  Freight: 91.48,
  ShipName: 'Ottilies Käseladen',
  ShipAddress: 'Mehrheimerstr. 369',
  ShipCity: 'Köln',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10408,
  CustomerID: 'FOLIG',
  OrderDate: '1997-01-08T00:00:00.000Z',
  ShippedDate: '1997-01-14T00:00:00.000Z',
  Freight: 11.26,
  ShipName: 'Folies gourmandes',
  ShipAddress: '184, chaussée de Tournai',
  ShipCity: 'Lille',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10409,
  CustomerID: 'OCEAN',
  OrderDate: '1997-01-09T00:00:00.000Z',
  ShippedDate: '1997-01-14T00:00:00.000Z',
  Freight: 29.83,
  ShipName: 'Océano Atlántico Ltda.',
  ShipAddress: 'Ing. Gustavo Moncada 8585 Piso 20-A',
  ShipCity: 'Buenos Aires',
  ShipRegion: null,
```

```
    ShipCountry: 'Argentina',
  },

  {
    OrderID: 10410,
    CustomerID: 'BOTTM',
    OrderDate: '1997-01-10T00:00:00.000Z',
    ShippedDate: '1997-01-15T00:00:00.000Z',
    Freight: 2.4,
    ShipName: 'Bottom-Dollar Markets',
    ShipAddress: '23 Tsawassen Blvd.',
    ShipCity: 'Tsawassen',
    ShipRegion: 'BC',
    ShipCountry: 'Canada',
  },

  {
    OrderID: 10411,
    CustomerID: 'BOTTM',
    OrderDate: '1997-01-10T00:00:00.000Z',
    ShippedDate: '1997-01-21T00:00:00.000Z',
    Freight: 23.65,
    ShipName: 'Bottom-Dollar Markets',
    ShipAddress: '23 Tsawassen Blvd.',
    ShipCity: 'Tsawassen',
    ShipRegion: 'BC',
    ShipCountry: 'Canada',
  },

  {
    OrderID: 10412,
    CustomerID: 'WARTH',
    OrderDate: '1997-01-13T00:00:00.000Z',
    ShippedDate: '1997-01-15T00:00:00.000Z',
    Freight: 3.77,
    ShipName: 'Wartian Herkku',
    ShipAddress: 'Torikatu 38',
    ShipCity: 'Oulu',
    ShipRegion: null,
    ShipCountry: 'Finland',
  },

  {
    OrderID: 10413,
    CustomerID: 'LAMAI',
    OrderDate: '1997-01-14T00:00:00.000Z',
    ShippedDate: '1997-01-16T00:00:00.000Z',
    Freight: 95.66,
    ShipName: "La maison d'Asie",
    ShipAddress: '1 rue Alsace-Lorraine',
    ShipCity: 'Toulouse',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10414,
```

```
CustomerID: 'FAMIA',
OrderDate: '1997-01-14T00:00:00.000Z',
ShippedDate: '1997-01-17T00:00:00.000Z',
Freight: 21.48,
ShipName: 'Familia Arquibaldo',
ShipAddress: 'Rua Orós, 92',
ShipCity: 'Sao Paulo',
ShipRegion: 'SP',
ShipCountry: 'Brazil',
},

{
  OrderID: 10415,
  CustomerID: 'HUNGC',
  OrderDate: '1997-01-15T00:00:00.000Z',
  ShippedDate: '1997-01-24T00:00:00.000Z',
  Freight: 0.2,
  ShipName: 'Hungry Coyote Import Store',
  ShipAddress: 'City Center Plaza 516 Main St.',
  ShipCity: 'Elgin',
  ShipRegion: 'OR',
  ShipCountry: 'USA',
},

{
  OrderID: 10416,
  CustomerID: 'WARTH',
  OrderDate: '1997-01-16T00:00:00.000Z',
  ShippedDate: '1997-01-27T00:00:00.000Z',
  Freight: 22.72,
  ShipName: 'Wartian Herkku',
  ShipAddress: 'Torikatu 38',
  ShipCity: 'Oulu',
  ShipRegion: null,
  ShipCountry: 'Finland',
},

{
  OrderID: 10417,
  CustomerID: 'SIMOB',
  OrderDate: '1997-01-16T00:00:00.000Z',
  ShippedDate: '1997-01-28T00:00:00.000Z',
  Freight: 70.29,
  ShipName: 'Simons bistro',
  ShipAddress: 'Vinbæltet 34',
  ShipCity: 'Kobenhavn',
  ShipRegion: null,
  ShipCountry: 'Denmark',
},

{
  OrderID: 10418,
  CustomerID: 'QUICK',
  OrderDate: '1997-01-17T00:00:00.000Z',
  ShippedDate: '1997-01-24T00:00:00.000Z',
  Freight: 17.55,
  ShipName: 'QUICK-Stop',
```

```
    ShipAddress: 'Taucherstraße 10',
    ShipCity: 'Cunewalde',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10419,
    CustomerID: 'RICSU',
    OrderDate: '1997-01-20T00:00:00.000Z',
    ShippedDate: '1997-01-30T00:00:00.000Z',
    Freight: 137.35,
    ShipName: 'Richter Supermarkt',
    ShipAddress: 'Starenweg 5',
    ShipCity: 'Genève',
    ShipRegion: null,
    ShipCountry: 'Switzerland',
  },

  {
    OrderID: 10420,
    CustomerID: 'WELLI',
    OrderDate: '1997-01-21T00:00:00.000Z',
    ShippedDate: '1997-01-27T00:00:00.000Z',
    Freight: 44.12,
    ShipName: 'Wellington Importadora',
    ShipAddress: 'Rua do Mercado, 12',
    ShipCity: 'Resende',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10421,
    CustomerID: 'QUEDE',
    OrderDate: '1997-01-21T00:00:00.000Z',
    ShippedDate: '1997-01-27T00:00:00.000Z',
    Freight: 99.23,
    ShipName: 'Que Delícia',
    ShipAddress: 'Rua da Panificadora, 12',
    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10422,
    CustomerID: 'FRANS',
    OrderDate: '1997-01-22T00:00:00.000Z',
    ShippedDate: '1997-01-31T00:00:00.000Z',
    Freight: 3.02,
    ShipName: 'Franchi S.p.A.',
    ShipAddress: 'Via Monte Bianco 34',
    ShipCity: 'Torino',
    ShipRegion: null,
    ShipCountry: 'Italy',
  },
},
```

```
{
  OrderID: 10423,
  CustomerID: 'GOURL',
  OrderDate: '1997-01-23T00:00:00.000Z',
  ShippedDate: '1997-02-24T00:00:00.000Z',
  Freight: 24.5,
  ShipName: 'Gourmet Lanchonetes',
  ShipAddress: 'Av. Brasil, 442',
  ShipCity: 'Campinas',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10424,
  CustomerID: 'MEREP',
  OrderDate: '1997-01-23T00:00:00.000Z',
  ShippedDate: '1997-01-27T00:00:00.000Z',
  Freight: 370.61,
  ShipName: 'Mère Paillarde',
  ShipAddress: '43 rue St. Laurent',
  ShipCity: 'Montréal',
  ShipRegion: 'Québec',
  ShipCountry: 'Canada',
},

{
  OrderID: 10425,
  CustomerID: 'LAMAI',
  OrderDate: '1997-01-24T00:00:00.000Z',
  ShippedDate: '1997-02-14T00:00:00.000Z',
  Freight: 7.93,
  ShipName: "La maison d'Asie",
  ShipAddress: '1 rue Alsace-Lorraine',
  ShipCity: 'Toulouse',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10426,
  CustomerID: 'GALED',
  OrderDate: '1997-01-27T00:00:00.000Z',
  ShippedDate: '1997-02-06T00:00:00.000Z',
  Freight: 18.69,
  ShipName: 'Galería del gastronómo',
  ShipAddress: 'Rambla de Cataluña, 23',
  ShipCity: 'Barcelona',
  ShipRegion: null,
  ShipCountry: 'Spain',
},

{
  OrderID: 10427,
  CustomerID: 'PICCO',
  OrderDate: '1997-01-27T00:00:00.000Z',
```



```

    ShippedDate: '1997-03-03T00:00:00.000Z',
    Freight: 31.29,
    ShipName: 'Piccolo und mehr',
    ShipAddress: 'Geislweg 14',
    ShipCity: 'Salzburg',
    ShipRegion: null,
    ShipCountry: 'Austria',
  },

  {
    OrderID: 10428,
    CustomerID: 'REGGC',
    OrderDate: '1997-01-28T00:00:00.000Z',
    ShippedDate: '1997-02-04T00:00:00.000Z',
    Freight: 11.09,
    ShipName: 'Reggiani Caseifici',
    ShipAddress: 'Strada Provinciale 124',
    ShipCity: 'Reggio Emilia',
    ShipRegion: null,
    ShipCountry: 'Italy',
  },

  {
    OrderID: 10429,
    CustomerID: 'HUNGO',
    OrderDate: '1997-01-29T00:00:00.000Z',
    ShippedDate: '1997-02-07T00:00:00.000Z',
    Freight: 56.63,
    ShipName: 'Hungry Owl All-Night Grocers',
    ShipAddress: '8 Johnstown Road',
    ShipCity: 'Cork',
    ShipRegion: 'Co. Cork',
    ShipCountry: 'Ireland',
  },

  {
    OrderID: 10430,
    CustomerID: 'ERNSH',
    OrderDate: '1997-01-30T00:00:00.000Z',
    ShippedDate: '1997-02-03T00:00:00.000Z',
    Freight: 458.78,
    ShipName: 'Ernst Handel',
    ShipAddress: 'Kirchgasse 6',
    ShipCity: 'Graz',
    ShipRegion: null,
    ShipCountry: 'Austria',
  },

  {
    OrderID: 10431,
    CustomerID: 'BOTTM',
    OrderDate: '1997-01-30T00:00:00.000Z',
    ShippedDate: '1997-02-07T00:00:00.000Z',
    Freight: 44.17,
    ShipName: 'Bottom-Dollar Markets',
    ShipAddress: '23 Tsawassen Blvd.',
    ShipCity: 'Tsawassen',
  },

```

```
    ShipRegion: 'BC',
    ShipCountry: 'Canada',
  },

  {
    OrderID: 10432,
    CustomerID: 'SPLIR',
    OrderDate: '1997-01-31T00:00:00.000Z',
    ShippedDate: '1997-02-07T00:00:00.000Z',
    Freight: 4.34,
    ShipName: 'Split Rail Beer & Ale',
    ShipAddress: 'P.O. Box 555',
    ShipCity: 'Lander',
    ShipRegion: 'WY',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10433,
    CustomerID: 'PRINI',
    OrderDate: '1997-02-03T00:00:00.000Z',
    ShippedDate: '1997-03-04T00:00:00.000Z',
    Freight: 73.83,
    ShipName: 'Princesa Isabel Vinhos',
    ShipAddress: 'Estrada da saúde n. 58',
    ShipCity: 'Lisboa',
    ShipRegion: null,
    ShipCountry: 'Portugal',
  },

  {
    OrderID: 10434,
    CustomerID: 'FOLKO',
    OrderDate: '1997-02-03T00:00:00.000Z',
    ShippedDate: '1997-02-13T00:00:00.000Z',
    Freight: 17.92,
    ShipName: 'Folk och fä HB',
    ShipAddress: 'Åkergatan 24',
    ShipCity: 'Bräcke',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },

  {
    OrderID: 10435,
    CustomerID: 'CONSH',
    OrderDate: '1997-02-04T00:00:00.000Z',
    ShippedDate: '1997-02-07T00:00:00.000Z',
    Freight: 9.21,
    ShipName: 'Consolidated Holdings',
    ShipAddress: 'Berkeley Gardens 12 Brewery',
    ShipCity: 'London',
    ShipRegion: null,
    ShipCountry: 'UK',
  },

  {
```

```
OrderID: 10436,
CustomerID: 'BLONP',
OrderDate: '1997-02-05T00:00:00.000Z',
ShippedDate: '1997-02-11T00:00:00.000Z',
Freight: 156.66,
ShipName: 'Blondel père et fils',
ShipAddress: '24, place Kléber',
ShipCity: 'Strasbourg',
ShipRegion: null,
ShipCountry: 'France',
},

{
  OrderID: 10437,
  CustomerID: 'WARTH',
  OrderDate: '1997-02-05T00:00:00.000Z',
  ShippedDate: '1997-02-12T00:00:00.000Z',
  Freight: 19.97,
  ShipName: 'Wartian Herkku',
  ShipAddress: 'Torikatu 38',
  ShipCity: 'Oulu',
  ShipRegion: null,
  ShipCountry: 'Finland',
},

{
  OrderID: 10438,
  CustomerID: 'TOMSP',
  OrderDate: '1997-02-06T00:00:00.000Z',
  ShippedDate: '1997-02-14T00:00:00.000Z',
  Freight: 8.24,
  ShipName: 'Toms Spezialitäten',
  ShipAddress: 'Luisenstr. 48',
  ShipCity: 'Münster',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10439,
  CustomerID: 'MEREP',
  OrderDate: '1997-02-07T00:00:00.000Z',
  ShippedDate: '1997-02-10T00:00:00.000Z',
  Freight: 4.07,
  ShipName: 'Mère Paillarde',
  ShipAddress: '43 rue St. Laurent',
  ShipCity: 'Montréal',
  ShipRegion: 'Québec',
  ShipCountry: 'Canada',
},

{
  OrderID: 10440,
  CustomerID: 'SAVEA',
  OrderDate: '1997-02-10T00:00:00.000Z',
  ShippedDate: '1997-02-28T00:00:00.000Z',
  Freight: 86.53,
```

```
    ShipName: 'Save-a-lot Markets',
    ShipAddress: '187 Suffolk Ln.',
    ShipCity: 'Boise',
    ShipRegion: 'ID',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10441,
    CustomerID: 'OLDWO',
    OrderDate: '1997-02-10T00:00:00.000Z',
    ShippedDate: '1997-03-14T00:00:00.000Z',
    Freight: 73.02,
    ShipName: 'Old World Delicatessen',
    ShipAddress: '2743 Bering St.',
    ShipCity: 'Anchorage',
    ShipRegion: 'AK',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10442,
    CustomerID: 'ERNSH',
    OrderDate: '1997-02-11T00:00:00.000Z',
    ShippedDate: '1997-02-18T00:00:00.000Z',
    Freight: 47.94,
    ShipName: 'Ernst Handel',
    ShipAddress: 'Kirchgasse 6',
    ShipCity: 'Graz',
    ShipRegion: null,
    ShipCountry: 'Austria',
  },

  {
    OrderID: 10443,
    CustomerID: 'REGGC',
    OrderDate: '1997-02-12T00:00:00.000Z',
    ShippedDate: '1997-02-14T00:00:00.000Z',
    Freight: 13.95,
    ShipName: 'Reggiani Caseifici',
    ShipAddress: 'Strada Provinciale 124',
    ShipCity: 'Reggio Emilia',
    ShipRegion: null,
    ShipCountry: 'Italy',
  },

  {
    OrderID: 10444,
    CustomerID: 'BERGS',
    OrderDate: '1997-02-12T00:00:00.000Z',
    ShippedDate: '1997-02-21T00:00:00.000Z',
    Freight: 3.5,
    ShipName: 'Berglunds snabbköp',
    ShipAddress: 'Berguvsvägen 8',
    ShipCity: 'Luleå',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },
```

```
},  
  
{  
  OrderID: 10445,  
  CustomerID: 'BERGS',  
  OrderDate: '1997-02-13T00:00:00.000Z',  
  ShippedDate: '1997-02-20T00:00:00.000Z',  
  Freight: 9.3,  
  ShipName: 'Berglunds snabbköp',  
  ShipAddress: 'Berguvsvägen 8',  
  ShipCity: 'Luleå',  
  ShipRegion: null,  
  ShipCountry: 'Sweden',  
},  
  
{  
  OrderID: 10446,  
  CustomerID: 'TOMSP',  
  OrderDate: '1997-02-14T00:00:00.000Z',  
  ShippedDate: '1997-02-19T00:00:00.000Z',  
  Freight: 14.68,  
  ShipName: 'Toms Spezialitäten',  
  ShipAddress: 'Luisenstr. 48',  
  ShipCity: 'Münster',  
  ShipRegion: null,  
  ShipCountry: 'Germany',  
},  
  
{  
  OrderID: 10447,  
  CustomerID: 'RICAR',  
  OrderDate: '1997-02-14T00:00:00.000Z',  
  ShippedDate: '1997-03-07T00:00:00.000Z',  
  Freight: 68.66,  
  ShipName: 'Ricardo Adocicados',  
  ShipAddress: 'Av. Copacabana, 267',  
  ShipCity: 'Rio de Janeiro',  
  ShipRegion: 'RJ',  
  ShipCountry: 'Brazil',  
},  
  
{  
  OrderID: 10448,  
  CustomerID: 'RANCH',  
  OrderDate: '1997-02-17T00:00:00.000Z',  
  ShippedDate: '1997-02-24T00:00:00.000Z',  
  Freight: 38.82,  
  ShipName: 'Rancho grande',  
  ShipAddress: 'Av. del Libertador 900',  
  ShipCity: 'Buenos Aires',  
  ShipRegion: null,  
  ShipCountry: 'Argentina',  
},  
  
{  
  OrderID: 10449,  
  CustomerID: 'BLONP',
```

```
OrderDate: '1997-02-18T00:00:00.000Z',
ShippedDate: '1997-02-27T00:00:00.000Z',
Freight: 53.3,
ShipName: 'Blondel père et fils',
ShipAddress: '24, place Kléber',
ShipCity: 'Strasbourg',
ShipRegion: null,
ShipCountry: 'France',
},

{
  OrderID: 10450,
  CustomerID: 'VICTE',
  OrderDate: '1997-02-19T00:00:00.000Z',
  ShippedDate: '1997-03-11T00:00:00.000Z',
  Freight: 7.23,
  ShipName: 'Victuailles en stock',
  ShipAddress: '2, rue du Commerce',
  ShipCity: 'Lyon',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10451,
  CustomerID: 'QUICK',
  OrderDate: '1997-02-19T00:00:00.000Z',
  ShippedDate: '1997-03-12T00:00:00.000Z',
  Freight: 189.09,
  ShipName: 'QUICK-Stop',
  ShipAddress: 'Taucherstraße 10',
  ShipCity: 'Cunewalde',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10452,
  CustomerID: 'SAVEA',
  OrderDate: '1997-02-20T00:00:00.000Z',
  ShippedDate: '1997-02-26T00:00:00.000Z',
  Freight: 140.26,
  ShipName: 'Save-a-lot Markets',
  ShipAddress: '187 Suffolk Ln.',
  ShipCity: 'Boise',
  ShipRegion: 'ID',
  ShipCountry: 'USA',
},

{
  OrderID: 10453,
  CustomerID: 'AROUT',
  OrderDate: '1997-02-21T00:00:00.000Z',
  ShippedDate: '1997-02-26T00:00:00.000Z',
  Freight: 25.36,
  ShipName: 'Around the Horn',
  ShipAddress: 'Brook Farm Stratford St. Mary',
```

```
    ShipCity: 'Colchester',
    ShipRegion: 'Essex',
    ShipCountry: 'UK',
  },

  {
    OrderID: 10454,
    CustomerID: 'LAMAI',
    OrderDate: '1997-02-21T00:00:00.000Z',
    ShippedDate: '1997-02-25T00:00:00.000Z',
    Freight: 2.74,
    ShipName: "La maison d'Asie",
    ShipAddress: '1 rue Alsace-Lorraine',
    ShipCity: 'Toulouse',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10455,
    CustomerID: 'WARTH',
    OrderDate: '1997-02-24T00:00:00.000Z',
    ShippedDate: '1997-03-03T00:00:00.000Z',
    Freight: 180.45,
    ShipName: 'Wartian Herkku',
    ShipAddress: 'Torikatu 38',
    ShipCity: 'Oulu',
    ShipRegion: null,
    ShipCountry: 'Finland',
  },

  {
    OrderID: 10456,
    CustomerID: 'KOENE',
    OrderDate: '1997-02-25T00:00:00.000Z',
    ShippedDate: '1997-02-28T00:00:00.000Z',
    Freight: 8.12,
    ShipName: 'Königlich Essen',
    ShipAddress: 'Maubelstr. 90',
    ShipCity: 'Brandenburg',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10457,
    CustomerID: 'KOENE',
    OrderDate: '1997-02-25T00:00:00.000Z',
    ShippedDate: '1997-03-03T00:00:00.000Z',
    Freight: 11.57,
    ShipName: 'Königlich Essen',
    ShipAddress: 'Maubelstr. 90',
    ShipCity: 'Brandenburg',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },
```

```
{
  OrderID: 10458,
  CustomerID: 'SUPRD',
  OrderDate: '1997-02-26T00:00:00.000Z',
  ShippedDate: '1997-03-04T00:00:00.000Z',
  Freight: 147.06,
  ShipName: 'Suprêmes délices',
  ShipAddress: 'Boulevard Tirou, 255',
  ShipCity: 'Charleroi',
  ShipRegion: null,
  ShipCountry: 'Belgium',
},

{
  OrderID: 10459,
  CustomerID: 'VICTE',
  OrderDate: '1997-02-27T00:00:00.000Z',
  ShippedDate: '1997-02-28T00:00:00.000Z',
  Freight: 25.09,
  ShipName: 'Victuailles en stock',
  ShipAddress: '2, rue du Commerce',
  ShipCity: 'Lyon',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10460,
  CustomerID: 'FOLKO',
  OrderDate: '1997-02-28T00:00:00.000Z',
  ShippedDate: '1997-03-03T00:00:00.000Z',
  Freight: 16.27,
  ShipName: 'Folk och fä HB',
  ShipAddress: 'Åkergatan 24',
  ShipCity: 'Bräcke',
  ShipRegion: null,
  ShipCountry: 'Sweden',
},

{
  OrderID: 10461,
  CustomerID: 'LILAS',
  OrderDate: '1997-02-28T00:00:00.000Z',
  ShippedDate: '1997-03-05T00:00:00.000Z',
  Freight: 148.61,
  ShipName: 'LILA-Supermercado',
  ShipAddress: 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
  ShipCity: 'Barquisimeto',
  ShipRegion: 'Lara',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10462,
  CustomerID: 'CONSH',
  OrderDate: '1997-03-03T00:00:00.000Z',
  ShippedDate: '1997-03-18T00:00:00.000Z',
```



```
Freight: 6.17,
ShipName: 'Consolidated Holdings',
ShipAddress: 'Berkeley Gardens 12 Brewery',
ShipCity: 'London',
ShipRegion: null,
ShipCountry: 'UK',
},

{
  OrderID: 10463,
  CustomerID: 'SUPRD',
  OrderDate: '1997-03-04T00:00:00.000Z',
  ShippedDate: '1997-03-06T00:00:00.000Z',
  Freight: 14.78,
  ShipName: 'Suprêmes délices',
  ShipAddress: 'Boulevard Tirou, 255',
  ShipCity: 'Charleroi',
  ShipRegion: null,
  ShipCountry: 'Belgium',
},

{
  OrderID: 10464,
  CustomerID: 'FURIB',
  OrderDate: '1997-03-04T00:00:00.000Z',
  ShippedDate: '1997-03-14T00:00:00.000Z',
  Freight: 89,
  ShipName: 'Furia Bacalhau e Frutos do Mar',
  ShipAddress: 'Jardim das rosas n. 32',
  ShipCity: 'Lisboa',
  ShipRegion: null,
  ShipCountry: 'Portugal',
},

{
  OrderID: 10465,
  CustomerID: 'VAFFE',
  OrderDate: '1997-03-05T00:00:00.000Z',
  ShippedDate: '1997-03-14T00:00:00.000Z',
  Freight: 145.04,
  ShipName: 'Vaffeljernet',
  ShipAddress: 'Smagsloget 45',
  ShipCity: 'Århus',
  ShipRegion: null,
  ShipCountry: 'Denmark',
},

{
  OrderID: 10466,
  CustomerID: 'COMMI',
  OrderDate: '1997-03-06T00:00:00.000Z',
  ShippedDate: '1997-03-13T00:00:00.000Z',
  Freight: 11.93,
  ShipName: 'Comércio Mineiro',
  ShipAddress: 'Av. dos Lusíadas, 23',
  ShipCity: 'Sao Paulo',
  ShipRegion: 'SP',
```

```
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10467,
    CustomerID: 'MAGAA',
    OrderDate: '1997-03-06T00:00:00.000Z',
    ShippedDate: '1997-03-11T00:00:00.000Z',
    Freight: 4.93,
    ShipName: 'Magazzini Alimentari Riuniti',
    ShipAddress: 'Via Ludovico il Moro 22',
    ShipCity: 'Bergamo',
    ShipRegion: null,
    ShipCountry: 'Italy',
  },

  {
    OrderID: 10468,
    CustomerID: 'KOENE',
    OrderDate: '1997-03-07T00:00:00.000Z',
    ShippedDate: '1997-03-12T00:00:00.000Z',
    Freight: 44.12,
    ShipName: 'Königlich Essen',
    ShipAddress: 'Maubelstr. 90',
    ShipCity: 'Brandenburg',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10469,
    CustomerID: 'WHITC',
    OrderDate: '1997-03-10T00:00:00.000Z',
    ShippedDate: '1997-03-14T00:00:00.000Z',
    Freight: 60.18,
    ShipName: 'White Clover Markets',
    ShipAddress: '1029 - 12th Ave. S.',
    ShipCity: 'Seattle',
    ShipRegion: 'WA',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10470,
    CustomerID: 'BONAP',
    OrderDate: '1997-03-11T00:00:00.000Z',
    ShippedDate: '1997-03-14T00:00:00.000Z',
    Freight: 64.56,
    ShipName: 'Bon app',
    ShipAddress: '12, rue des Bouchers',
    ShipCity: 'Marseille',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10471,
```

```
CustomerID: 'BSBEV',
OrderDate: '1997-03-11T00:00:00.000Z',
ShippedDate: '1997-03-18T00:00:00.000Z',
Freight: 45.59,
ShipName: "B' Beverages",
ShipAddress: 'Fauntleroy Circus',
ShipCity: 'London',
ShipRegion: null,
ShipCountry: 'UK',
},

{
  OrderID: 10472,
  CustomerID: 'SEVES',
  OrderDate: '1997-03-12T00:00:00.000Z',
  ShippedDate: '1997-03-19T00:00:00.000Z',
  Freight: 4.2,
  ShipName: 'Seven Seas Imports',
  ShipAddress: '90 Wadhurst Rd.',
  ShipCity: 'London',
  ShipRegion: null,
  ShipCountry: 'UK',
},

{
  OrderID: 10473,
  CustomerID: 'ISLAT',
  OrderDate: '1997-03-13T00:00:00.000Z',
  ShippedDate: '1997-03-21T00:00:00.000Z',
  Freight: 16.37,
  ShipName: 'Island Trading',
  ShipAddress: 'Garden House Crowther Way',
  ShipCity: 'Cowes',
  ShipRegion: 'Isle of Wight',
  ShipCountry: 'UK',
},

{
  OrderID: 10474,
  CustomerID: 'PERIC',
  OrderDate: '1997-03-13T00:00:00.000Z',
  ShippedDate: '1997-03-21T00:00:00.000Z',
  Freight: 83.49,
  ShipName: 'Pericles Comidas clásicas',
  ShipAddress: 'Calle Dr. Jorge Cash 321',
  ShipCity: 'México D.F.',
  ShipRegion: null,
  ShipCountry: 'Mexico',
},

{
  OrderID: 10475,
  CustomerID: 'SUPRD',
  OrderDate: '1997-03-14T00:00:00.000Z',
  ShippedDate: '1997-04-04T00:00:00.000Z',
  Freight: 68.52,
  ShipName: 'Suprêmes délices',
```

```
    ShipAddress: 'Boulevard Tirou, 255',
    ShipCity: 'Charleroi',
    ShipRegion: null,
    ShipCountry: 'Belgium',
  },

  {
    OrderID: 10476,
    CustomerID: 'HILAA',
    OrderDate: '1997-03-17T00:00:00.000Z',
    ShippedDate: '1997-03-24T00:00:00.000Z',
    Freight: 4.41,
    ShipName: 'HILARION-Abastos',
    ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipCity: 'San Cristóbal',
    ShipRegion: 'Táchira',
    ShipCountry: 'Venezuela',
  },

  {
    OrderID: 10477,
    CustomerID: 'PRINI',
    OrderDate: '1997-03-17T00:00:00.000Z',
    ShippedDate: '1997-03-25T00:00:00.000Z',
    Freight: 13.02,
    ShipName: 'Princesa Isabel Vinhos',
    ShipAddress: 'Estrada da saúde n. 58',
    ShipCity: 'Lisboa',
    ShipRegion: null,
    ShipCountry: 'Portugal',
  },

  {
    OrderID: 10478,
    CustomerID: 'VICTE',
    OrderDate: '1997-03-18T00:00:00.000Z',
    ShippedDate: '1997-03-26T00:00:00.000Z',
    Freight: 4.81,
    ShipName: 'Victuailles en stock',
    ShipAddress: '2, rue du Commerce',
    ShipCity: 'Lyon',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10479,
    CustomerID: 'RATTC',
    OrderDate: '1997-03-19T00:00:00.000Z',
    ShippedDate: '1997-03-21T00:00:00.000Z',
    Freight: 708.95,
    ShipName: 'Rattlesnake Canyon Grocery',
    ShipAddress: '2817 Milton Dr.',
    ShipCity: 'Albuquerque',
    ShipRegion: 'NM',
    ShipCountry: 'USA',
  },
},
```

```
{
  OrderID: 10480,
  CustomerID: 'FOLIG',
  OrderDate: '1997-03-20T00:00:00.000Z',
  ShippedDate: '1997-03-24T00:00:00.000Z',
  Freight: 1.35,
  ShipName: 'Folies gourmandes',
  ShipAddress: '184, chaussée de Tournai',
  ShipCity: 'Lille',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10481,
  CustomerID: 'RICAR',
  OrderDate: '1997-03-20T00:00:00.000Z',
  ShippedDate: '1997-03-25T00:00:00.000Z',
  Freight: 64.33,
  ShipName: 'Ricardo Adocicados',
  ShipAddress: 'Av. Copacabana, 267',
  ShipCity: 'Rio de Janeiro',
  ShipRegion: 'RJ',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10482,
  CustomerID: 'LAZYK',
  OrderDate: '1997-03-21T00:00:00.000Z',
  ShippedDate: '1997-04-10T00:00:00.000Z',
  Freight: 7.48,
  ShipName: 'Lazy K Kountry Store',
  ShipAddress: '12 Orchestra Terrace',
  ShipCity: 'Walla Walla',
  ShipRegion: 'WA',
  ShipCountry: 'USA',
},

{
  OrderID: 10483,
  CustomerID: 'WHITC',
  OrderDate: '1997-03-24T00:00:00.000Z',
  ShippedDate: '1997-04-25T00:00:00.000Z',
  Freight: 15.28,
  ShipName: 'White Clover Markets',
  ShipAddress: '1029 - 12th Ave. S.',
  ShipCity: 'Seattle',
  ShipRegion: 'WA',
  ShipCountry: 'USA',
},

{
  OrderID: 10484,
  CustomerID: 'BSBEV',
  OrderDate: '1997-03-24T00:00:00.000Z',
```

```
ShippedDate: '1997-04-01T00:00:00.000Z',
Freight: 6.88,
ShipName: "B' Beverages",
ShipAddress: 'Fauntleroy Circus',
ShipCity: 'London',
ShipRegion: null,
ShipCountry: 'UK',
},

{
  OrderID: 10485,
  CustomerID: 'LINOD',
  OrderDate: '1997-03-25T00:00:00.000Z',
  ShippedDate: '1997-03-31T00:00:00.000Z',
  Freight: 64.45,
  ShipName: 'LINO-Delicateses',
  ShipAddress: 'Ave. 5 de Mayo Porlamar',
  ShipCity: 'I. de Margarita',
  ShipRegion: 'Nueva Esparta',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10486,
  CustomerID: 'HILAA',
  OrderDate: '1997-03-26T00:00:00.000Z',
  ShippedDate: '1997-04-02T00:00:00.000Z',
  Freight: 30.53,
  ShipName: 'HILARION-Abastos',
  ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
  ShipCity: 'San Cristóbal',
  ShipRegion: 'Táchira',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10487,
  CustomerID: 'QUEEN',
  OrderDate: '1997-03-26T00:00:00.000Z',
  ShippedDate: '1997-03-28T00:00:00.000Z',
  Freight: 71.07,
  ShipName: 'Queen Cozinha',
  ShipAddress: 'Alameda dos Canários, 891',
  ShipCity: 'Sao Paulo',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10488,
  CustomerID: 'FRANK',
  OrderDate: '1997-03-27T00:00:00.000Z',
  ShippedDate: '1997-04-02T00:00:00.000Z',
  Freight: 4.93,
  ShipName: 'Frankenversand',
  ShipAddress: 'Berliner Platz 43',
  ShipCity: 'München',
```

```
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10489,
    CustomerID: 'PICCO',
    OrderDate: '1997-03-28T00:00:00.000Z',
    ShippedDate: '1997-04-09T00:00:00.000Z',
    Freight: 5.29,
    ShipName: 'Piccolo und mehr',
    ShipAddress: 'Geislweg 14',
    ShipCity: 'Salzburg',
    ShipRegion: null,
    ShipCountry: 'Austria',
  },

  {
    OrderID: 10490,
    CustomerID: 'HILAA',
    OrderDate: '1997-03-31T00:00:00.000Z',
    ShippedDate: '1997-04-03T00:00:00.000Z',
    Freight: 210.19,
    ShipName: 'HILARION-Abastos',
    ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipCity: 'San Cristóbal',
    ShipRegion: 'Táchira',
    ShipCountry: 'Venezuela',
  },

  {
    OrderID: 10491,
    CustomerID: 'FURIB',
    OrderDate: '1997-03-31T00:00:00.000Z',
    ShippedDate: '1997-04-08T00:00:00.000Z',
    Freight: 16.96,
    ShipName: 'Furia Bacalhau e Frutos do Mar',
    ShipAddress: 'Jardim das rosas n. 32',
    ShipCity: 'Lisboa',
    ShipRegion: null,
    ShipCountry: 'Portugal',
  },

  {
    OrderID: 10492,
    CustomerID: 'BOTTM',
    OrderDate: '1997-04-01T00:00:00.000Z',
    ShippedDate: '1997-04-11T00:00:00.000Z',
    Freight: 62.89,
    ShipName: 'Bottom-Dollar Markets',
    ShipAddress: '23 Tsawassen Blvd.',
    ShipCity: 'Tsawassen',
    ShipRegion: 'BC',
    ShipCountry: 'Canada',
  },

  {
```

```
OrderID: 10493,
CustomerID: 'LAMAI',
OrderDate: '1997-04-02T00:00:00.000Z',
ShippedDate: '1997-04-10T00:00:00.000Z',
Freight: 10.64,
ShipName: "La maison d'Asie",
ShipAddress: '1 rue Alsace-Lorraine',
ShipCity: 'Toulouse',
ShipRegion: null,
ShipCountry: 'France',
},

{
  OrderID: 10494,
  CustomerID: 'COMMI',
  OrderDate: '1997-04-02T00:00:00.000Z',
  ShippedDate: '1997-04-09T00:00:00.000Z',
  Freight: 65.99,
  ShipName: 'Comércio Mineiro',
  ShipAddress: 'Av. dos Lusíadas, 23',
  ShipCity: 'Sao Paulo',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10495,
  CustomerID: 'LAUGB',
  OrderDate: '1997-04-03T00:00:00.000Z',
  ShippedDate: '1997-04-11T00:00:00.000Z',
  Freight: 4.65,
  ShipName: 'Laughing Bacchus Wine Cellars',
  ShipAddress: '2319 Elm St.',
  ShipCity: 'Vancouver',
  ShipRegion: 'BC',
  ShipCountry: 'Canada',
},

{
  OrderID: 10496,
  CustomerID: 'TRADH',
  OrderDate: '1997-04-04T00:00:00.000Z',
  ShippedDate: '1997-04-07T00:00:00.000Z',
  Freight: 46.77,
  ShipName: 'Tradição Hipermercados',
  ShipAddress: 'Av. Inês de Castro, 414',
  ShipCity: 'Sao Paulo',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10497,
  CustomerID: 'LEHMS',
  OrderDate: '1997-04-04T00:00:00.000Z',
  ShippedDate: '1997-04-07T00:00:00.000Z',
  Freight: 36.21,
```



```
    ShipName: 'Lehmanns Marktstand',
    ShipAddress: 'Magazinweg 7',
    ShipCity: 'Frankfurt a.M.',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10498,
    CustomerID: 'HILAA',
    OrderDate: '1997-04-07T00:00:00.000Z',
    ShippedDate: '1997-04-11T00:00:00.000Z',
    Freight: 29.75,
    ShipName: 'HILARION-Abastos',
    ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipCity: 'San Cristóbal',
    ShipRegion: 'Táchira',
    ShipCountry: 'Venezuela',
  },

  {
    OrderID: 10499,
    CustomerID: 'LILAS',
    OrderDate: '1997-04-08T00:00:00.000Z',
    ShippedDate: '1997-04-16T00:00:00.000Z',
    Freight: 102.02,
    ShipName: 'LILA-Supermercado',
    ShipAddress: 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    ShipCity: 'Barquisimeto',
    ShipRegion: 'Lara',
    ShipCountry: 'Venezuela',
  },

  {
    OrderID: 10500,
    CustomerID: 'LAMAI',
    OrderDate: '1997-04-09T00:00:00.000Z',
    ShippedDate: '1997-04-17T00:00:00.000Z',
    Freight: 42.68,
    ShipName: "La maison d'Asie",
    ShipAddress: '1 rue Alsace-Lorraine',
    ShipCity: 'Toulouse',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10501,
    CustomerID: 'BLAUS',
    OrderDate: '1997-04-09T00:00:00.000Z',
    ShippedDate: '1997-04-16T00:00:00.000Z',
    Freight: 8.85,
    ShipName: 'Blauer See Delikatessen',
    ShipAddress: 'Forsterstr. 57',
    ShipCity: 'Mannheim',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },
```

```
},  
  
{  
  OrderID: 10502,  
  CustomerID: 'PERIC',  
  OrderDate: '1997-04-10T00:00:00.000Z',  
  ShippedDate: '1997-04-29T00:00:00.000Z',  
  Freight: 69.32,  
  ShipName: 'Pericles Comidas clásicas',  
  ShipAddress: 'Calle Dr. Jorge Cash 321',  
  ShipCity: 'México D.F.',  
  ShipRegion: null,  
  ShipCountry: 'Mexico',  
},  
  
{  
  OrderID: 10503,  
  CustomerID: 'HUNGO',  
  OrderDate: '1997-04-11T00:00:00.000Z',  
  ShippedDate: '1997-04-16T00:00:00.000Z',  
  Freight: 16.74,  
  ShipName: 'Hungry Owl All-Night Grocers',  
  ShipAddress: '8 Johnstown Road',  
  ShipCity: 'Cork',  
  ShipRegion: 'Co. Cork',  
  ShipCountry: 'Ireland',  
},  
  
{  
  OrderID: 10504,  
  CustomerID: 'WHITC',  
  OrderDate: '1997-04-11T00:00:00.000Z',  
  ShippedDate: '1997-04-18T00:00:00.000Z',  
  Freight: 59.13,  
  ShipName: 'White Clover Markets',  
  ShipAddress: '1029 - 12th Ave. S.',  
  ShipCity: 'Seattle',  
  ShipRegion: 'WA',  
  ShipCountry: 'USA',  
},  
  
{  
  OrderID: 10505,  
  CustomerID: 'MEREP',  
  OrderDate: '1997-04-14T00:00:00.000Z',  
  ShippedDate: '1997-04-21T00:00:00.000Z',  
  Freight: 7.13,  
  ShipName: 'Mère Paillarde',  
  ShipAddress: '43 rue St. Laurent',  
  ShipCity: 'Montréal',  
  ShipRegion: 'Québec',  
  ShipCountry: 'Canada',  
},  
  
{  
  OrderID: 10506,  
  CustomerID: 'KOENE',
```

```
OrderDate: '1997-04-15T00:00:00.000Z',
ShippedDate: '1997-05-02T00:00:00.000Z',
Freight: 21.19,
ShipName: 'Königlich Essen',
ShipAddress: 'Maubelstr. 90',
ShipCity: 'Brandenburg',
ShipRegion: null,
ShipCountry: 'Germany',
},

{
  OrderID: 10507,
  CustomerID: 'ANTON',
  OrderDate: '1997-04-15T00:00:00.000Z',
  ShippedDate: '1997-04-22T00:00:00.000Z',
  Freight: 47.45,
  ShipName: 'Antonio Moreno Taquería',
  ShipAddress: 'Mataderos 2312',
  ShipCity: 'México D.F.',
  ShipRegion: null,
  ShipCountry: 'Mexico',
},

{
  OrderID: 10508,
  CustomerID: 'OTTIK',
  OrderDate: '1997-04-16T00:00:00.000Z',
  ShippedDate: '1997-05-13T00:00:00.000Z',
  Freight: 4.99,
  ShipName: 'Ottilies Käseladen',
  ShipAddress: 'Mehrheimerstr. 369',
  ShipCity: 'Köln',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10509,
  CustomerID: 'BLAUS',
  OrderDate: '1997-04-17T00:00:00.000Z',
  ShippedDate: '1997-04-29T00:00:00.000Z',
  Freight: 0.15,
  ShipName: 'Blauer See Delikatessen',
  ShipAddress: 'Forsterstr. 57',
  ShipCity: 'Mannheim',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10510,
  CustomerID: 'SAVEA',
  OrderDate: '1997-04-18T00:00:00.000Z',
  ShippedDate: '1997-04-28T00:00:00.000Z',
  Freight: 367.63,
  ShipName: 'Save-a-lot Markets',
  ShipAddress: '187 Suffolk Ln.',
```

```
    ShipCity: 'Boise',
    ShipRegion: 'ID',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10511,
    CustomerID: 'BONAP',
    OrderDate: '1997-04-18T00:00:00.000Z',
    ShippedDate: '1997-04-21T00:00:00.000Z',
    Freight: 350.64,
    ShipName: 'Bon app',
    ShipAddress: '12, rue des Bouchers',
    ShipCity: 'Marseille',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10512,
    CustomerID: 'FAMIA',
    OrderDate: '1997-04-21T00:00:00.000Z',
    ShippedDate: '1997-04-24T00:00:00.000Z',
    Freight: 3.53,
    ShipName: 'Familia Arquibaldo',
    ShipAddress: 'Rua Orós, 92',
    ShipCity: 'Sao Paulo',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10513,
    CustomerID: 'WANDK',
    OrderDate: '1997-04-22T00:00:00.000Z',
    ShippedDate: '1997-04-28T00:00:00.000Z',
    Freight: 105.65,
    ShipName: 'Die Wandernde Kuh',
    ShipAddress: 'Adenauerallee 900',
    ShipCity: 'Stuttgart',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10514,
    CustomerID: 'ERNSH',
    OrderDate: '1997-04-22T00:00:00.000Z',
    ShippedDate: '1997-05-16T00:00:00.000Z',
    Freight: 789.95,
    ShipName: 'Ernst Handel',
    ShipAddress: 'Kirchgasse 6',
    ShipCity: 'Graz',
    ShipRegion: null,
    ShipCountry: 'Austria',
  },
}
```

```
{
  OrderID: 10515,
  CustomerID: 'QUICK',
  OrderDate: '1997-04-23T00:00:00.000Z',
  ShippedDate: '1997-05-23T00:00:00.000Z',
  Freight: 204.47,
  ShipName: 'QUICK-Stop',
  ShipAddress: 'Taucherstraße 10',
  ShipCity: 'Cunewalde',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10516,
  CustomerID: 'HUNGO',
  OrderDate: '1997-04-24T00:00:00.000Z',
  ShippedDate: '1997-05-01T00:00:00.000Z',
  Freight: 62.78,
  ShipName: 'Hungry Owl All-Night Grocers',
  ShipAddress: '8 Johnstown Road',
  ShipCity: 'Cork',
  ShipRegion: 'Co. Cork',
  ShipCountry: 'Ireland',
},

{
  OrderID: 10517,
  CustomerID: 'NORTS',
  OrderDate: '1997-04-24T00:00:00.000Z',
  ShippedDate: '1997-04-29T00:00:00.000Z',
  Freight: 32.07,
  ShipName: 'North/South',
  ShipAddress: 'South House 300 Queensbridge',
  ShipCity: 'London',
  ShipRegion: null,
  ShipCountry: 'UK',
},

{
  OrderID: 10518,
  CustomerID: 'TORTU',
  OrderDate: '1997-04-25T00:00:00.000Z',
  ShippedDate: '1997-05-05T00:00:00.000Z',
  Freight: 218.15,
  ShipName: 'Tortuga Restaurante',
  ShipAddress: 'Avda. Azteca 123',
  ShipCity: 'México D.F.',
  ShipRegion: null,
  ShipCountry: 'Mexico',
},

{
  OrderID: 10519,
  CustomerID: 'CHOPS',
  OrderDate: '1997-04-28T00:00:00.000Z',
  ShippedDate: '1997-05-01T00:00:00.000Z',
```

```
Freight: 91.76,
ShipName: 'Chop-suey Chinese',
ShipAddress: 'Hauptstr. 31',
ShipCity: 'Bern',
ShipRegion: null,
ShipCountry: 'Switzerland',
},

{
  OrderID: 10520,
  CustomerID: 'SANTG',
  OrderDate: '1997-04-29T00:00:00.000Z',
  ShippedDate: '1997-05-01T00:00:00.000Z',
  Freight: 13.37,
  ShipName: 'Santé Gourmet',
  ShipAddress: 'Erling Skakkess gate 78',
  ShipCity: 'Stavern',
  ShipRegion: null,
  ShipCountry: 'Norway',
},

{
  OrderID: 10521,
  CustomerID: 'CACTU',
  OrderDate: '1997-04-29T00:00:00.000Z',
  ShippedDate: '1997-05-02T00:00:00.000Z',
  Freight: 17.22,
  ShipName: 'Cactus Comidas para llevar',
  ShipAddress: 'Cerrito 333',
  ShipCity: 'Buenos Aires',
  ShipRegion: null,
  ShipCountry: 'Argentina',
},

{
  OrderID: 10522,
  CustomerID: 'LEHMS',
  OrderDate: '1997-04-30T00:00:00.000Z',
  ShippedDate: '1997-05-06T00:00:00.000Z',
  Freight: 45.33,
  ShipName: 'Lehmanns Marktstand',
  ShipAddress: 'Magazinweg 7',
  ShipCity: 'Frankfurt a.M.',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10523,
  CustomerID: 'SEVES',
  OrderDate: '1997-05-01T00:00:00.000Z',
  ShippedDate: '1997-05-30T00:00:00.000Z',
  Freight: 77.63,
  ShipName: 'Seven Seas Imports',
  ShipAddress: '90 Wadhurst Rd.',
  ShipCity: 'London',
  ShipRegion: null,
```

```
    ShipCountry: 'UK',
  },

  {
    OrderID: 10524,
    CustomerID: 'BERGS',
    OrderDate: '1997-05-01T00:00:00.000Z',
    ShippedDate: '1997-05-07T00:00:00.000Z',
    Freight: 244.79,
    ShipName: 'Berglunds snabbköp',
    ShipAddress: 'Berguvsvägen 8',
    ShipCity: 'Luleå',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },

  {
    OrderID: 10525,
    CustomerID: 'BONAP',
    OrderDate: '1997-05-02T00:00:00.000Z',
    ShippedDate: '1997-05-23T00:00:00.000Z',
    Freight: 11.06,
    ShipName: 'Bon app',
    ShipAddress: '12, rue des Bouchers',
    ShipCity: 'Marseille',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10526,
    CustomerID: 'WARTH',
    OrderDate: '1997-05-05T00:00:00.000Z',
    ShippedDate: '1997-05-15T00:00:00.000Z',
    Freight: 58.59,
    ShipName: 'Wartian Herkku',
    ShipAddress: 'Torikatu 38',
    ShipCity: 'Oulu',
    ShipRegion: null,
    ShipCountry: 'Finland',
  },

  {
    OrderID: 10527,
    CustomerID: 'QUICK',
    OrderDate: '1997-05-05T00:00:00.000Z',
    ShippedDate: '1997-05-07T00:00:00.000Z',
    Freight: 41.9,
    ShipName: 'QUICK-Stop',
    ShipAddress: 'Taucherstraße 10',
    ShipCity: 'Cunewalde',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10528,
```

```
CustomerID: 'GREAL',
OrderDate: '1997-05-06T00:00:00.000Z',
ShippedDate: '1997-05-09T00:00:00.000Z',
Freight: 3.35,
ShipName: 'Great Lakes Food Market',
ShipAddress: '2732 Baker Blvd.',
ShipCity: 'Eugene',
ShipRegion: 'OR',
ShipCountry: 'USA',
},

{
  OrderID: 10529,
  CustomerID: 'MAISD',
  OrderDate: '1997-05-07T00:00:00.000Z',
  ShippedDate: '1997-05-09T00:00:00.000Z',
  Freight: 66.69,
  ShipName: 'Maison Dewey',
  ShipAddress: 'Rue Joseph-Bens 532',
  ShipCity: 'Bruxelles',
  ShipRegion: null,
  ShipCountry: 'Belgium',
},

{
  OrderID: 10530,
  CustomerID: 'PICCO',
  OrderDate: '1997-05-08T00:00:00.000Z',
  ShippedDate: '1997-05-12T00:00:00.000Z',
  Freight: 339.22,
  ShipName: 'Piccolo und mehr',
  ShipAddress: 'Geislweg 14',
  ShipCity: 'Salzburg',
  ShipRegion: null,
  ShipCountry: 'Austria',
},

{
  OrderID: 10531,
  CustomerID: 'OCEAN',
  OrderDate: '1997-05-08T00:00:00.000Z',
  ShippedDate: '1997-05-19T00:00:00.000Z',
  Freight: 8.12,
  ShipName: 'Océano Atlántico Ltda.',
  ShipAddress: 'Ing. Gustavo Moncada 8585 Piso 20-A',
  ShipCity: 'Buenos Aires',
  ShipRegion: null,
  ShipCountry: 'Argentina',
},

{
  OrderID: 10532,
  CustomerID: 'EASTC',
  OrderDate: '1997-05-09T00:00:00.000Z',
  ShippedDate: '1997-05-12T00:00:00.000Z',
  Freight: 74.46,
  ShipName: 'Eastern Connection',
```



```
    ShipAddress: '35 King George',
    ShipCity: 'London',
    ShipRegion: null,
    ShipCountry: 'UK',
  },

  {
    OrderID: 10533,
    CustomerID: 'FOLKO',
    OrderDate: '1997-05-12T00:00:00.000Z',
    ShippedDate: '1997-05-22T00:00:00.000Z',
    Freight: 188.04,
    ShipName: 'Folk och fä HB',
    ShipAddress: 'Åkergatan 24',
    ShipCity: 'Bräcke',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },

  {
    OrderID: 10534,
    CustomerID: 'LEHMS',
    OrderDate: '1997-05-12T00:00:00.000Z',
    ShippedDate: '1997-05-14T00:00:00.000Z',
    Freight: 27.94,
    ShipName: 'Lehmanns Marktstand',
    ShipAddress: 'Magazinweg 7',
    ShipCity: 'Frankfurt a.M.',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10535,
    CustomerID: 'ANTON',
    OrderDate: '1997-05-13T00:00:00.000Z',
    ShippedDate: '1997-05-21T00:00:00.000Z',
    Freight: 15.64,
    ShipName: 'Antonio Moreno Taquería',
    ShipAddress: 'Mataderos 2312',
    ShipCity: 'México D.F.',
    ShipRegion: null,
    ShipCountry: 'Mexico',
  },

  {
    OrderID: 10536,
    CustomerID: 'LEHMS',
    OrderDate: '1997-05-14T00:00:00.000Z',
    ShippedDate: '1997-06-06T00:00:00.000Z',
    Freight: 58.88,
    ShipName: 'Lehmanns Marktstand',
    ShipAddress: 'Magazinweg 7',
    ShipCity: 'Frankfurt a.M.',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },
},
```

```
{
  OrderID: 10537,
  CustomerID: 'RICSU',
  OrderDate: '1997-05-14T00:00:00.000Z',
  ShippedDate: '1997-05-19T00:00:00.000Z',
  Freight: 78.85,
  ShipName: 'Richter Supermarkt',
  ShipAddress: 'Starenweg 5',
  ShipCity: 'Genève',
  ShipRegion: null,
  ShipCountry: 'Switzerland',
},

{
  OrderID: 10538,
  CustomerID: 'BSBEV',
  OrderDate: '1997-05-15T00:00:00.000Z',
  ShippedDate: '1997-05-16T00:00:00.000Z',
  Freight: 4.87,
  ShipName: "B' Beverages",
  ShipAddress: 'Fauntleroy Circus',
  ShipCity: 'London',
  ShipRegion: null,
  ShipCountry: 'UK',
},

{
  OrderID: 10539,
  CustomerID: 'BSBEV',
  OrderDate: '1997-05-16T00:00:00.000Z',
  ShippedDate: '1997-05-23T00:00:00.000Z',
  Freight: 12.36,
  ShipName: "B' Beverages",
  ShipAddress: 'Fauntleroy Circus',
  ShipCity: 'London',
  ShipRegion: null,
  ShipCountry: 'UK',
},

{
  OrderID: 10540,
  CustomerID: 'QUICK',
  OrderDate: '1997-05-19T00:00:00.000Z',
  ShippedDate: '1997-06-13T00:00:00.000Z',
  Freight: 1007.64,
  ShipName: 'QUICK-Stop',
  ShipAddress: 'Taucherstraße 10',
  ShipCity: 'Cunewalde',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10541,
  CustomerID: 'HANAR',
  OrderDate: '1997-05-19T00:00:00.000Z',
```

```
ShippedDate: '1997-05-29T00:00:00.000Z',
Freight: 68.65,
ShipName: 'Hanari Carnes',
ShipAddress: 'Rua do Paço, 67',
ShipCity: 'Rio de Janeiro',
ShipRegion: 'RJ',
ShipCountry: 'Brazil',
},

{
  OrderID: 10542,
  CustomerID: 'KOENE',
  OrderDate: '1997-05-20T00:00:00.000Z',
  ShippedDate: '1997-05-26T00:00:00.000Z',
  Freight: 10.95,
  ShipName: 'Königlich Essen',
  ShipAddress: 'Maubelstr. 90',
  ShipCity: 'Brandenburg',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10543,
  CustomerID: 'LILAS',
  OrderDate: '1997-05-21T00:00:00.000Z',
  ShippedDate: '1997-05-23T00:00:00.000Z',
  Freight: 48.17,
  ShipName: 'LILA-Supermercado',
  ShipAddress: 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
  ShipCity: 'Barquisimeto',
  ShipRegion: 'Lara',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10544,
  CustomerID: 'LONEP',
  OrderDate: '1997-05-21T00:00:00.000Z',
  ShippedDate: '1997-05-30T00:00:00.000Z',
  Freight: 24.91,
  ShipName: 'Lonesome Pine Restaurant',
  ShipAddress: '89 Chiaroscuro Rd.',
  ShipCity: 'Portland',
  ShipRegion: 'OR',
  ShipCountry: 'USA',
},

{
  OrderID: 10545,
  CustomerID: 'LAZYK',
  OrderDate: '1997-05-22T00:00:00.000Z',
  ShippedDate: '1997-06-26T00:00:00.000Z',
  Freight: 11.92,
  ShipName: 'Lazy K Kountry Store',
  ShipAddress: '12 Orchestra Terrace',
  ShipCity: 'Walla Walla',
```

```
    ShipRegion: 'WA',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10546,
    CustomerID: 'VICTE',
    OrderDate: '1997-05-23T00:00:00.000Z',
    ShippedDate: '1997-05-27T00:00:00.000Z',
    Freight: 194.72,
    ShipName: 'Victuailles en stock',
    ShipAddress: '2, rue du Commerce',
    ShipCity: 'Lyon',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10547,
    CustomerID: 'SEVES',
    OrderDate: '1997-05-23T00:00:00.000Z',
    ShippedDate: '1997-06-02T00:00:00.000Z',
    Freight: 178.43,
    ShipName: 'Seven Seas Imports',
    ShipAddress: '90 Wadhurst Rd.',
    ShipCity: 'London',
    ShipRegion: null,
    ShipCountry: 'UK',
  },

  {
    OrderID: 10548,
    CustomerID: 'TOMSP',
    OrderDate: '1997-05-26T00:00:00.000Z',
    ShippedDate: '1997-06-02T00:00:00.000Z',
    Freight: 1.43,
    ShipName: 'Toms Spezialitäten',
    ShipAddress: 'Luisenstr. 48',
    ShipCity: 'Münster',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10549,
    CustomerID: 'QUICK',
    OrderDate: '1997-05-27T00:00:00.000Z',
    ShippedDate: '1997-05-30T00:00:00.000Z',
    Freight: 171.24,
    ShipName: 'QUICK-Stop',
    ShipAddress: 'Taucherstraße 10',
    ShipCity: 'Cunewalde',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
```

```
OrderID: 10550,
CustomerID: 'GODOS',
OrderDate: '1997-05-28T00:00:00.000Z',
ShippedDate: '1997-06-06T00:00:00.000Z',
Freight: 4.32,
ShipName: 'Godos Cocina Típica',
ShipAddress: 'C/ Romero, 33',
ShipCity: 'Sevilla',
ShipRegion: null,
ShipCountry: 'Spain',
},

{
  OrderID: 10551,
  CustomerID: 'FURIB',
  OrderDate: '1997-05-28T00:00:00.000Z',
  ShippedDate: '1997-06-06T00:00:00.000Z',
  Freight: 72.95,
  ShipName: 'Furia Bacalhau e Frutos do Mar',
  ShipAddress: 'Jardim das rosas n. 32',
  ShipCity: 'Lisboa',
  ShipRegion: null,
  ShipCountry: 'Portugal',
},

{
  OrderID: 10552,
  CustomerID: 'HILAA',
  OrderDate: '1997-05-29T00:00:00.000Z',
  ShippedDate: '1997-06-05T00:00:00.000Z',
  Freight: 83.22,
  ShipName: 'HILARION-Abastos',
  ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
  ShipCity: 'San Cristóbal',
  ShipRegion: 'Táchira',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10553,
  CustomerID: 'WARTH',
  OrderDate: '1997-05-30T00:00:00.000Z',
  ShippedDate: '1997-06-03T00:00:00.000Z',
  Freight: 149.49,
  ShipName: 'Wartian Herkku',
  ShipAddress: 'Torikatu 38',
  ShipCity: 'Oulu',
  ShipRegion: null,
  ShipCountry: 'Finland',
},

{
  OrderID: 10554,
  CustomerID: 'OTTIK',
  OrderDate: '1997-05-30T00:00:00.000Z',
  ShippedDate: '1997-06-05T00:00:00.000Z',
  Freight: 120.97,
```

```
    ShipName: 'Ottilies Käseladen',
    ShipAddress: 'Mehrheimerstr. 369',
    ShipCity: 'Köln',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10555,
    CustomerID: 'SAVEA',
    OrderDate: '1997-06-02T00:00:00.000Z',
    ShippedDate: '1997-06-04T00:00:00.000Z',
    Freight: 252.49,
    ShipName: 'Save-a-lot Markets',
    ShipAddress: '187 Suffolk Ln.',
    ShipCity: 'Boise',
    ShipRegion: 'ID',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10556,
    CustomerID: 'SIMOB',
    OrderDate: '1997-06-03T00:00:00.000Z',
    ShippedDate: '1997-06-13T00:00:00.000Z',
    Freight: 9.8,
    ShipName: 'Simons bistro',
    ShipAddress: 'Vinbæltet 34',
    ShipCity: 'Kobenhavn',
    ShipRegion: null,
    ShipCountry: 'Denmark',
  },

  {
    OrderID: 10557,
    CustomerID: 'LEHMS',
    OrderDate: '1997-06-03T00:00:00.000Z',
    ShippedDate: '1997-06-06T00:00:00.000Z',
    Freight: 96.72,
    ShipName: 'Lehmanns Marktstand',
    ShipAddress: 'Magazinweg 7',
    ShipCity: 'Frankfurt a.M.',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10558,
    CustomerID: 'AROUT',
    OrderDate: '1997-06-04T00:00:00.000Z',
    ShippedDate: '1997-06-10T00:00:00.000Z',
    Freight: 72.97,
    ShipName: 'Around the Horn',
    ShipAddress: 'Brook Farm Stratford St. Mary',
    ShipCity: 'Colchester',
    ShipRegion: 'Essex',
    ShipCountry: 'UK',
  },
```

```
},  
  
{  
  OrderID: 10559,  
  CustomerID: 'BLONP',  
  OrderDate: '1997-06-05T00:00:00.000Z',  
  ShippedDate: '1997-06-13T00:00:00.000Z',  
  Freight: 8.05,  
  ShipName: 'Blondel père et fils',  
  ShipAddress: '24, place Kléber',  
  ShipCity: 'Strasbourg',  
  ShipRegion: null,  
  ShipCountry: 'France',  
},  
  
{  
  OrderID: 10560,  
  CustomerID: 'FRANK',  
  OrderDate: '1997-06-06T00:00:00.000Z',  
  ShippedDate: '1997-06-09T00:00:00.000Z',  
  Freight: 36.65,  
  ShipName: 'Frankenversand',  
  ShipAddress: 'Berliner Platz 43',  
  ShipCity: 'München',  
  ShipRegion: null,  
  ShipCountry: 'Germany',  
},  
  
{  
  OrderID: 10561,  
  CustomerID: 'FOLKO',  
  OrderDate: '1997-06-06T00:00:00.000Z',  
  ShippedDate: '1997-06-09T00:00:00.000Z',  
  Freight: 242.21,  
  ShipName: 'Folk och fä HB',  
  ShipAddress: 'Åkergatan 24',  
  ShipCity: 'Bräcke',  
  ShipRegion: null,  
  ShipCountry: 'Sweden',  
},  
  
{  
  OrderID: 10562,  
  CustomerID: 'REGGC',  
  OrderDate: '1997-06-09T00:00:00.000Z',  
  ShippedDate: '1997-06-12T00:00:00.000Z',  
  Freight: 22.95,  
  ShipName: 'Reggiani Caseifici',  
  ShipAddress: 'Strada Provinciale 124',  
  ShipCity: 'Reggio Emilia',  
  ShipRegion: null,  
  ShipCountry: 'Italy',  
},  
  
{  
  OrderID: 10563,  
  CustomerID: 'RICAR',
```

```
OrderDate: '1997-06-10T00:00:00.000Z',
ShippedDate: '1997-06-24T00:00:00.000Z',
Freight: 60.43,
ShipName: 'Ricardo Adocicados',
ShipAddress: 'Av. Copacabana, 267',
ShipCity: 'Rio de Janeiro',
ShipRegion: 'RJ',
ShipCountry: 'Brazil',
},

{
  OrderID: 10564,
  CustomerID: 'RATTC',
  OrderDate: '1997-06-10T00:00:00.000Z',
  ShippedDate: '1997-06-16T00:00:00.000Z',
  Freight: 13.75,
  ShipName: 'Rattlesnake Canyon Grocery',
  ShipAddress: '2817 Milton Dr.',
  ShipCity: 'Albuquerque',
  ShipRegion: 'NM',
  ShipCountry: 'USA',
},

{
  OrderID: 10565,
  CustomerID: 'MEREP',
  OrderDate: '1997-06-11T00:00:00.000Z',
  ShippedDate: '1997-06-18T00:00:00.000Z',
  Freight: 7.15,
  ShipName: 'Mère Paillarde',
  ShipAddress: '43 rue St. Laurent',
  ShipCity: 'Montréal',
  ShipRegion: 'Québec',
  ShipCountry: 'Canada',
},

{
  OrderID: 10566,
  CustomerID: 'BLONP',
  OrderDate: '1997-06-12T00:00:00.000Z',
  ShippedDate: '1997-06-18T00:00:00.000Z',
  Freight: 88.4,
  ShipName: 'Blondel père et fils',
  ShipAddress: '24, place Kléber',
  ShipCity: 'Strasbourg',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10567,
  CustomerID: 'HUNGO',
  OrderDate: '1997-06-12T00:00:00.000Z',
  ShippedDate: '1997-06-17T00:00:00.000Z',
  Freight: 33.97,
  ShipName: 'Hungry Owl All-Night Grocers',
  ShipAddress: '8 Johnstown Road',
```



```
    ShipCity: 'Cork',
    ShipRegion: 'Co. Cork',
    ShipCountry: 'Ireland',
  },

  {
    OrderID: 10568,
    CustomerID: 'GALED',
    OrderDate: '1997-06-13T00:00:00.000Z',
    ShippedDate: '1997-07-09T00:00:00.000Z',
    Freight: 6.54,
    ShipName: 'Galería del gastronómo',
    ShipAddress: 'Rambla de Cataluña, 23',
    ShipCity: 'Barcelona',
    ShipRegion: null,
    ShipCountry: 'Spain',
  },

  {
    OrderID: 10569,
    CustomerID: 'RATTC',
    OrderDate: '1997-06-16T00:00:00.000Z',
    ShippedDate: '1997-07-11T00:00:00.000Z',
    Freight: 58.98,
    ShipName: 'Rattlesnake Canyon Grocery',
    ShipAddress: '2817 Milton Dr.',
    ShipCity: 'Albuquerque',
    ShipRegion: 'NM',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10570,
    CustomerID: 'MEREP',
    OrderDate: '1997-06-17T00:00:00.000Z',
    ShippedDate: '1997-06-19T00:00:00.000Z',
    Freight: 188.99,
    ShipName: 'Mère Paillarde',
    ShipAddress: '43 rue St. Laurent',
    ShipCity: 'Montréal',
    ShipRegion: 'Québec',
    ShipCountry: 'Canada',
  },

  {
    OrderID: 10571,
    CustomerID: 'ERNSH',
    OrderDate: '1997-06-17T00:00:00.000Z',
    ShippedDate: '1997-07-04T00:00:00.000Z',
    Freight: 26.06,
    ShipName: 'Ernst Handel',
    ShipAddress: 'Kirchgasse 6',
    ShipCity: 'Graz',
    ShipRegion: null,
    ShipCountry: 'Austria',
  },
}
```

```
{
  OrderID: 10572,
  CustomerID: 'BERGS',
  OrderDate: '1997-06-18T00:00:00.000Z',
  ShippedDate: '1997-06-25T00:00:00.000Z',
  Freight: 116.43,
  ShipName: 'Berglunds snabbköp',
  ShipAddress: 'Berguvsvägen 8',
  ShipCity: 'Luleå',
  ShipRegion: null,
  ShipCountry: 'Sweden',
},

{
  OrderID: 10573,
  CustomerID: 'ANTON',
  OrderDate: '1997-06-19T00:00:00.000Z',
  ShippedDate: '1997-06-20T00:00:00.000Z',
  Freight: 84.84,
  ShipName: 'Antonio Moreno Taquería',
  ShipAddress: 'Mataderos 2312',
  ShipCity: 'México D.F.',
  ShipRegion: null,
  ShipCountry: 'Mexico',
},

{
  OrderID: 10574,
  CustomerID: 'TRAIH',
  OrderDate: '1997-06-19T00:00:00.000Z',
  ShippedDate: '1997-06-30T00:00:00.000Z',
  Freight: 37.6,
  ShipName: "Trail' Head Gourmet Provisioners",
  ShipAddress: '722 DaVinci Blvd.',
  ShipCity: 'Kirkland',
  ShipRegion: 'WA',
  ShipCountry: 'USA',
},

{
  OrderID: 10575,
  CustomerID: 'MORGK',
  OrderDate: '1997-06-20T00:00:00.000Z',
  ShippedDate: '1997-06-30T00:00:00.000Z',
  Freight: 127.34,
  ShipName: 'Morgenstern Gesundkost',
  ShipAddress: 'Heerstr. 22',
  ShipCity: 'Leipzig',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10576,
  CustomerID: 'TORTU',
  OrderDate: '1997-06-23T00:00:00.000Z',
  ShippedDate: '1997-06-30T00:00:00.000Z',
```

```
Freight: 18.56,
ShipName: 'Tortuga Restaurante',
ShipAddress: 'Avda. Azteca 123',
ShipCity: 'México D.F.',
ShipRegion: null,
ShipCountry: 'Mexico',
},

{
  OrderID: 10577,
  CustomerID: 'TRAIH',
  OrderDate: '1997-06-23T00:00:00.000Z',
  ShippedDate: '1997-06-30T00:00:00.000Z',
  Freight: 25.41,
  ShipName: 'Trail Head Gourmet Provisioners',
  ShipAddress: '722 DaVinci Blvd.',
  ShipCity: 'Kirkland',
  ShipRegion: 'WA',
  ShipCountry: 'USA',
},

{
  OrderID: 10578,
  CustomerID: 'BSBEV',
  OrderDate: '1997-06-24T00:00:00.000Z',
  ShippedDate: '1997-07-25T00:00:00.000Z',
  Freight: 29.6,
  ShipName: 'B Beverages',
  ShipAddress: 'Fauntleroy Circus',
  ShipCity: 'London',
  ShipRegion: null,
  ShipCountry: 'UK',
},

{
  OrderID: 10579,
  CustomerID: 'LETSS',
  OrderDate: '1997-06-25T00:00:00.000Z',
  ShippedDate: '1997-07-04T00:00:00.000Z',
  Freight: 13.73,
  ShipName: 'Let Stop N Shop',
  ShipAddress: '87 Polk St. Suite 5',
  ShipCity: 'San Francisco',
  ShipRegion: 'CA',
  ShipCountry: 'USA',
},

{
  OrderID: 10580,
  CustomerID: 'OTTIK',
  OrderDate: '1997-06-26T00:00:00.000Z',
  ShippedDate: '1997-07-01T00:00:00.000Z',
  Freight: 75.89,
  ShipName: 'Ottilies Käseladen',
  ShipAddress: 'Mehrheimerstr. 369',
  ShipCity: 'Köln',
  ShipRegion: null,
```

```
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10581,
    CustomerID: 'FAMIA',
    OrderDate: '1997-06-26T00:00:00.000Z',
    ShippedDate: '1997-07-02T00:00:00.000Z',
    Freight: 3.01,
    ShipName: 'Familia Arquibaldo',
    ShipAddress: 'Rua Orós, 92',
    ShipCity: 'Sao Paulo',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10582,
    CustomerID: 'BLAUS',
    OrderDate: '1997-06-27T00:00:00.000Z',
    ShippedDate: '1997-07-14T00:00:00.000Z',
    Freight: 27.71,
    ShipName: 'Blauer See Delikatessen',
    ShipAddress: 'Forsterstr. 57',
    ShipCity: 'Mannheim',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10583,
    CustomerID: 'WARTH',
    OrderDate: '1997-06-30T00:00:00.000Z',
    ShippedDate: '1997-07-04T00:00:00.000Z',
    Freight: 7.28,
    ShipName: 'Wartian Herkku',
    ShipAddress: 'Torikatu 38',
    ShipCity: 'Oulu',
    ShipRegion: null,
    ShipCountry: 'Finland',
  },

  {
    OrderID: 10584,
    CustomerID: 'BLONP',
    OrderDate: '1997-06-30T00:00:00.000Z',
    ShippedDate: '1997-07-04T00:00:00.000Z',
    Freight: 59.14,
    ShipName: 'Blondel père et fils',
    ShipAddress: '24, place Kléber',
    ShipCity: 'Strasbourg',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10585,
```

```
CustomerID: 'WELLI',
OrderDate: '1997-07-01T00:00:00.000Z',
ShippedDate: '1997-07-10T00:00:00.000Z',
Freight: 13.41,
ShipName: 'Wellington Importadora',
ShipAddress: 'Rua do Mercado, 12',
ShipCity: 'Resende',
ShipRegion: 'SP',
ShipCountry: 'Brazil',
},

{
  OrderID: 10586,
  CustomerID: 'REGGC',
  OrderDate: '1997-07-02T00:00:00.000Z',
  ShippedDate: '1997-07-09T00:00:00.000Z',
  Freight: 0.48,
  ShipName: 'Reggiani Caseifici',
  ShipAddress: 'Strada Provinciale 124',
  ShipCity: 'Reggio Emilia',
  ShipRegion: null,
  ShipCountry: 'Italy',
},

{
  OrderID: 10587,
  CustomerID: 'QUEDE',
  OrderDate: '1997-07-02T00:00:00.000Z',
  ShippedDate: '1997-07-09T00:00:00.000Z',
  Freight: 62.52,
  ShipName: 'Que Delícia',
  ShipAddress: 'Rua da Panificadora, 12',
  ShipCity: 'Rio de Janeiro',
  ShipRegion: 'RJ',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10588,
  CustomerID: 'QUICK',
  OrderDate: '1997-07-03T00:00:00.000Z',
  ShippedDate: '1997-07-10T00:00:00.000Z',
  Freight: 194.67,
  ShipName: 'QUICK-Stop',
  ShipAddress: 'Taucherstraße 10',
  ShipCity: 'Cunewalde',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10589,
  CustomerID: 'GREAL',
  OrderDate: '1997-07-04T00:00:00.000Z',
  ShippedDate: '1997-07-14T00:00:00.000Z',
  Freight: 4.42,
  ShipName: 'Great Lakes Food Market',
```

```
    ShipAddress: '2732 Baker Blvd.',
    ShipCity: 'Eugene',
    ShipRegion: 'OR',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10590,
    CustomerID: 'MEREP',
    OrderDate: '1997-07-07T00:00:00.000Z',
    ShippedDate: '1997-07-14T00:00:00.000Z',
    Freight: 44.77,
    ShipName: 'Mère Paillarde',
    ShipAddress: '43 rue St. Laurent',
    ShipCity: 'Montréal',
    ShipRegion: 'Québec',
    ShipCountry: 'Canada',
  },

  {
    OrderID: 10591,
    CustomerID: 'VAFFE',
    OrderDate: '1997-07-07T00:00:00.000Z',
    ShippedDate: '1997-07-16T00:00:00.000Z',
    Freight: 55.92,
    ShipName: 'Vaffeljernet',
    ShipAddress: 'Smagsloget 45',
    ShipCity: 'Århus',
    ShipRegion: null,
    ShipCountry: 'Denmark',
  },

  {
    OrderID: 10592,
    CustomerID: 'LEHMS',
    OrderDate: '1997-07-08T00:00:00.000Z',
    ShippedDate: '1997-07-16T00:00:00.000Z',
    Freight: 32.1,
    ShipName: 'Lehmanns Marktstand',
    ShipAddress: 'Magazinweg 7',
    ShipCity: 'Frankfurt a.M.',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10593,
    CustomerID: 'LEHMS',
    OrderDate: '1997-07-09T00:00:00.000Z',
    ShippedDate: '1997-08-13T00:00:00.000Z',
    Freight: 174.2,
    ShipName: 'Lehmanns Marktstand',
    ShipAddress: 'Magazinweg 7',
    ShipCity: 'Frankfurt a.M.',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },
},
```

```
{
  OrderID: 10594,
  CustomerID: 'OLDWO',
  OrderDate: '1997-07-09T00:00:00.000Z',
  ShippedDate: '1997-07-16T00:00:00.000Z',
  Freight: 5.24,
  ShipName: 'Old World Delicatessen',
  ShipAddress: '2743 Bering St.',
  ShipCity: 'Anchorage',
  ShipRegion: 'AK',
  ShipCountry: 'USA',
},

{
  OrderID: 10595,
  CustomerID: 'ERNSH',
  OrderDate: '1997-07-10T00:00:00.000Z',
  ShippedDate: '1997-07-14T00:00:00.000Z',
  Freight: 96.78,
  ShipName: 'Ernst Handel',
  ShipAddress: 'Kirchgasse 6',
  ShipCity: 'Graz',
  ShipRegion: null,
  ShipCountry: 'Austria',
},

{
  OrderID: 10596,
  CustomerID: 'WHITC',
  OrderDate: '1997-07-11T00:00:00.000Z',
  ShippedDate: '1997-08-12T00:00:00.000Z',
  Freight: 16.34,
  ShipName: 'White Clover Markets',
  ShipAddress: '1029 - 12th Ave. S.',
  ShipCity: 'Seattle',
  ShipRegion: 'WA',
  ShipCountry: 'USA',
},

{
  OrderID: 10597,
  CustomerID: 'PICCO',
  OrderDate: '1997-07-11T00:00:00.000Z',
  ShippedDate: '1997-07-18T00:00:00.000Z',
  Freight: 35.12,
  ShipName: 'Piccolo und mehr',
  ShipAddress: 'Geislweg 14',
  ShipCity: 'Salzburg',
  ShipRegion: null,
  ShipCountry: 'Austria',
},

{
  OrderID: 10598,
  CustomerID: 'RATTC',
  OrderDate: '1997-07-14T00:00:00.000Z',
```

```
ShippedDate: '1997-07-18T00:00:00.000Z',
Freight: 44.42,
ShipName: 'Rattlesnake Canyon Grocery',
ShipAddress: '2817 Milton Dr.',
ShipCity: 'Albuquerque',
ShipRegion: 'NM',
ShipCountry: 'USA',
},

{
  OrderID: 10599,
  CustomerID: 'BSBEV',
  OrderDate: '1997-07-15T00:00:00.000Z',
  ShippedDate: '1997-07-21T00:00:00.000Z',
  Freight: 29.98,
  ShipName: 'B Beverages',
  ShipAddress: 'Fauntleroy Circus',
  ShipCity: 'London',
  ShipRegion: null,
  ShipCountry: 'UK',
},

{
  OrderID: 10600,
  CustomerID: 'HUNGC',
  OrderDate: '1997-07-16T00:00:00.000Z',
  ShippedDate: '1997-07-21T00:00:00.000Z',
  Freight: 45.13,
  ShipName: 'Hungry Coyote Import Store',
  ShipAddress: 'City Center Plaza 516 Main St.',
  ShipCity: 'Elgin',
  ShipRegion: 'OR',
  ShipCountry: 'USA',
},

{
  OrderID: 10601,
  CustomerID: 'HILAA',
  OrderDate: '1997-07-16T00:00:00.000Z',
  ShippedDate: '1997-07-22T00:00:00.000Z',
  Freight: 58.3,
  ShipName: 'HILARION-Abastos',
  ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
  ShipCity: 'San Cristóbal',
  ShipRegion: 'Táchira',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10602,
  CustomerID: 'VAFFE',
  OrderDate: '1997-07-17T00:00:00.000Z',
  ShippedDate: '1997-07-22T00:00:00.000Z',
  Freight: 2.92,
  ShipName: 'Vaffeljernet',
  ShipAddress: 'Smagsloget 45',
  ShipCity: 'Århus',
```



```
    ShipRegion: null,
    ShipCountry: 'Denmark',
  },

  {
    OrderID: 10603,
    CustomerID: 'SAVEA',
    OrderDate: '1997-07-18T00:00:00.000Z',
    ShippedDate: '1997-08-08T00:00:00.000Z',
    Freight: 48.77,
    ShipName: 'Save-a-lot Markets',
    ShipAddress: '187 Suffolk Ln.',
    ShipCity: 'Boise',
    ShipRegion: 'ID',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10604,
    CustomerID: 'FURIB',
    OrderDate: '1997-07-18T00:00:00.000Z',
    ShippedDate: '1997-07-29T00:00:00.000Z',
    Freight: 7.46,
    ShipName: 'Furia Bacalhau e Frutos do Mar',
    ShipAddress: 'Jardim das rosas n. 32',
    ShipCity: 'Lisboa',
    ShipRegion: null,
    ShipCountry: 'Portugal',
  },

  {
    OrderID: 10605,
    CustomerID: 'MEREP',
    OrderDate: '1997-07-21T00:00:00.000Z',
    ShippedDate: '1997-07-29T00:00:00.000Z',
    Freight: 379.13,
    ShipName: 'Mère Paillarde',
    ShipAddress: '43 rue St. Laurent',
    ShipCity: 'Montréal',
    ShipRegion: 'Québec',
    ShipCountry: 'Canada',
  },

  {
    OrderID: 10606,
    CustomerID: 'TRADH',
    OrderDate: '1997-07-22T00:00:00.000Z',
    ShippedDate: '1997-07-31T00:00:00.000Z',
    Freight: 79.4,
    ShipName: 'Tradiçao Hipermercados',
    ShipAddress: 'Av. Inês de Castro, 414',
    ShipCity: 'Sao Paulo',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },

  {
```

```
OrderID: 10607,
CustomerID: 'SAVEA',
OrderDate: '1997-07-22T00:00:00.000Z',
ShippedDate: '1997-07-25T00:00:00.000Z',
Freight: 200.24,
ShipName: 'Save-a-lot Markets',
ShipAddress: '187 Suffolk Ln.',
ShipCity: 'Boise',
ShipRegion: 'ID',
ShipCountry: 'USA',
},

{
  OrderID: 10608,
  CustomerID: 'TOMSP',
  OrderDate: '1997-07-23T00:00:00.000Z',
  ShippedDate: '1997-08-01T00:00:00.000Z',
  Freight: 27.79,
  ShipName: 'Toms Spezialitäten',
  ShipAddress: 'Luisenstr. 48',
  ShipCity: 'Münster',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10609,
  CustomerID: 'DUMON',
  OrderDate: '1997-07-24T00:00:00.000Z',
  ShippedDate: '1997-07-30T00:00:00.000Z',
  Freight: 1.85,
  ShipName: 'Du monde entier',
  ShipAddress: '67, rue des Cinquante Otages',
  ShipCity: 'Nantes',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10610,
  CustomerID: 'LAMAI',
  OrderDate: '1997-07-25T00:00:00.000Z',
  ShippedDate: '1997-08-06T00:00:00.000Z',
  Freight: 26.78,
  ShipName: 'La maison d'Asie',
  ShipAddress: '1 rue Alsace-Lorraine',
  ShipCity: 'Toulouse',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10611,
  CustomerID: 'WOLZA',
  OrderDate: '1997-07-25T00:00:00.000Z',
  ShippedDate: '1997-08-01T00:00:00.000Z',
  Freight: 80.65,
```

```
    ShipName: 'Wolski Zajazd',
    ShipAddress: 'ul. Filtrowa 68',
    ShipCity: 'Warszawa',
    ShipRegion: null,
    ShipCountry: 'Poland',
  },

  {
    OrderID: 10612,
    CustomerID: 'SAVEA',
    OrderDate: '1997-07-28T00:00:00.000Z',
    ShippedDate: '1997-08-01T00:00:00.000Z',
    Freight: 544.08,
    ShipName: 'Save-a-lot Markets',
    ShipAddress: '187 Suffolk Ln.',
    ShipCity: 'Boise',
    ShipRegion: 'ID',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10613,
    CustomerID: 'HILAA',
    OrderDate: '1997-07-29T00:00:00.000Z',
    ShippedDate: '1997-08-01T00:00:00.000Z',
    Freight: 8.11,
    ShipName: 'HILARION-Abastos',
    ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipCity: 'San Cristóbal',
    ShipRegion: 'Táchira',
    ShipCountry: 'Venezuela',
  },

  {
    OrderID: 10614,
    CustomerID: 'BLAUS',
    OrderDate: '1997-07-29T00:00:00.000Z',
    ShippedDate: '1997-08-01T00:00:00.000Z',
    Freight: 1.93,
    ShipName: 'Blauer See Delikatessen',
    ShipAddress: 'Forsterstr. 57',
    ShipCity: 'Mannheim',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10615,
    CustomerID: 'WILMK',
    OrderDate: '1997-07-30T00:00:00.000Z',
    ShippedDate: '1997-08-06T00:00:00.000Z',
    Freight: 0.75,
    ShipName: 'Wilman Kala',
    ShipAddress: 'Keskuskatu 45',
    ShipCity: 'Helsinki',
    ShipRegion: null,
    ShipCountry: 'Finland',
  },
```

```
},  
  
{  
  OrderID: 10616,  
  CustomerID: 'GREAL',  
  OrderDate: '1997-07-31T00:00:00.000Z',  
  ShippedDate: '1997-08-05T00:00:00.000Z',  
  Freight: 116.53,  
  ShipName: 'Great Lakes Food Market',  
  ShipAddress: '2732 Baker Blvd.',  
  ShipCity: 'Eugene',  
  ShipRegion: 'OR',  
  ShipCountry: 'USA',  
},  
  
{  
  OrderID: 10617,  
  CustomerID: 'GREAL',  
  OrderDate: '1997-07-31T00:00:00.000Z',  
  ShippedDate: '1997-08-04T00:00:00.000Z',  
  Freight: 18.53,  
  ShipName: 'Great Lakes Food Market',  
  ShipAddress: '2732 Baker Blvd.',  
  ShipCity: 'Eugene',  
  ShipRegion: 'OR',  
  ShipCountry: 'USA',  
},  
  
{  
  OrderID: 10618,  
  CustomerID: 'MEREP',  
  OrderDate: '1997-08-01T00:00:00.000Z',  
  ShippedDate: '1997-08-08T00:00:00.000Z',  
  Freight: 154.68,  
  ShipName: 'Mère Paillarde',  
  ShipAddress: '43 rue St. Laurent',  
  ShipCity: 'Montréal',  
  ShipRegion: 'Québec',  
  ShipCountry: 'Canada',  
},  
  
{  
  OrderID: 10619,  
  CustomerID: 'MEREP',  
  OrderDate: '1997-08-04T00:00:00.000Z',  
  ShippedDate: '1997-08-07T00:00:00.000Z',  
  Freight: 91.05,  
  ShipName: 'Mère Paillarde',  
  ShipAddress: '43 rue St. Laurent',  
  ShipCity: 'Montréal',  
  ShipRegion: 'Québec',  
  ShipCountry: 'Canada',  
},  
  
{  
  OrderID: 10620,  
  CustomerID: 'LAUGB',
```

```
OrderDate: '1997-08-05T00:00:00.000Z',
ShippedDate: '1997-08-14T00:00:00.000Z',
Freight: 0.94,
ShipName: 'Laughing Bacchus Wine Cellars',
ShipAddress: '2319 Elm St.',
ShipCity: 'Vancouver',
ShipRegion: 'BC',
ShipCountry: 'Canada',
},

{
  OrderID: 10621,
  CustomerID: 'ISLAT',
  OrderDate: '1997-08-05T00:00:00.000Z',
  ShippedDate: '1997-08-11T00:00:00.000Z',
  Freight: 23.73,
  ShipName: 'Island Trading',
  ShipAddress: 'Garden House Crowther Way',
  ShipCity: 'Cowes',
  ShipRegion: 'Isle of Wight',
  ShipCountry: 'UK',
},

{
  OrderID: 10622,
  CustomerID: 'RICAR',
  OrderDate: '1997-08-06T00:00:00.000Z',
  ShippedDate: '1997-08-11T00:00:00.000Z',
  Freight: 50.97,
  ShipName: 'Ricardo Adocicados',
  ShipAddress: 'Av. Copacabana, 267',
  ShipCity: 'Rio de Janeiro',
  ShipRegion: 'RJ',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10623,
  CustomerID: 'FRANK',
  OrderDate: '1997-08-07T00:00:00.000Z',
  ShippedDate: '1997-08-12T00:00:00.000Z',
  Freight: 97.18,
  ShipName: 'Frankenversand',
  ShipAddress: 'Berliner Platz 43',
  ShipCity: 'München',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10624,
  CustomerID: 'THECR',
  OrderDate: '1997-08-07T00:00:00.000Z',
  ShippedDate: '1997-08-19T00:00:00.000Z',
  Freight: 94.8,
  ShipName: 'The Cracker Box',
  ShipAddress: '55 Grizzly Peak Rd.',
```

```
    ShipCity: 'Butte',
    ShipRegion: 'MT',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10625,
    CustomerID: 'ANATR',
    OrderDate: '1997-08-08T00:00:00.000Z',
    ShippedDate: '1997-08-14T00:00:00.000Z',
    Freight: 43.9,
    ShipName: 'Ana Trujillo Emparedados y helados',
    ShipAddress: 'Avda. de la Constitución 2222',
    ShipCity: 'México D.F.',
    ShipRegion: null,
    ShipCountry: 'Mexico',
  },

  {
    OrderID: 10626,
    CustomerID: 'BERGS',
    OrderDate: '1997-08-11T00:00:00.000Z',
    ShippedDate: '1997-08-20T00:00:00.000Z',
    Freight: 138.69,
    ShipName: 'Berghlunds snabbköp',
    ShipAddress: 'Berguvsvägen 8',
    ShipCity: 'Luleå',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },

  {
    OrderID: 10627,
    CustomerID: 'SAVEA',
    OrderDate: '1997-08-11T00:00:00.000Z',
    ShippedDate: '1997-08-21T00:00:00.000Z',
    Freight: 107.46,
    ShipName: 'Save-a-lot Markets',
    ShipAddress: '187 Suffolk Ln.',
    ShipCity: 'Boise',
    ShipRegion: 'ID',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10628,
    CustomerID: 'BLONP',
    OrderDate: '1997-08-12T00:00:00.000Z',
    ShippedDate: '1997-08-20T00:00:00.000Z',
    Freight: 30.36,
    ShipName: 'Blondel père et fils',
    ShipAddress: '24, place Kléber',
    ShipCity: 'Strasbourg',
    ShipRegion: null,
    ShipCountry: 'France',
  },
```

```
{
  OrderID: 10629,
  CustomerID: 'GODOS',
  OrderDate: '1997-08-12T00:00:00.000Z',
  ShippedDate: '1997-08-20T00:00:00.000Z',
  Freight: 85.46,
  ShipName: 'Godos Cocina Típica',
  ShipAddress: 'C/ Romero, 33',
  ShipCity: 'Sevilla',
  ShipRegion: null,
  ShipCountry: 'Spain',
},

{
  OrderID: 10630,
  CustomerID: 'KOENE',
  OrderDate: '1997-08-13T00:00:00.000Z',
  ShippedDate: '1997-08-19T00:00:00.000Z',
  Freight: 32.35,
  ShipName: 'Königlich Essen',
  ShipAddress: 'Maubelstr. 90',
  ShipCity: 'Brandenburg',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10631,
  CustomerID: 'LAMAI',
  OrderDate: '1997-08-14T00:00:00.000Z',
  ShippedDate: '1997-08-15T00:00:00.000Z',
  Freight: 0.87,
  ShipName: "La maison d'Asie",
  ShipAddress: '1 rue Alsace-Lorraine',
  ShipCity: 'Toulouse',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10632,
  CustomerID: 'WANDK',
  OrderDate: '1997-08-14T00:00:00.000Z',
  ShippedDate: '1997-08-19T00:00:00.000Z',
  Freight: 41.38,
  ShipName: 'Die Wandernde Kuh',
  ShipAddress: 'Adenauerallee 900',
  ShipCity: 'Stuttgart',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10633,
  CustomerID: 'ERNSH',
  OrderDate: '1997-08-15T00:00:00.000Z',
  ShippedDate: '1997-08-18T00:00:00.000Z',
```

```
Freight: 477.9,
ShipName: 'Ernst Handel',
ShipAddress: 'Kirchgasse 6',
ShipCity: 'Graz',
ShipRegion: null,
ShipCountry: 'Austria',
},

{
  OrderID: 10634,
  CustomerID: 'FOLIG',
  OrderDate: '1997-08-15T00:00:00.000Z',
  ShippedDate: '1997-08-21T00:00:00.000Z',
  Freight: 487.38,
  ShipName: 'Folies gourmandes',
  ShipAddress: '184, chaussée de Tournai',
  ShipCity: 'Lille',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10635,
  CustomerID: 'MAGAA',
  OrderDate: '1997-08-18T00:00:00.000Z',
  ShippedDate: '1997-08-21T00:00:00.000Z',
  Freight: 47.46,
  ShipName: 'Magazzini Alimentari Riuniti',
  ShipAddress: 'Via Ludovico il Moro 22',
  ShipCity: 'Bergamo',
  ShipRegion: null,
  ShipCountry: 'Italy',
},

{
  OrderID: 10636,
  CustomerID: 'WARTH',
  OrderDate: '1997-08-19T00:00:00.000Z',
  ShippedDate: '1997-08-26T00:00:00.000Z',
  Freight: 1.15,
  ShipName: 'Wartian Herkku',
  ShipAddress: 'Torikatu 38',
  ShipCity: 'Oulu',
  ShipRegion: null,
  ShipCountry: 'Finland',
},

{
  OrderID: 10637,
  CustomerID: 'QUEEN',
  OrderDate: '1997-08-19T00:00:00.000Z',
  ShippedDate: '1997-08-26T00:00:00.000Z',
  Freight: 201.29,
  ShipName: 'Queen Cozinha',
  ShipAddress: 'Alameda dos Canários, 891',
  ShipCity: 'Sao Paulo',
  ShipRegion: 'SP',
```



```
    ShipCountry: 'Brazil',
  },
  {
    OrderID: 10638,
    CustomerID: 'LINOD',
    OrderDate: '1997-08-20T00:00:00.000Z',
    ShippedDate: '1997-09-01T00:00:00.000Z',
    Freight: 158.44,
    ShipName: 'LINO-Delicateses',
    ShipAddress: 'Ave. 5 de Mayo Porlamar',
    ShipCity: 'I. de Margarita',
    ShipRegion: 'Nueva Esparta',
    ShipCountry: 'Venezuela',
  },
  {
    OrderID: 10639,
    CustomerID: 'SANTG',
    OrderDate: '1997-08-20T00:00:00.000Z',
    ShippedDate: '1997-08-27T00:00:00.000Z',
    Freight: 38.64,
    ShipName: 'Santé Gourmet',
    ShipAddress: 'Erling Skakkes gate 78',
    ShipCity: 'Stavern',
    ShipRegion: null,
    ShipCountry: 'Norway',
  },
  {
    OrderID: 10640,
    CustomerID: 'WANDK',
    OrderDate: '1997-08-21T00:00:00.000Z',
    ShippedDate: '1997-08-28T00:00:00.000Z',
    Freight: 23.55,
    ShipName: 'Die Wandernde Kuh',
    ShipAddress: 'Adenauerallee 900',
    ShipCity: 'Stuttgart',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },
  {
    OrderID: 10641,
    CustomerID: 'HILAA',
    OrderDate: '1997-08-22T00:00:00.000Z',
    ShippedDate: '1997-08-26T00:00:00.000Z',
    Freight: 179.61,
    ShipName: 'HILARION-Abastos',
    ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipCity: 'San Cristóbal',
    ShipRegion: 'Táchira',
    ShipCountry: 'Venezuela',
  },
  {
    OrderID: 10642,
```

```
CustomerID: 'SIMOB',
OrderDate: '1997-08-22T00:00:00.000Z',
ShippedDate: '1997-09-05T00:00:00.000Z',
Freight: 41.89,
ShipName: 'Simons bistro',
ShipAddress: 'Vinbæltet 34',
ShipCity: 'Kobenhavn',
ShipRegion: null,
ShipCountry: 'Denmark',
},

{
  OrderID: 10643,
  CustomerID: 'ALFKI',
  OrderDate: '1997-08-25T00:00:00.000Z',
  ShippedDate: '1997-09-02T00:00:00.000Z',
  Freight: 29.46,
  ShipName: 'Alfreds Futterkiste',
  ShipAddress: 'Obere Str. 57',
  ShipCity: 'Berlin',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10644,
  CustomerID: 'WELLI',
  OrderDate: '1997-08-25T00:00:00.000Z',
  ShippedDate: '1997-09-01T00:00:00.000Z',
  Freight: 0.14,
  ShipName: 'Wellington Importadora',
  ShipAddress: 'Rua do Mercado, 12',
  ShipCity: 'Resende',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10645,
  CustomerID: 'HANAR',
  OrderDate: '1997-08-26T00:00:00.000Z',
  ShippedDate: '1997-09-02T00:00:00.000Z',
  Freight: 12.41,
  ShipName: 'Hanari Carnes',
  ShipAddress: 'Rua do Paço, 67',
  ShipCity: 'Rio de Janeiro',
  ShipRegion: 'RJ',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10646,
  CustomerID: 'HUNGO',
  OrderDate: '1997-08-27T00:00:00.000Z',
  ShippedDate: '1997-09-03T00:00:00.000Z',
  Freight: 142.33,
  ShipName: 'Hungry Owl All-Night Grocers',
```

```
    ShipAddress: '8 Johnstown Road',
    ShipCity: 'Cork',
    ShipRegion: 'Co. Cork',
    ShipCountry: 'Ireland',
  },

  {
    OrderID: 10647,
    CustomerID: 'QUEDE',
    OrderDate: '1997-08-27T00:00:00.000Z',
    ShippedDate: '1997-09-03T00:00:00.000Z',
    Freight: 45.54,
    ShipName: 'Que Delícia',
    ShipAddress: 'Rua da Panificadora, 12',
    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10648,
    CustomerID: 'RICAR',
    OrderDate: '1997-08-28T00:00:00.000Z',
    ShippedDate: '1997-09-09T00:00:00.000Z',
    Freight: 14.25,
    ShipName: 'Ricardo Adocicados',
    ShipAddress: 'Av. Copacabana, 267',
    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10649,
    CustomerID: 'MAISD',
    OrderDate: '1997-08-28T00:00:00.000Z',
    ShippedDate: '1997-08-29T00:00:00.000Z',
    Freight: 6.2,
    ShipName: 'Maison Dewey',
    ShipAddress: 'Rue Joseph-Bens 532',
    ShipCity: 'Bruxelles',
    ShipRegion: null,
    ShipCountry: 'Belgium',
  },

  {
    OrderID: 10650,
    CustomerID: 'FAMIA',
    OrderDate: '1997-08-29T00:00:00.000Z',
    ShippedDate: '1997-09-03T00:00:00.000Z',
    Freight: 176.81,
    ShipName: 'Familia Arquibaldo',
    ShipAddress: 'Rua Orós, 92',
    ShipCity: 'Sao Paulo',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },
},
```

```
{
  OrderID: 10651,
  CustomerID: 'WANDK',
  OrderDate: '1997-09-01T00:00:00.000Z',
  ShippedDate: '1997-09-11T00:00:00.000Z',
  Freight: 20.6,
  ShipName: 'Die Wandernde Kuh',
  ShipAddress: 'Adenauerallee 900',
  ShipCity: 'Stuttgart',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10652,
  CustomerID: 'GOURL',
  OrderDate: '1997-09-01T00:00:00.000Z',
  ShippedDate: '1997-09-08T00:00:00.000Z',
  Freight: 7.14,
  ShipName: 'Gourmet Lanchonetes',
  ShipAddress: 'Av. Brasil, 442',
  ShipCity: 'Campinas',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10653,
  CustomerID: 'FRANK',
  OrderDate: '1997-09-02T00:00:00.000Z',
  ShippedDate: '1997-09-19T00:00:00.000Z',
  Freight: 93.25,
  ShipName: 'Frankenversand',
  ShipAddress: 'Berliner Platz 43',
  ShipCity: 'München',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10654,
  CustomerID: 'BERGS',
  OrderDate: '1997-09-02T00:00:00.000Z',
  ShippedDate: '1997-09-11T00:00:00.000Z',
  Freight: 55.26,
  ShipName: 'Berglunds snabbköp',
  ShipAddress: 'Berguvsvägen 8',
  ShipCity: 'Luleå',
  ShipRegion: null,
  ShipCountry: 'Sweden',
},

{
  OrderID: 10655,
  CustomerID: 'REGGC',
  OrderDate: '1997-09-03T00:00:00.000Z',
```

```
ShippedDate: '1997-09-11T00:00:00.000Z',
Freight: 4.41,
ShipName: 'Reggiani Caseifici',
ShipAddress: 'Strada Provinciale 124',
ShipCity: 'Reggio Emilia',
ShipRegion: null,
ShipCountry: 'Italy',
},

{
  OrderID: 10656,
  CustomerID: 'GREAL',
  OrderDate: '1997-09-04T00:00:00.000Z',
  ShippedDate: '1997-09-10T00:00:00.000Z',
  Freight: 57.15,
  ShipName: 'Great Lakes Food Market',
  ShipAddress: '2732 Baker Blvd.',
  ShipCity: 'Eugene',
  ShipRegion: 'OR',
  ShipCountry: 'USA',
},

{
  OrderID: 10657,
  CustomerID: 'SAVEA',
  OrderDate: '1997-09-04T00:00:00.000Z',
  ShippedDate: '1997-09-15T00:00:00.000Z',
  Freight: 352.69,
  ShipName: 'Save-a-lot Markets',
  ShipAddress: '187 Suffolk Ln.',
  ShipCity: 'Boise',
  ShipRegion: 'ID',
  ShipCountry: 'USA',
},

{
  OrderID: 10658,
  CustomerID: 'QUICK',
  OrderDate: '1997-09-05T00:00:00.000Z',
  ShippedDate: '1997-09-08T00:00:00.000Z',
  Freight: 364.15,
  ShipName: 'QUICK-Stop',
  ShipAddress: 'Taucherstraße 10',
  ShipCity: 'Cunewalde',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10659,
  CustomerID: 'QUEEN',
  OrderDate: '1997-09-05T00:00:00.000Z',
  ShippedDate: '1997-09-10T00:00:00.000Z',
  Freight: 105.81,
  ShipName: 'Queen Cozinha',
  ShipAddress: 'Alameda dos Canários, 891',
  ShipCity: 'Sao Paulo',
```

```
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10660,
    CustomerID: 'HUNGC',
    OrderDate: '1997-09-08T00:00:00.000Z',
    ShippedDate: '1997-10-15T00:00:00.000Z',
    Freight: 111.29,
    ShipName: 'Hungry Coyote Import Store',
    ShipAddress: 'City Center Plaza 516 Main St.',
    ShipCity: 'Elgin',
    ShipRegion: 'OR',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10661,
    CustomerID: 'HUNGO',
    OrderDate: '1997-09-09T00:00:00.000Z',
    ShippedDate: '1997-09-15T00:00:00.000Z',
    Freight: 17.55,
    ShipName: 'Hungry Owl All-Night Grocers',
    ShipAddress: '8 Johnstown Road',
    ShipCity: 'Cork',
    ShipRegion: 'Co. Cork',
    ShipCountry: 'Ireland',
  },

  {
    OrderID: 10662,
    CustomerID: 'LONEP',
    OrderDate: '1997-09-09T00:00:00.000Z',
    ShippedDate: '1997-09-18T00:00:00.000Z',
    Freight: 1.28,
    ShipName: 'Lonesome Pine Restaurant',
    ShipAddress: '89 Chiaroscuro Rd.',
    ShipCity: 'Portland',
    ShipRegion: 'OR',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10663,
    CustomerID: 'BONAP',
    OrderDate: '1997-09-10T00:00:00.000Z',
    ShippedDate: '1997-10-03T00:00:00.000Z',
    Freight: 113.15,
    ShipName: 'Bon app',
    ShipAddress: '12, rue des Bouchers',
    ShipCity: 'Marseille',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
```

```
OrderID: 10664,
CustomerID: 'FURIB',
OrderDate: '1997-09-10T00:00:00.000Z',
ShippedDate: '1997-09-19T00:00:00.000Z',
Freight: 1.27,
ShipName: 'Furia Bacalhau e Frutos do Mar',
ShipAddress: 'Jardim das rosas n. 32',
ShipCity: 'Lisboa',
ShipRegion: null,
ShipCountry: 'Portugal',
},

{
  OrderID: 10665,
  CustomerID: 'LONEP',
  OrderDate: '1997-09-11T00:00:00.000Z',
  ShippedDate: '1997-09-17T00:00:00.000Z',
  Freight: 26.31,
  ShipName: 'Lonesome Pine Restaurant',
  ShipAddress: '89 Chiaroscuro Rd.',
  ShipCity: 'Portland',
  ShipRegion: 'OR',
  ShipCountry: 'USA',
},

{
  OrderID: 10666,
  CustomerID: 'RICSU',
  OrderDate: '1997-09-12T00:00:00.000Z',
  ShippedDate: '1997-09-22T00:00:00.000Z',
  Freight: 232.42,
  ShipName: 'Richter Supermarkt',
  ShipAddress: 'Starenweg 5',
  ShipCity: 'Genève',
  ShipRegion: null,
  ShipCountry: 'Switzerland',
},

{
  OrderID: 10667,
  CustomerID: 'ERNSH',
  OrderDate: '1997-09-12T00:00:00.000Z',
  ShippedDate: '1997-09-19T00:00:00.000Z',
  Freight: 78.09,
  ShipName: 'Ernst Handel',
  ShipAddress: 'Kirchgasse 6',
  ShipCity: 'Graz',
  ShipRegion: null,
  ShipCountry: 'Austria',
},

{
  OrderID: 10668,
  CustomerID: 'WANDK',
  OrderDate: '1997-09-15T00:00:00.000Z',
  ShippedDate: '1997-09-23T00:00:00.000Z',
  Freight: 47.22,
```

```
    ShipName: 'Die Wandernde Kuh',
    ShipAddress: 'Adenauerallee 900',
    ShipCity: 'Stuttgart',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10669,
    CustomerID: 'SIMOB',
    OrderDate: '1997-09-15T00:00:00.000Z',
    ShippedDate: '1997-09-22T00:00:00.000Z',
    Freight: 24.39,
    ShipName: 'Simons bistro',
    ShipAddress: 'Vinbæltet 34',
    ShipCity: 'Kobenhavn',
    ShipRegion: null,
    ShipCountry: 'Denmark',
  },

  {
    OrderID: 10670,
    CustomerID: 'FRANK',
    OrderDate: '1997-09-16T00:00:00.000Z',
    ShippedDate: '1997-09-18T00:00:00.000Z',
    Freight: 203.48,
    ShipName: 'Frankenversand',
    ShipAddress: 'Berliner Platz 43',
    ShipCity: 'München',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10671,
    CustomerID: 'FRANR',
    OrderDate: '1997-09-17T00:00:00.000Z',
    ShippedDate: '1997-09-24T00:00:00.000Z',
    Freight: 30.34,
    ShipName: 'France restauration',
    ShipAddress: '54, rue Royale',
    ShipCity: 'Nantes',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10672,
    CustomerID: 'BERGS',
    OrderDate: '1997-09-17T00:00:00.000Z',
    ShippedDate: '1997-09-26T00:00:00.000Z',
    Freight: 95.75,
    ShipName: 'Berglunds snabbköp',
    ShipAddress: 'Berguvsvägen 8',
    ShipCity: 'Luleå',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },
```



```
},  
  
{  
  OrderID: 10673,  
  CustomerID: 'WILMK',  
  OrderDate: '1997-09-18T00:00:00.000Z',  
  ShippedDate: '1997-09-19T00:00:00.000Z',  
  Freight: 22.76,  
  ShipName: 'Wilman Kala',  
  ShipAddress: 'Keskuskatu 45',  
  ShipCity: 'Helsinki',  
  ShipRegion: null,  
  ShipCountry: 'Finland',  
},  
  
{  
  OrderID: 10674,  
  CustomerID: 'ISLAT',  
  OrderDate: '1997-09-18T00:00:00.000Z',  
  ShippedDate: '1997-09-30T00:00:00.000Z',  
  Freight: 0.9,  
  ShipName: 'Island Trading',  
  ShipAddress: 'Garden House Crowther Way',  
  ShipCity: 'Cowes',  
  ShipRegion: 'Isle of Wight',  
  ShipCountry: 'UK',  
},  
  
{  
  OrderID: 10675,  
  CustomerID: 'FRANK',  
  OrderDate: '1997-09-19T00:00:00.000Z',  
  ShippedDate: '1997-09-23T00:00:00.000Z',  
  Freight: 31.85,  
  ShipName: 'Frankenversand',  
  ShipAddress: 'Berliner Platz 43',  
  ShipCity: 'München',  
  ShipRegion: null,  
  ShipCountry: 'Germany',  
},  
  
{  
  OrderID: 10676,  
  CustomerID: 'TORTU',  
  OrderDate: '1997-09-22T00:00:00.000Z',  
  ShippedDate: '1997-09-29T00:00:00.000Z',  
  Freight: 2.01,  
  ShipName: 'Tortuga Restaurante',  
  ShipAddress: 'Avda. Azteca 123',  
  ShipCity: 'México D.F.',  
  ShipRegion: null,  
  ShipCountry: 'Mexico',  
},  
  
{  
  OrderID: 10677,  
  CustomerID: 'ANTON',
```

```
OrderDate: '1997-09-22T00:00:00.000Z',
ShippedDate: '1997-09-26T00:00:00.000Z',
Freight: 4.03,
ShipName: 'Antonio Moreno Taquería',
ShipAddress: 'Mataderos 2312',
ShipCity: 'México D.F.',
ShipRegion: null,
ShipCountry: 'Mexico',
},

{
  OrderID: 10678,
  CustomerID: 'SAVEA',
  OrderDate: '1997-09-23T00:00:00.000Z',
  ShippedDate: '1997-10-16T00:00:00.000Z',
  Freight: 388.98,
  ShipName: 'Save-a-lot Markets',
  ShipAddress: '187 Suffolk Ln.',
  ShipCity: 'Boise',
  ShipRegion: 'ID',
  ShipCountry: 'USA',
},

{
  OrderID: 10679,
  CustomerID: 'BLONP',
  OrderDate: '1997-09-23T00:00:00.000Z',
  ShippedDate: '1997-09-30T00:00:00.000Z',
  Freight: 27.94,
  ShipName: 'Blondel père et fils',
  ShipAddress: '24, place Kléber',
  ShipCity: 'Strasbourg',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10680,
  CustomerID: 'OLDWO',
  OrderDate: '1997-09-24T00:00:00.000Z',
  ShippedDate: '1997-09-26T00:00:00.000Z',
  Freight: 26.61,
  ShipName: 'Old World Delicatessen',
  ShipAddress: '2743 Bering St.',
  ShipCity: 'Anchorage',
  ShipRegion: 'AK',
  ShipCountry: 'USA',
},

{
  OrderID: 10681,
  CustomerID: 'GREAL',
  OrderDate: '1997-09-25T00:00:00.000Z',
  ShippedDate: '1997-09-30T00:00:00.000Z',
  Freight: 76.13,
  ShipName: 'Great Lakes Food Market',
  ShipAddress: '2732 Baker Blvd.',
```

```
    ShipCity: 'Eugene',
    ShipRegion: 'OR',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10682,
    CustomerID: 'ANTON',
    OrderDate: '1997-09-25T00:00:00.000Z',
    ShippedDate: '1997-10-01T00:00:00.000Z',
    Freight: 36.13,
    ShipName: 'Antonio Moreno Taquería',
    ShipAddress: 'Mataderos 2312',
    ShipCity: 'México D.F.',
    ShipRegion: null,
    ShipCountry: 'Mexico',
  },

  {
    OrderID: 10683,
    CustomerID: 'DUMON',
    OrderDate: '1997-09-26T00:00:00.000Z',
    ShippedDate: '1997-10-01T00:00:00.000Z',
    Freight: 4.4,
    ShipName: 'Du monde entier',
    ShipAddress: '67, rue des Cinquante Otages',
    ShipCity: 'Nantes',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10684,
    CustomerID: 'OTTIK',
    OrderDate: '1997-09-26T00:00:00.000Z',
    ShippedDate: '1997-09-30T00:00:00.000Z',
    Freight: 145.63,
    ShipName: 'Ottilies Käseladen',
    ShipAddress: 'Mehrheimerstr. 369',
    ShipCity: 'Köln',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10685,
    CustomerID: 'GOURL',
    OrderDate: '1997-09-29T00:00:00.000Z',
    ShippedDate: '1997-10-03T00:00:00.000Z',
    Freight: 33.75,
    ShipName: 'Gourmet Lanchonetes',
    ShipAddress: 'Av. Brasil, 442',
    ShipCity: 'Campinas',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },
}
```

```
{
  OrderID: 10686,
  CustomerID: 'PICCO',
  OrderDate: '1997-09-30T00:00:00.000Z',
  ShippedDate: '1997-10-08T00:00:00.000Z',
  Freight: 96.5,
  ShipName: 'Piccolo und mehr',
  ShipAddress: 'Geislweg 14',
  ShipCity: 'Salzburg',
  ShipRegion: null,
  ShipCountry: 'Austria',
},

{
  OrderID: 10687,
  CustomerID: 'HUNGO',
  OrderDate: '1997-09-30T00:00:00.000Z',
  ShippedDate: '1997-10-30T00:00:00.000Z',
  Freight: 296.43,
  ShipName: 'Hungry Owl All-Night Grocers',
  ShipAddress: '8 Johnstown Road',
  ShipCity: 'Cork',
  ShipRegion: 'Co. Cork',
  ShipCountry: 'Ireland',
},

{
  OrderID: 10688,
  CustomerID: 'VAFFE',
  OrderDate: '1997-10-01T00:00:00.000Z',
  ShippedDate: '1997-10-07T00:00:00.000Z',
  Freight: 299.09,
  ShipName: 'Vaffeljernet',
  ShipAddress: 'Smagsloget 45',
  ShipCity: 'Århus',
  ShipRegion: null,
  ShipCountry: 'Denmark',
},

{
  OrderID: 10689,
  CustomerID: 'BERGS',
  OrderDate: '1997-10-01T00:00:00.000Z',
  ShippedDate: '1997-10-07T00:00:00.000Z',
  Freight: 13.42,
  ShipName: 'Berglunds snabbköp',
  ShipAddress: 'Berguvsvägen 8',
  ShipCity: 'Luleå',
  ShipRegion: null,
  ShipCountry: 'Sweden',
},

{
  OrderID: 10690,
  CustomerID: 'HANAR',
  OrderDate: '1997-10-02T00:00:00.000Z',
  ShippedDate: '1997-10-03T00:00:00.000Z',
```

```
Freight: 15.8,
ShipName: 'Hanari Carnes',
ShipAddress: 'Rua do Paço, 67',
ShipCity: 'Rio de Janeiro',
ShipRegion: 'RJ',
ShipCountry: 'Brazil',
},

{
  OrderID: 10691,
  CustomerID: 'QUICK',
  OrderDate: '1997-10-03T00:00:00.000Z',
  ShippedDate: '1997-10-22T00:00:00.000Z',
  Freight: 810.05,
  ShipName: 'QUICK-Stop',
  ShipAddress: 'Taucherstraße 10',
  ShipCity: 'Cunewalde',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10692,
  CustomerID: 'ALFKI',
  OrderDate: '1997-10-03T00:00:00.000Z',
  ShippedDate: '1997-10-13T00:00:00.000Z',
  Freight: 61.02,
  ShipName: 'Alfred Futterkiste',
  ShipAddress: 'Obere Str. 57',
  ShipCity: 'Berlin',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10693,
  CustomerID: 'WHITC',
  OrderDate: '1997-10-06T00:00:00.000Z',
  ShippedDate: '1997-10-10T00:00:00.000Z',
  Freight: 139.34,
  ShipName: 'White Clover Markets',
  ShipAddress: '1029 - 12th Ave. S.',
  ShipCity: 'Seattle',
  ShipRegion: 'WA',
  ShipCountry: 'USA',
},

{
  OrderID: 10694,
  CustomerID: 'QUICK',
  OrderDate: '1997-10-06T00:00:00.000Z',
  ShippedDate: '1997-10-09T00:00:00.000Z',
  Freight: 398.36,
  ShipName: 'QUICK-Stop',
  ShipAddress: 'Taucherstraße 10',
  ShipCity: 'Cunewalde',
  ShipRegion: null,
```

```
    ShipCountry: 'Germany',
  },
  {
    OrderID: 10695,
    CustomerID: 'WILMK',
    OrderDate: '1997-10-07T00:00:00.000Z',
    ShippedDate: '1997-10-14T00:00:00.000Z',
    Freight: 16.72,
    ShipName: 'Wilman Kala',
    ShipAddress: 'Keskuskatu 45',
    ShipCity: 'Helsinki',
    ShipRegion: null,
    ShipCountry: 'Finland',
  },
  {
    OrderID: 10696,
    CustomerID: 'WHITC',
    OrderDate: '1997-10-08T00:00:00.000Z',
    ShippedDate: '1997-10-14T00:00:00.000Z',
    Freight: 102.55,
    ShipName: 'White Clover Markets',
    ShipAddress: '1029 - 12th Ave. S.',
    ShipCity: 'Seattle',
    ShipRegion: 'WA',
    ShipCountry: 'USA',
  },
  {
    OrderID: 10697,
    CustomerID: 'LINOD',
    OrderDate: '1997-10-08T00:00:00.000Z',
    ShippedDate: '1997-10-14T00:00:00.000Z',
    Freight: 45.52,
    ShipName: 'LINO-Delicateses',
    ShipAddress: 'Ave. 5 de Mayo Porlamar',
    ShipCity: 'I. de Margarita',
    ShipRegion: 'Nueva Esparta',
    ShipCountry: 'Venezuela',
  },
  {
    OrderID: 10698,
    CustomerID: 'ERNSH',
    OrderDate: '1997-10-09T00:00:00.000Z',
    ShippedDate: '1997-10-17T00:00:00.000Z',
    Freight: 272.47,
    ShipName: 'Ernst Handel',
    ShipAddress: 'Kirchgasse 6',
    ShipCity: 'Graz',
    ShipRegion: null,
    ShipCountry: 'Austria',
  },
  {
    OrderID: 10699,
```

```
CustomerID: 'MORGK',
OrderDate: '1997-10-09T00:00:00.000Z',
ShippedDate: '1997-10-13T00:00:00.000Z',
Freight: 0.58,
ShipName: 'Morgenstern Gesundkost',
ShipAddress: 'Heerstr. 22',
ShipCity: 'Leipzig',
ShipRegion: null,
ShipCountry: 'Germany',
},

{
  OrderID: 10700,
  CustomerID: 'SAVEA',
  OrderDate: '1997-10-10T00:00:00.000Z',
  ShippedDate: '1997-10-16T00:00:00.000Z',
  Freight: 65.1,
  ShipName: 'Save-a-lot Markets',
  ShipAddress: '187 Suffolk Ln.',
  ShipCity: 'Boise',
  ShipRegion: 'ID',
  ShipCountry: 'USA',
},

{
  OrderID: 10701,
  CustomerID: 'HUNGO',
  OrderDate: '1997-10-13T00:00:00.000Z',
  ShippedDate: '1997-10-15T00:00:00.000Z',
  Freight: 220.31,
  ShipName: 'Hungry Owl All-Night Grocers',
  ShipAddress: '8 Johnstown Road',
  ShipCity: 'Cork',
  ShipRegion: 'Co. Cork',
  ShipCountry: 'Ireland',
},

{
  OrderID: 10702,
  CustomerID: 'ALFKI',
  OrderDate: '1997-10-13T00:00:00.000Z',
  ShippedDate: '1997-10-21T00:00:00.000Z',
  Freight: 23.94,
  ShipName: 'Alfred Futterkiste',
  ShipAddress: 'Obere Str. 57',
  ShipCity: 'Berlin',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10703,
  CustomerID: 'FOLKO',
  OrderDate: '1997-10-14T00:00:00.000Z',
  ShippedDate: '1997-10-20T00:00:00.000Z',
  Freight: 152.3,
  ShipName: 'Folk och fä HB',
```

```
    ShipAddress: 'Åkergatan 24',
    ShipCity: 'Bräcke',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },

  {
    OrderID: 10704,
    CustomerID: 'QUEEN',
    OrderDate: '1997-10-14T00:00:00.000Z',
    ShippedDate: '1997-11-07T00:00:00.000Z',
    Freight: 4.78,
    ShipName: 'Queen Cozinha',
    ShipAddress: 'Alameda dos Canários, 891',
    ShipCity: 'Sao Paulo',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10705,
    CustomerID: 'HILAA',
    OrderDate: '1997-10-15T00:00:00.000Z',
    ShippedDate: '1997-11-18T00:00:00.000Z',
    Freight: 3.52,
    ShipName: 'HILARION-Abastos',
    ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipCity: 'San Cristóbal',
    ShipRegion: 'Táchira',
    ShipCountry: 'Venezuela',
  },

  {
    OrderID: 10706,
    CustomerID: 'OLDWO',
    OrderDate: '1997-10-16T00:00:00.000Z',
    ShippedDate: '1997-10-21T00:00:00.000Z',
    Freight: 135.63,
    ShipName: 'Old World Delicatessen',
    ShipAddress: '2743 Bering St.',
    ShipCity: 'Anchorage',
    ShipRegion: 'AK',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10707,
    CustomerID: 'AROUT',
    OrderDate: '1997-10-16T00:00:00.000Z',
    ShippedDate: '1997-10-23T00:00:00.000Z',
    Freight: 21.74,
    ShipName: 'Around the Horn',
    ShipAddress: 'Brook Farm Stratford St. Mary',
    ShipCity: 'Colchester',
    ShipRegion: 'Essex',
    ShipCountry: 'UK',
  },
},
```



```
{
  OrderID: 10708,
  CustomerID: 'THEBI',
  OrderDate: '1997-10-17T00:00:00.000Z',
  ShippedDate: '1997-11-05T00:00:00.000Z',
  Freight: 2.96,
  ShipName: 'The Big Cheese',
  ShipAddress: '89 Jefferson Way Suite 2',
  ShipCity: 'Portland',
  ShipRegion: 'OR',
  ShipCountry: 'USA',
},

{
  OrderID: 10709,
  CustomerID: 'GOURL',
  OrderDate: '1997-10-17T00:00:00.000Z',
  ShippedDate: '1997-11-20T00:00:00.000Z',
  Freight: 210.8,
  ShipName: 'Gourmet Lanchonetes',
  ShipAddress: 'Av. Brasil, 442',
  ShipCity: 'Campinas',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10710,
  CustomerID: 'FRANS',
  OrderDate: '1997-10-20T00:00:00.000Z',
  ShippedDate: '1997-10-23T00:00:00.000Z',
  Freight: 4.98,
  ShipName: 'Franchi S.p.A.',
  ShipAddress: 'Via Monte Bianco 34',
  ShipCity: 'Torino',
  ShipRegion: null,
  ShipCountry: 'Italy',
},

{
  OrderID: 10711,
  CustomerID: 'SAVEA',
  OrderDate: '1997-10-21T00:00:00.000Z',
  ShippedDate: '1997-10-29T00:00:00.000Z',
  Freight: 52.41,
  ShipName: 'Save-a-lot Markets',
  ShipAddress: '187 Suffolk Ln.',
  ShipCity: 'Boise',
  ShipRegion: 'ID',
  ShipCountry: 'USA',
},

{
  OrderID: 10712,
  CustomerID: 'HUNGO',
  OrderDate: '1997-10-21T00:00:00.000Z',
```

```
ShippedDate: '1997-10-31T00:00:00.000Z',
Freight: 89.93,
ShipName: 'Hungry Owl All-Night Grocers',
ShipAddress: '8 Johnstown Road',
ShipCity: 'Cork',
ShipRegion: 'Co. Cork',
ShipCountry: 'Ireland',
},

{
  OrderID: 10713,
  CustomerID: 'SAVEA',
  OrderDate: '1997-10-22T00:00:00.000Z',
  ShippedDate: '1997-10-24T00:00:00.000Z',
  Freight: 167.05,
  ShipName: 'Save-a-lot Markets',
  ShipAddress: '187 Suffolk Ln.',
  ShipCity: 'Boise',
  ShipRegion: 'ID',
  ShipCountry: 'USA',
},

{
  OrderID: 10714,
  CustomerID: 'SAVEA',
  OrderDate: '1997-10-22T00:00:00.000Z',
  ShippedDate: '1997-10-27T00:00:00.000Z',
  Freight: 24.49,
  ShipName: 'Save-a-lot Markets',
  ShipAddress: '187 Suffolk Ln.',
  ShipCity: 'Boise',
  ShipRegion: 'ID',
  ShipCountry: 'USA',
},

{
  OrderID: 10715,
  CustomerID: 'BONAP',
  OrderDate: '1997-10-23T00:00:00.000Z',
  ShippedDate: '1997-10-29T00:00:00.000Z',
  Freight: 63.2,
  ShipName: 'Bon app',
  ShipAddress: '12, rue des Bouchers',
  ShipCity: 'Marseille',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10716,
  CustomerID: 'RANCH',
  OrderDate: '1997-10-24T00:00:00.000Z',
  ShippedDate: '1997-10-27T00:00:00.000Z',
  Freight: 22.57,
  ShipName: 'Rancho grande',
  ShipAddress: 'Av. del Libertador 900',
  ShipCity: 'Buenos Aires',
```

```
    ShipRegion: null,
    ShipCountry: 'Argentina',
  },

  {
    OrderID: 10717,
    CustomerID: 'FRANK',
    OrderDate: '1997-10-24T00:00:00.000Z',
    ShippedDate: '1997-10-29T00:00:00.000Z',
    Freight: 59.25,
    ShipName: 'Frankenversand',
    ShipAddress: 'Berliner Platz 43',
    ShipCity: 'München',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10718,
    CustomerID: 'KOENE',
    OrderDate: '1997-10-27T00:00:00.000Z',
    ShippedDate: '1997-10-29T00:00:00.000Z',
    Freight: 170.88,
    ShipName: 'Königlich Essen',
    ShipAddress: 'Maubelstr. 90',
    ShipCity: 'Brandenburg',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10719,
    CustomerID: 'LETSS',
    OrderDate: '1997-10-27T00:00:00.000Z',
    ShippedDate: '1997-11-05T00:00:00.000Z',
    Freight: 51.44,
    ShipName: "Let' Stop N Shop",
    ShipAddress: '87 Polk St. Suite 5',
    ShipCity: 'San Francisco',
    ShipRegion: 'CA',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10720,
    CustomerID: 'QUEDE',
    OrderDate: '1997-10-28T00:00:00.000Z',
    ShippedDate: '1997-11-05T00:00:00.000Z',
    Freight: 9.53,
    ShipName: 'Que Delícia',
    ShipAddress: 'Rua da Panificadora, 12',
    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    ShipCountry: 'Brazil',
  },

  {
```

```
OrderID: 10721,
CustomerID: 'QUICK',
OrderDate: '1997-10-29T00:00:00.000Z',
ShippedDate: '1997-10-31T00:00:00.000Z',
Freight: 48.92,
ShipName: 'QUICK-Stop',
ShipAddress: 'Taucherstraße 10',
ShipCity: 'Cunewalde',
ShipRegion: null,
ShipCountry: 'Germany',
},

{
  OrderID: 10722,
  CustomerID: 'SAVEA',
  OrderDate: '1997-10-29T00:00:00.000Z',
  ShippedDate: '1997-11-04T00:00:00.000Z',
  Freight: 74.58,
  ShipName: 'Save-a-lot Markets',
  ShipAddress: '187 Suffolk Ln.',
  ShipCity: 'Boise',
  ShipRegion: 'ID',
  ShipCountry: 'USA',
},

{
  OrderID: 10723,
  CustomerID: 'WHITC',
  OrderDate: '1997-10-30T00:00:00.000Z',
  ShippedDate: '1997-11-25T00:00:00.000Z',
  Freight: 21.72,
  ShipName: 'White Clover Markets',
  ShipAddress: '1029 - 12th Ave. S.',
  ShipCity: 'Seattle',
  ShipRegion: 'WA',
  ShipCountry: 'USA',
},

{
  OrderID: 10724,
  CustomerID: 'MEREP',
  OrderDate: '1997-10-30T00:00:00.000Z',
  ShippedDate: '1997-11-05T00:00:00.000Z',
  Freight: 57.75,
  ShipName: 'Mère Paillarde',
  ShipAddress: '43 rue St. Laurent',
  ShipCity: 'Montréal',
  ShipRegion: 'Québec',
  ShipCountry: 'Canada',
},

{
  OrderID: 10725,
  CustomerID: 'FAMIA',
  OrderDate: '1997-10-31T00:00:00.000Z',
  ShippedDate: '1997-11-05T00:00:00.000Z',
  Freight: 10.83,
```

```
ShipName: 'Familia Arquibaldo',
ShipAddress: 'Rua Orós, 92',
ShipCity: 'Sao Paulo',
ShipRegion: 'SP',
ShipCountry: 'Brazil',
},

{
  OrderID: 10726,
  CustomerID: 'EASTC',
  OrderDate: '1997-11-03T00:00:00.000Z',
  ShippedDate: '1997-12-05T00:00:00.000Z',
  Freight: 16.56,
  ShipName: 'Eastern Connection',
  ShipAddress: '35 King George',
  ShipCity: 'London',
  ShipRegion: null,
  ShipCountry: 'UK',
},

{
  OrderID: 10727,
  CustomerID: 'REGGC',
  OrderDate: '1997-11-03T00:00:00.000Z',
  ShippedDate: '1997-12-05T00:00:00.000Z',
  Freight: 89.9,
  ShipName: 'Reggiani Caseifici',
  ShipAddress: 'Strada Provinciale 124',
  ShipCity: 'Reggio Emilia',
  ShipRegion: null,
  ShipCountry: 'Italy',
},

{
  OrderID: 10728,
  CustomerID: 'QUEEN',
  OrderDate: '1997-11-04T00:00:00.000Z',
  ShippedDate: '1997-11-11T00:00:00.000Z',
  Freight: 58.33,
  ShipName: 'Queen Cozinha',
  ShipAddress: 'Alameda dos Canários, 891',
  ShipCity: 'Sao Paulo',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10729,
  CustomerID: 'LINOD',
  OrderDate: '1997-11-04T00:00:00.000Z',
  ShippedDate: '1997-11-14T00:00:00.000Z',
  Freight: 141.06,
  ShipName: 'LINO-Delicateses',
  ShipAddress: 'Ave. 5 de Mayo Porlamar',
  ShipCity: 'I. de Margarita',
  ShipRegion: 'Nueva Esparta',
  ShipCountry: 'Venezuela',
```

```
},  
  
{  
  OrderID: 10730,  
  CustomerID: 'BONAP',  
  OrderDate: '1997-11-05T00:00:00.000Z',  
  ShippedDate: '1997-11-14T00:00:00.000Z',  
  Freight: 20.12,  
  ShipName: 'Bon app',  
  ShipAddress: '12, rue des Bouchers',  
  ShipCity: 'Marseille',  
  ShipRegion: null,  
  ShipCountry: 'France',  
},  
  
{  
  OrderID: 10731,  
  CustomerID: 'CHOPS',  
  OrderDate: '1997-11-06T00:00:00.000Z',  
  ShippedDate: '1997-11-14T00:00:00.000Z',  
  Freight: 96.65,  
  ShipName: 'Chop-suey Chinese',  
  ShipAddress: 'Hauptstr. 31',  
  ShipCity: 'Bern',  
  ShipRegion: null,  
  ShipCountry: 'Switzerland',  
},  
  
{  
  OrderID: 10732,  
  CustomerID: 'BONAP',  
  OrderDate: '1997-11-06T00:00:00.000Z',  
  ShippedDate: '1997-11-07T00:00:00.000Z',  
  Freight: 16.97,  
  ShipName: 'Bon app',  
  ShipAddress: '12, rue des Bouchers',  
  ShipCity: 'Marseille',  
  ShipRegion: null,  
  ShipCountry: 'France',  
},  
  
{  
  OrderID: 10733,  
  CustomerID: 'BERGS',  
  OrderDate: '1997-11-07T00:00:00.000Z',  
  ShippedDate: '1997-11-10T00:00:00.000Z',  
  Freight: 110.11,  
  ShipName: 'Berglunds snabbköp',  
  ShipAddress: 'Berguvsvägen 8',  
  ShipCity: 'Luleå',  
  ShipRegion: null,  
  ShipCountry: 'Sweden',  
},  
  
{  
  OrderID: 10734,  
  CustomerID: 'GOURL',
```

```
OrderDate: '1997-11-07T00:00:00.000Z',
ShippedDate: '1997-11-12T00:00:00.000Z',
Freight: 1.63,
ShipName: 'Gourmet Lanchonetes',
ShipAddress: 'Av. Brasil, 442',
ShipCity: 'Campinas',
ShipRegion: 'SP',
ShipCountry: 'Brazil',
},

{
  OrderID: 10735,
  CustomerID: 'LETSS',
  OrderDate: '1997-11-10T00:00:00.000Z',
  ShippedDate: '1997-11-21T00:00:00.000Z',
  Freight: 45.97,
  ShipName: "Let' Stop N Shop",
  ShipAddress: '87 Polk St. Suite 5',
  ShipCity: 'San Francisco',
  ShipRegion: 'CA',
  ShipCountry: 'USA',
},

{
  OrderID: 10736,
  CustomerID: 'HUNGO',
  OrderDate: '1997-11-11T00:00:00.000Z',
  ShippedDate: '1997-11-21T00:00:00.000Z',
  Freight: 44.1,
  ShipName: 'Hungry Owl All-Night Grocers',
  ShipAddress: '8 Johnstown Road',
  ShipCity: 'Cork',
  ShipRegion: 'Co. Cork',
  ShipCountry: 'Ireland',
},

{
  OrderID: 10737,
  CustomerID: 'VINET',
  OrderDate: '1997-11-11T00:00:00.000Z',
  ShippedDate: '1997-11-18T00:00:00.000Z',
  Freight: 7.79,
  ShipName: 'Vins et alcools Chevalier',
  ShipAddress: "59 rue de l'Abbaye",
  ShipCity: 'Reims',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10738,
  CustomerID: 'SPECB',
  OrderDate: '1997-11-12T00:00:00.000Z',
  ShippedDate: '1997-11-18T00:00:00.000Z',
  Freight: 2.91,
  ShipName: 'Spécialités du monde',
  ShipAddress: '25, rue Lauriston',
```

```
    ShipCity: 'Paris',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10739,
    CustomerID: 'VINET',
    OrderDate: '1997-11-12T00:00:00.000Z',
    ShippedDate: '1997-11-17T00:00:00.000Z',
    Freight: 11.08,
    ShipName: 'Vins et alcools Chevalier',
    ShipAddress: '59 rue de l'Abbaye',
    ShipCity: 'Reims',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10740,
    CustomerID: 'WHITC',
    OrderDate: '1997-11-13T00:00:00.000Z',
    ShippedDate: '1997-11-25T00:00:00.000Z',
    Freight: 81.88,
    ShipName: 'White Clover Markets',
    ShipAddress: '1029 - 12th Ave. S.',
    ShipCity: 'Seattle',
    ShipRegion: 'WA',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10741,
    CustomerID: 'AROUT',
    OrderDate: '1997-11-14T00:00:00.000Z',
    ShippedDate: '1997-11-18T00:00:00.000Z',
    Freight: 10.96,
    ShipName: 'Around the Horn',
    ShipAddress: 'Brook Farm Stratford St. Mary',
    ShipCity: 'Colchester',
    ShipRegion: 'Essex',
    ShipCountry: 'UK',
  },

  {
    OrderID: 10742,
    CustomerID: 'BOTTM',
    OrderDate: '1997-11-14T00:00:00.000Z',
    ShippedDate: '1997-11-18T00:00:00.000Z',
    Freight: 243.73,
    ShipName: 'Bottom-Dollar Markets',
    ShipAddress: '23 Tsawassen Blvd.',
    ShipCity: 'Tsawassen',
    ShipRegion: 'BC',
    ShipCountry: 'Canada',
  },
```



```
{
  OrderID: 10743,
  CustomerID: 'AROUT',
  OrderDate: '1997-11-17T00:00:00.000Z',
  ShippedDate: '1997-11-21T00:00:00.000Z',
  Freight: 23.72,
  ShipName: 'Around the Horn',
  ShipAddress: 'Brook Farm Stratford St. Mary',
  ShipCity: 'Colchester',
  ShipRegion: 'Essex',
  ShipCountry: 'UK',
},

{
  OrderID: 10744,
  CustomerID: 'VAFFE',
  OrderDate: '1997-11-17T00:00:00.000Z',
  ShippedDate: '1997-11-24T00:00:00.000Z',
  Freight: 69.19,
  ShipName: 'Vaffeljernet',
  ShipAddress: 'Smagsloget 45',
  ShipCity: 'Århus',
  ShipRegion: null,
  ShipCountry: 'Denmark',
},

{
  OrderID: 10745,
  CustomerID: 'QUICK',
  OrderDate: '1997-11-18T00:00:00.000Z',
  ShippedDate: '1997-11-27T00:00:00.000Z',
  Freight: 3.52,
  ShipName: 'QUICK-Stop',
  ShipAddress: 'Taucherstraße 10',
  ShipCity: 'Cunewalde',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10746,
  CustomerID: 'CHOPS',
  OrderDate: '1997-11-19T00:00:00.000Z',
  ShippedDate: '1997-11-21T00:00:00.000Z',
  Freight: 31.43,
  ShipName: 'Chop-suey Chinese',
  ShipAddress: 'Hauptstr. 31',
  ShipCity: 'Bern',
  ShipRegion: null,
  ShipCountry: 'Switzerland',
},

{
  OrderID: 10747,
  CustomerID: 'PICCO',
  OrderDate: '1997-11-19T00:00:00.000Z',
  ShippedDate: '1997-11-26T00:00:00.000Z',
```

```
Freight: 117.33,
ShipName: 'Piccolo und mehr',
ShipAddress: 'Geislweg 14',
ShipCity: 'Salzburg',
ShipRegion: null,
ShipCountry: 'Austria',
},

{
  OrderID: 10748,
  CustomerID: 'SAVEA',
  OrderDate: '1997-11-20T00:00:00.000Z',
  ShippedDate: '1997-11-28T00:00:00.000Z',
  Freight: 232.55,
  ShipName: 'Save-a-lot Markets',
  ShipAddress: '187 Suffolk Ln.',
  ShipCity: 'Boise',
  ShipRegion: 'ID',
  ShipCountry: 'USA',
},

{
  OrderID: 10749,
  CustomerID: 'ISLAT',
  OrderDate: '1997-11-20T00:00:00.000Z',
  ShippedDate: '1997-12-19T00:00:00.000Z',
  Freight: 61.53,
  ShipName: 'Island Trading',
  ShipAddress: 'Garden House Crowther Way',
  ShipCity: 'Cowes',
  ShipRegion: 'Isle of Wight',
  ShipCountry: 'UK',
},

{
  OrderID: 10750,
  CustomerID: 'WARTH',
  OrderDate: '1997-11-21T00:00:00.000Z',
  ShippedDate: '1997-11-24T00:00:00.000Z',
  Freight: 79.3,
  ShipName: 'Wartian Herkku',
  ShipAddress: 'Torikatu 38',
  ShipCity: 'Oulu',
  ShipRegion: null,
  ShipCountry: 'Finland',
},

{
  OrderID: 10751,
  CustomerID: 'RICSU',
  OrderDate: '1997-11-24T00:00:00.000Z',
  ShippedDate: '1997-12-03T00:00:00.000Z',
  Freight: 130.79,
  ShipName: 'Richter Supermarkt',
  ShipAddress: 'Starenweg 5',
  ShipCity: 'Genève',
  ShipRegion: null,
```

```
    ShipCountry: 'Switzerland',
  },
  {
    OrderID: 10752,
    CustomerID: 'NORTS',
    OrderDate: '1997-11-24T00:00:00.000Z',
    ShippedDate: '1997-11-28T00:00:00.000Z',
    Freight: 1.39,
    ShipName: 'North/South',
    ShipAddress: 'South House 300 Queensbridge',
    ShipCity: 'London',
    ShipRegion: null,
    ShipCountry: 'UK',
  },
  {
    OrderID: 10753,
    CustomerID: 'FRANS',
    OrderDate: '1997-11-25T00:00:00.000Z',
    ShippedDate: '1997-11-27T00:00:00.000Z',
    Freight: 7.7,
    ShipName: 'Franchi S.p.A.',
    ShipAddress: 'Via Monte Bianco 34',
    ShipCity: 'Torino',
    ShipRegion: null,
    ShipCountry: 'Italy',
  },
  {
    OrderID: 10754,
    CustomerID: 'MAGAA',
    OrderDate: '1997-11-25T00:00:00.000Z',
    ShippedDate: '1997-11-27T00:00:00.000Z',
    Freight: 2.38,
    ShipName: 'Magazzini Alimentari Riuniti',
    ShipAddress: 'Via Ludovico il Moro 22',
    ShipCity: 'Bergamo',
    ShipRegion: null,
    ShipCountry: 'Italy',
  },
  {
    OrderID: 10755,
    CustomerID: 'BONAP',
    OrderDate: '1997-11-26T00:00:00.000Z',
    ShippedDate: '1997-11-28T00:00:00.000Z',
    Freight: 16.71,
    ShipName: 'Bon app',
    ShipAddress: '12, rue des Bouchers',
    ShipCity: 'Marseille',
    ShipRegion: null,
    ShipCountry: 'France',
  },
  {
    OrderID: 10756,
```

```
CustomerID: 'SPLIR',
OrderDate: '1997-11-27T00:00:00.000Z',
ShippedDate: '1997-12-02T00:00:00.000Z',
Freight: 73.21,
ShipName: 'Split Rail Beer & Ale',
ShipAddress: 'P.O. Box 555',
ShipCity: 'Lander',
ShipRegion: 'WY',
ShipCountry: 'USA',
},

{
  OrderID: 10757,
  CustomerID: 'SAVEA',
  OrderDate: '1997-11-27T00:00:00.000Z',
  ShippedDate: '1997-12-15T00:00:00.000Z',
  Freight: 8.19,
  ShipName: 'Save-a-lot Markets',
  ShipAddress: '187 Suffolk Ln.',
  ShipCity: 'Boise',
  ShipRegion: 'ID',
  ShipCountry: 'USA',
},

{
  OrderID: 10758,
  CustomerID: 'RICSU',
  OrderDate: '1997-11-28T00:00:00.000Z',
  ShippedDate: '1997-12-04T00:00:00.000Z',
  Freight: 138.17,
  ShipName: 'Richter Supermarkt',
  ShipAddress: 'Starenweg 5',
  ShipCity: 'Genève',
  ShipRegion: null,
  ShipCountry: 'Switzerland',
},

{
  OrderID: 10759,
  CustomerID: 'ANATR',
  OrderDate: '1997-11-28T00:00:00.000Z',
  ShippedDate: '1997-12-12T00:00:00.000Z',
  Freight: 11.99,
  ShipName: 'Ana Trujillo Emparedados y helados',
  ShipAddress: 'Avda. de la Constitución 2222',
  ShipCity: 'México D.F.',
  ShipRegion: null,
  ShipCountry: 'Mexico',
},

{
  OrderID: 10760,
  CustomerID: 'MAISD',
  OrderDate: '1997-12-01T00:00:00.000Z',
  ShippedDate: '1997-12-10T00:00:00.000Z',
  Freight: 155.64,
  ShipName: 'Maison Dewey',
```

```
    ShipAddress: 'Rue Joseph-Bens 532',
    ShipCity: 'Bruxelles',
    ShipRegion: null,
    ShipCountry: 'Belgium',
  },

  {
    OrderID: 10761,
    CustomerID: 'RATTC',
    OrderDate: '1997-12-02T00:00:00.000Z',
    ShippedDate: '1997-12-08T00:00:00.000Z',
    Freight: 18.66,
    ShipName: 'Rattlesnake Canyon Grocery',
    ShipAddress: '2817 Milton Dr.',
    ShipCity: 'Albuquerque',
    ShipRegion: 'NM',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10762,
    CustomerID: 'FOLKO',
    OrderDate: '1997-12-02T00:00:00.000Z',
    ShippedDate: '1997-12-09T00:00:00.000Z',
    Freight: 328.74,
    ShipName: 'Folk och fä HB',
    ShipAddress: 'Åkergatan 24',
    ShipCity: 'Bräcke',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },

  {
    OrderID: 10763,
    CustomerID: 'FOLIG',
    OrderDate: '1997-12-03T00:00:00.000Z',
    ShippedDate: '1997-12-08T00:00:00.000Z',
    Freight: 37.35,
    ShipName: 'Folies gourmandes',
    ShipAddress: '184, chaussée de Tournai',
    ShipCity: 'Lille',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10764,
    CustomerID: 'ERNSH',
    OrderDate: '1997-12-03T00:00:00.000Z',
    ShippedDate: '1997-12-08T00:00:00.000Z',
    Freight: 145.45,
    ShipName: 'Ernst Handel',
    ShipAddress: 'Kirchgasse 6',
    ShipCity: 'Graz',
    ShipRegion: null,
    ShipCountry: 'Austria',
  },
},
```

```
{
  OrderID: 10765,
  CustomerID: 'QUICK',
  OrderDate: '1997-12-04T00:00:00.000Z',
  ShippedDate: '1997-12-09T00:00:00.000Z',
  Freight: 42.74,
  ShipName: 'QUICK-Stop',
  ShipAddress: 'Taucherstraße 10',
  ShipCity: 'Cunewalde',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10766,
  CustomerID: 'OTTIK',
  OrderDate: '1997-12-05T00:00:00.000Z',
  ShippedDate: '1997-12-09T00:00:00.000Z',
  Freight: 157.55,
  ShipName: 'Ottilies Käseladen',
  ShipAddress: 'Mehrheimerstr. 369',
  ShipCity: 'Köln',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10767,
  CustomerID: 'SUPRD',
  OrderDate: '1997-12-05T00:00:00.000Z',
  ShippedDate: '1997-12-15T00:00:00.000Z',
  Freight: 1.59,
  ShipName: 'Suprêmes délices',
  ShipAddress: 'Boulevard Tirou, 255',
  ShipCity: 'Charleroi',
  ShipRegion: null,
  ShipCountry: 'Belgium',
},

{
  OrderID: 10768,
  CustomerID: 'AROUT',
  OrderDate: '1997-12-08T00:00:00.000Z',
  ShippedDate: '1997-12-15T00:00:00.000Z',
  Freight: 146.32,
  ShipName: 'Around the Horn',
  ShipAddress: 'Brook Farm Stratford St. Mary',
  ShipCity: 'Colchester',
  ShipRegion: 'Essex',
  ShipCountry: 'UK',
},

{
  OrderID: 10769,
  CustomerID: 'VAFFE',
  OrderDate: '1997-12-08T00:00:00.000Z',
```

```
ShippedDate: '1997-12-12T00:00:00.000Z',
Freight: 65.06,
ShipName: 'Vaffeljernet',
ShipAddress: 'Smagsloget 45',
ShipCity: 'Århus',
ShipRegion: null,
ShipCountry: 'Denmark',
},

{
  OrderID: 10770,
  CustomerID: 'HANAR',
  OrderDate: '1997-12-09T00:00:00.000Z',
  ShippedDate: '1997-12-17T00:00:00.000Z',
  Freight: 5.32,
  ShipName: 'Hanari Carnes',
  ShipAddress: 'Rua do Paço, 67',
  ShipCity: 'Rio de Janeiro',
  ShipRegion: 'RJ',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10771,
  CustomerID: 'ERNSH',
  OrderDate: '1997-12-10T00:00:00.000Z',
  ShippedDate: '1998-01-02T00:00:00.000Z',
  Freight: 11.19,
  ShipName: 'Ernst Handel',
  ShipAddress: 'Kirchgasse 6',
  ShipCity: 'Graz',
  ShipRegion: null,
  ShipCountry: 'Austria',
},

{
  OrderID: 10772,
  CustomerID: 'LEHMS',
  OrderDate: '1997-12-10T00:00:00.000Z',
  ShippedDate: '1997-12-19T00:00:00.000Z',
  Freight: 91.28,
  ShipName: 'Lehmanns Marktstand',
  ShipAddress: 'Magazinweg 7',
  ShipCity: 'Frankfurt a.M.',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10773,
  CustomerID: 'ERNSH',
  OrderDate: '1997-12-11T00:00:00.000Z',
  ShippedDate: '1997-12-16T00:00:00.000Z',
  Freight: 96.43,
  ShipName: 'Ernst Handel',
  ShipAddress: 'Kirchgasse 6',
  ShipCity: 'Graz',
```

```
    ShipRegion: null,
    ShipCountry: 'Austria',
  },

  {
    OrderID: 10774,
    CustomerID: 'FOLKO',
    OrderDate: '1997-12-11T00:00:00.000Z',
    ShippedDate: '1997-12-12T00:00:00.000Z',
    Freight: 48.2,
    ShipName: 'Folk och fä HB',
    ShipAddress: 'Åkergatan 24',
    ShipCity: 'Bräcke',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },

  {
    OrderID: 10775,
    CustomerID: 'THECR',
    OrderDate: '1997-12-12T00:00:00.000Z',
    ShippedDate: '1997-12-26T00:00:00.000Z',
    Freight: 20.25,
    ShipName: 'The Cracker Box',
    ShipAddress: '55 Grizzly Peak Rd.',
    ShipCity: 'Butte',
    ShipRegion: 'MT',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10776,
    CustomerID: 'ERNSH',
    OrderDate: '1997-12-15T00:00:00.000Z',
    ShippedDate: '1997-12-18T00:00:00.000Z',
    Freight: 351.53,
    ShipName: 'Ernst Handel',
    ShipAddress: 'Kirchgasse 6',
    ShipCity: 'Graz',
    ShipRegion: null,
    ShipCountry: 'Austria',
  },

  {
    OrderID: 10777,
    CustomerID: 'GOURL',
    OrderDate: '1997-12-15T00:00:00.000Z',
    ShippedDate: '1998-01-21T00:00:00.000Z',
    Freight: 3.01,
    ShipName: 'Gourmet Lanchonetes',
    ShipAddress: 'Av. Brasil, 442',
    ShipCity: 'Campinas',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },

  {
```



```
OrderID: 10778,
CustomerID: 'BERGS',
OrderDate: '1997-12-16T00:00:00.000Z',
ShippedDate: '1997-12-24T00:00:00.000Z',
Freight: 6.79,
ShipName: 'Berglunds snabbköp',
ShipAddress: 'Berguvsvägen 8',
ShipCity: 'Luleå',
ShipRegion: null,
ShipCountry: 'Sweden',
},

{
  OrderID: 10779,
  CustomerID: 'MORGK',
  OrderDate: '1997-12-16T00:00:00.000Z',
  ShippedDate: '1998-01-14T00:00:00.000Z',
  Freight: 58.13,
  ShipName: 'Morgenstern Gesundkost',
  ShipAddress: 'Heerstr. 22',
  ShipCity: 'Leipzig',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10780,
  CustomerID: 'LILAS',
  OrderDate: '1997-12-16T00:00:00.000Z',
  ShippedDate: '1997-12-25T00:00:00.000Z',
  Freight: 42.13,
  ShipName: 'LILA-Supermercado',
  ShipAddress: 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
  ShipCity: 'Barquisimeto',
  ShipRegion: 'Lara',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10781,
  CustomerID: 'WARTH',
  OrderDate: '1997-12-17T00:00:00.000Z',
  ShippedDate: '1997-12-19T00:00:00.000Z',
  Freight: 73.16,
  ShipName: 'Wartian Herkku',
  ShipAddress: 'Torikatu 38',
  ShipCity: 'Oulu',
  ShipRegion: null,
  ShipCountry: 'Finland',
},

{
  OrderID: 10782,
  CustomerID: 'CACTU',
  OrderDate: '1997-12-17T00:00:00.000Z',
  ShippedDate: '1997-12-22T00:00:00.000Z',
  Freight: 1.1,
```

```
    ShipName: 'Cactus Comidas para llevar',
    ShipAddress: 'Cerrito 333',
    ShipCity: 'Buenos Aires',
    ShipRegion: null,
    ShipCountry: 'Argentina',
  },

  {
    OrderID: 10783,
    CustomerID: 'HANAR',
    OrderDate: '1997-12-18T00:00:00.000Z',
    ShippedDate: '1997-12-19T00:00:00.000Z',
    Freight: 124.98,
    ShipName: 'Hanari Carnes',
    ShipAddress: 'Rua do Paço, 67',
    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10784,
    CustomerID: 'MAGAA',
    OrderDate: '1997-12-18T00:00:00.000Z',
    ShippedDate: '1997-12-22T00:00:00.000Z',
    Freight: 70.09,
    ShipName: 'Magazzini Alimentari Riuniti',
    ShipAddress: 'Via Ludovico il Moro 22',
    ShipCity: 'Bergamo',
    ShipRegion: null,
    ShipCountry: 'Italy',
  },

  {
    OrderID: 10785,
    CustomerID: 'GROSR',
    OrderDate: '1997-12-18T00:00:00.000Z',
    ShippedDate: '1997-12-24T00:00:00.000Z',
    Freight: 1.51,
    ShipName: 'GROSELLA-Restaurante',
    ShipAddress: '5ª Ave. Los Palos Grandes',
    ShipCity: 'Caracas',
    ShipRegion: 'DF',
    ShipCountry: 'Venezuela',
  },

  {
    OrderID: 10786,
    CustomerID: 'QUEEN',
    OrderDate: '1997-12-19T00:00:00.000Z',
    ShippedDate: '1997-12-23T00:00:00.000Z',
    Freight: 110.87,
    ShipName: 'Queen Cozinha',
    ShipAddress: 'Alameda dos Canários, 891',
    ShipCity: 'Sao Paulo',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
```

```
},  
  
{  
  OrderID: 10787,  
  CustomerID: 'LAMAI',  
  OrderDate: '1997-12-19T00:00:00.000Z',  
  ShippedDate: '1997-12-26T00:00:00.000Z',  
  Freight: 249.93,  
  ShipName: 'La maison d'Asie',  
  ShipAddress: '1 rue Alsace-Lorraine',  
  ShipCity: 'Toulouse',  
  ShipRegion: null,  
  ShipCountry: 'France',  
},  
  
{  
  OrderID: 10788,  
  CustomerID: 'QUICK',  
  OrderDate: '1997-12-22T00:00:00.000Z',  
  ShippedDate: '1998-01-19T00:00:00.000Z',  
  Freight: 42.7,  
  ShipName: 'QUICK-Stop',  
  ShipAddress: 'Taucherstraße 10',  
  ShipCity: 'Cunewalde',  
  ShipRegion: null,  
  ShipCountry: 'Germany',  
},  
  
{  
  OrderID: 10789,  
  CustomerID: 'FOLIG',  
  OrderDate: '1997-12-22T00:00:00.000Z',  
  ShippedDate: '1997-12-31T00:00:00.000Z',  
  Freight: 100.6,  
  ShipName: 'Folies gourmandes',  
  ShipAddress: '184, chaussée de Tournai',  
  ShipCity: 'Lille',  
  ShipRegion: null,  
  ShipCountry: 'France',  
},  
  
{  
  OrderID: 10790,  
  CustomerID: 'GOURL',  
  OrderDate: '1997-12-22T00:00:00.000Z',  
  ShippedDate: '1997-12-26T00:00:00.000Z',  
  Freight: 28.23,  
  ShipName: 'Gourmet Lanchonetes',  
  ShipAddress: 'Av. Brasil, 442',  
  ShipCity: 'Campinas',  
  ShipRegion: 'SP',  
  ShipCountry: 'Brazil',  
},  
  
{  
  OrderID: 10791,  
  CustomerID: 'FRANK',
```

```
OrderDate: '1997-12-23T00:00:00.000Z',
ShippedDate: '1998-01-01T00:00:00.000Z',
Freight: 16.85,
ShipName: 'Frankenversand',
ShipAddress: 'Berliner Platz 43',
ShipCity: 'München',
ShipRegion: null,
ShipCountry: 'Germany',
},

{
  OrderID: 10792,
  CustomerID: 'WOLZA',
  OrderDate: '1997-12-23T00:00:00.000Z',
  ShippedDate: '1997-12-31T00:00:00.000Z',
  Freight: 23.79,
  ShipName: 'Wolski Zajazd',
  ShipAddress: 'ul. Filtrowa 68',
  ShipCity: 'Warszawa',
  ShipRegion: null,
  ShipCountry: 'Poland',
},

{
  OrderID: 10793,
  CustomerID: 'AROUT',
  OrderDate: '1997-12-24T00:00:00.000Z',
  ShippedDate: '1998-01-08T00:00:00.000Z',
  Freight: 4.52,
  ShipName: 'Around the Horn',
  ShipAddress: 'Brook Farm Stratford St. Mary',
  ShipCity: 'Colchester',
  ShipRegion: 'Essex',
  ShipCountry: 'UK',
},

{
  OrderID: 10794,
  CustomerID: 'QUEDE',
  OrderDate: '1997-12-24T00:00:00.000Z',
  ShippedDate: '1998-01-02T00:00:00.000Z',
  Freight: 21.49,
  ShipName: 'Que Delícia',
  ShipAddress: 'Rua da Panificadora, 12',
  ShipCity: 'Rio de Janeiro',
  ShipRegion: 'RJ',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10795,
  CustomerID: 'ERNSH',
  OrderDate: '1997-12-24T00:00:00.000Z',
  ShippedDate: '1998-01-20T00:00:00.000Z',
  Freight: 126.66,
  ShipName: 'Ernst Handel',
  ShipAddress: 'Kirchgasse 6',
```

```
    ShipCity: 'Graz',
    ShipRegion: null,
    ShipCountry: 'Austria',
  },

  {
    OrderID: 10796,
    CustomerID: 'HILAA',
    OrderDate: '1997-12-25T00:00:00.000Z',
    ShippedDate: '1998-01-14T00:00:00.000Z',
    Freight: 26.52,
    ShipName: 'HILARION-Abastos',
    ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipCity: 'San Cristóbal',
    ShipRegion: 'Táchira',
    ShipCountry: 'Venezuela',
  },

  {
    OrderID: 10797,
    CustomerID: 'DRACD',
    OrderDate: '1997-12-25T00:00:00.000Z',
    ShippedDate: '1998-01-05T00:00:00.000Z',
    Freight: 33.35,
    ShipName: 'Drachenblut Delikatessen',
    ShipAddress: 'Walserweg 21',
    ShipCity: 'Aachen',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10798,
    CustomerID: 'ISLAT',
    OrderDate: '1997-12-26T00:00:00.000Z',
    ShippedDate: '1998-01-05T00:00:00.000Z',
    Freight: 2.33,
    ShipName: 'Island Trading',
    ShipAddress: 'Garden House Crowther Way',
    ShipCity: 'Cowes',
    ShipRegion: 'Isle of Wight',
    ShipCountry: 'UK',
  },

  {
    OrderID: 10799,
    CustomerID: 'KOENE',
    OrderDate: '1997-12-26T00:00:00.000Z',
    ShippedDate: '1998-01-05T00:00:00.000Z',
    Freight: 30.76,
    ShipName: 'Königlich Essen',
    ShipAddress: 'Maubelstr. 90',
    ShipCity: 'Brandenburg',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },
```

```
{
  OrderID: 10800,
  CustomerID: 'SEVES',
  OrderDate: '1997-12-26T00:00:00.000Z',
  ShippedDate: '1998-01-05T00:00:00.000Z',
  Freight: 137.44,
  ShipName: 'Seven Seas Imports',
  ShipAddress: '90 Wadhurst Rd.',
  ShipCity: 'London',
  ShipRegion: null,
  ShipCountry: 'UK',
},

{
  OrderID: 10801,
  CustomerID: 'BOLID',
  OrderDate: '1997-12-29T00:00:00.000Z',
  ShippedDate: '1997-12-31T00:00:00.000Z',
  Freight: 97.09,
  ShipName: 'Bólido Comidas preparadas',
  ShipAddress: 'C/ Araquil, 67',
  ShipCity: 'Madrid',
  ShipRegion: null,
  ShipCountry: 'Spain',
},

{
  OrderID: 10802,
  CustomerID: 'SIMOB',
  OrderDate: '1997-12-29T00:00:00.000Z',
  ShippedDate: '1998-01-02T00:00:00.000Z',
  Freight: 257.26,
  ShipName: 'Simons bistro',
  ShipAddress: 'Vinbæltet 34',
  ShipCity: 'Kobenhavn',
  ShipRegion: null,
  ShipCountry: 'Denmark',
},

{
  OrderID: 10803,
  CustomerID: 'WELLI',
  OrderDate: '1997-12-30T00:00:00.000Z',
  ShippedDate: '1998-01-06T00:00:00.000Z',
  Freight: 55.23,
  ShipName: 'Wellington Importadora',
  ShipAddress: 'Rua do Mercado, 12',
  ShipCity: 'Resende',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10804,
  CustomerID: 'SEVES',
  OrderDate: '1997-12-30T00:00:00.000Z',
  ShippedDate: '1998-01-07T00:00:00.000Z',
```

```
Freight: 27.33,  
ShipName: 'Seven Seas Imports',  
ShipAddress: '90 Wadhurst Rd.',  
ShipCity: 'London',  
ShipRegion: null,  
ShipCountry: 'UK',  
},  
  
{  
  OrderID: 10805,  
  CustomerID: 'THEBI',  
  OrderDate: '1997-12-30T00:00:00.000Z',  
  ShippedDate: '1998-01-09T00:00:00.000Z',  
  Freight: 237.34,  
  ShipName: 'The Big Cheese',  
  ShipAddress: '89 Jefferson Way Suite 2',  
  ShipCity: 'Portland',  
  ShipRegion: 'OR',  
  ShipCountry: 'USA',  
},  
  
{  
  OrderID: 10806,  
  CustomerID: 'VICTE',  
  OrderDate: '1997-12-31T00:00:00.000Z',  
  ShippedDate: '1998-01-05T00:00:00.000Z',  
  Freight: 22.11,  
  ShipName: 'Victuailles en stock',  
  ShipAddress: '2, rue du Commerce',  
  ShipCity: 'Lyon',  
  ShipRegion: null,  
  ShipCountry: 'France',  
},  
  
{  
  OrderID: 10807,  
  CustomerID: 'FRANS',  
  OrderDate: '1997-12-31T00:00:00.000Z',  
  ShippedDate: '1998-01-30T00:00:00.000Z',  
  Freight: 1.36,  
  ShipName: 'Franchi S.p.A.',  
  ShipAddress: 'Via Monte Bianco 34',  
  ShipCity: 'Torino',  
  ShipRegion: null,  
  ShipCountry: 'Italy',  
},  
  
{  
  OrderID: 10808,  
  CustomerID: 'OLDWO',  
  OrderDate: '1998-01-01T00:00:00.000Z',  
  ShippedDate: '1998-01-09T00:00:00.000Z',  
  Freight: 45.53,  
  ShipName: 'Old World Delicatessen',  
  ShipAddress: '2743 Bering St.',  
  ShipCity: 'Anchorage',  
  ShipRegion: 'AK',
```

```
    ShipCountry: 'USA',
  },

  {
    OrderID: 10809,
    CustomerID: 'WELLI',
    OrderDate: '1998-01-01T00:00:00.000Z',
    ShippedDate: '1998-01-07T00:00:00.000Z',
    Freight: 4.87,
    ShipName: 'Wellington Importadora',
    ShipAddress: 'Rua do Mercado, 12',
    ShipCity: 'Resende',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10810,
    CustomerID: 'LAUGB',
    OrderDate: '1998-01-01T00:00:00.000Z',
    ShippedDate: '1998-01-07T00:00:00.000Z',
    Freight: 4.33,
    ShipName: 'Laughing Bacchus Wine Cellars',
    ShipAddress: '2319 Elm St.',
    ShipCity: 'Vancouver',
    ShipRegion: 'BC',
    ShipCountry: 'Canada',
  },

  {
    OrderID: 10811,
    CustomerID: 'LINOD',
    OrderDate: '1998-01-02T00:00:00.000Z',
    ShippedDate: '1998-01-08T00:00:00.000Z',
    Freight: 31.22,
    ShipName: 'LINO-Delicateses',
    ShipAddress: 'Ave. 5 de Mayo Porlamar',
    ShipCity: 'I. de Margarita',
    ShipRegion: 'Nueva Esparta',
    ShipCountry: 'Venezuela',
  },

  {
    OrderID: 10812,
    CustomerID: 'REGGC',
    OrderDate: '1998-01-02T00:00:00.000Z',
    ShippedDate: '1998-01-12T00:00:00.000Z',
    Freight: 59.78,
    ShipName: 'Reggiani Caseifici',
    ShipAddress: 'Strada Provinciale 124',
    ShipCity: 'Reggio Emilia',
    ShipRegion: null,
    ShipCountry: 'Italy',
  },

  {
    OrderID: 10813,
```



```
CustomerID: 'RICAR',
OrderDate: '1998-01-05T00:00:00.000Z',
ShippedDate: '1998-01-09T00:00:00.000Z',
Freight: 47.38,
ShipName: 'Ricardo Adocicados',
ShipAddress: 'Av. Copacabana, 267',
ShipCity: 'Rio de Janeiro',
ShipRegion: 'RJ',
ShipCountry: 'Brazil',
},

{
  OrderID: 10814,
  CustomerID: 'VICTE',
  OrderDate: '1998-01-05T00:00:00.000Z',
  ShippedDate: '1998-01-14T00:00:00.000Z',
  Freight: 130.94,
  ShipName: 'Victuailles en stock',
  ShipAddress: '2, rue du Commerce',
  ShipCity: 'Lyon',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10815,
  CustomerID: 'SAVEA',
  OrderDate: '1998-01-05T00:00:00.000Z',
  ShippedDate: '1998-01-14T00:00:00.000Z',
  Freight: 14.62,
  ShipName: 'Save-a-lot Markets',
  ShipAddress: '187 Suffolk Ln.',
  ShipCity: 'Boise',
  ShipRegion: 'ID',
  ShipCountry: 'USA',
},

{
  OrderID: 10816,
  CustomerID: 'GREAL',
  OrderDate: '1998-01-06T00:00:00.000Z',
  ShippedDate: '1998-02-04T00:00:00.000Z',
  Freight: 719.78,
  ShipName: 'Great Lakes Food Market',
  ShipAddress: '2732 Baker Blvd.',
  ShipCity: 'Eugene',
  ShipRegion: 'OR',
  ShipCountry: 'USA',
},

{
  OrderID: 10817,
  CustomerID: 'KOENE',
  OrderDate: '1998-01-06T00:00:00.000Z',
  ShippedDate: '1998-01-13T00:00:00.000Z',
  Freight: 306.07,
  ShipName: 'Königlich Essen',
```

```
    ShipAddress: 'Maubelstr. 90',
    ShipCity: 'Brandenburg',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10818,
    CustomerID: 'MAGAA',
    OrderDate: '1998-01-07T00:00:00.000Z',
    ShippedDate: '1998-01-12T00:00:00.000Z',
    Freight: 65.48,
    ShipName: 'Magazzini Alimentari Riuniti',
    ShipAddress: 'Via Ludovico il Moro 22',
    ShipCity: 'Bergamo',
    ShipRegion: null,
    ShipCountry: 'Italy',
  },

  {
    OrderID: 10819,
    CustomerID: 'CACTU',
    OrderDate: '1998-01-07T00:00:00.000Z',
    ShippedDate: '1998-01-16T00:00:00.000Z',
    Freight: 19.76,
    ShipName: 'Cactus Comidas para llevar',
    ShipAddress: 'Cerrito 333',
    ShipCity: 'Buenos Aires',
    ShipRegion: null,
    ShipCountry: 'Argentina',
  },

  {
    OrderID: 10820,
    CustomerID: 'RATTC',
    OrderDate: '1998-01-07T00:00:00.000Z',
    ShippedDate: '1998-01-13T00:00:00.000Z',
    Freight: 37.52,
    ShipName: 'Rattlesnake Canyon Grocery',
    ShipAddress: '2817 Milton Dr.',
    ShipCity: 'Albuquerque',
    ShipRegion: 'NM',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10821,
    CustomerID: 'SPLIR',
    OrderDate: '1998-01-08T00:00:00.000Z',
    ShippedDate: '1998-01-15T00:00:00.000Z',
    Freight: 36.68,
    ShipName: 'Split Rail Beer & Ale',
    ShipAddress: 'P.O. Box 555',
    ShipCity: 'Lander',
    ShipRegion: 'WY',
    ShipCountry: 'USA',
  },
},
```

```
{
  OrderID: 10822,
  CustomerID: 'TRAIH',
  OrderDate: '1998-01-08T00:00:00.000Z',
  ShippedDate: '1998-01-16T00:00:00.000Z',
  Freight: 7,
  ShipName: "Trail' Head Gourmet Provisioners",
  ShipAddress: '722 DaVinci Blvd.',
  ShipCity: 'Kirkland',
  ShipRegion: 'WA',
  ShipCountry: 'USA',
},

{
  OrderID: 10823,
  CustomerID: 'LILAS',
  OrderDate: '1998-01-09T00:00:00.000Z',
  ShippedDate: '1998-01-13T00:00:00.000Z',
  Freight: 163.97,
  ShipName: 'LILA-Supermercado',
  ShipAddress: 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
  ShipCity: 'Barquisimeto',
  ShipRegion: 'Lara',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10824,
  CustomerID: 'FOLKO',
  OrderDate: '1998-01-09T00:00:00.000Z',
  ShippedDate: '1998-01-30T00:00:00.000Z',
  Freight: 1.23,
  ShipName: 'Folk och fä HB',
  ShipAddress: 'Åkergatan 24',
  ShipCity: 'Bräcke',
  ShipRegion: null,
  ShipCountry: 'Sweden',
},

{
  OrderID: 10825,
  CustomerID: 'DRACD',
  OrderDate: '1998-01-09T00:00:00.000Z',
  ShippedDate: '1998-01-14T00:00:00.000Z',
  Freight: 79.25,
  ShipName: 'Drachenblut Delikatessen',
  ShipAddress: 'Walserweg 21',
  ShipCity: 'Aachen',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10826,
  CustomerID: 'BLONP',
  OrderDate: '1998-01-12T00:00:00.000Z',
```

```
ShippedDate: '1998-02-06T00:00:00.000Z',
Freight: 7.09,
ShipName: 'Blondel père et fils',
ShipAddress: '24, place Kléber',
ShipCity: 'Strasbourg',
ShipRegion: null,
ShipCountry: 'France',
},

{
  OrderID: 10827,
  CustomerID: 'BONAP',
  OrderDate: '1998-01-12T00:00:00.000Z',
  ShippedDate: '1998-02-06T00:00:00.000Z',
  Freight: 63.54,
  ShipName: 'Bon app',
  ShipAddress: '12, rue des Bouchers',
  ShipCity: 'Marseille',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10828,
  CustomerID: 'RANCH',
  OrderDate: '1998-01-13T00:00:00.000Z',
  ShippedDate: '1998-02-04T00:00:00.000Z',
  Freight: 90.85,
  ShipName: 'Rancho grande',
  ShipAddress: 'Av. del Libertador 900',
  ShipCity: 'Buenos Aires',
  ShipRegion: null,
  ShipCountry: 'Argentina',
},

{
  OrderID: 10829,
  CustomerID: 'ISLAT',
  OrderDate: '1998-01-13T00:00:00.000Z',
  ShippedDate: '1998-01-23T00:00:00.000Z',
  Freight: 154.72,
  ShipName: 'Island Trading',
  ShipAddress: 'Garden House Crowther Way',
  ShipCity: 'Cowes',
  ShipRegion: 'Isle of Wight',
  ShipCountry: 'UK',
},

{
  OrderID: 10830,
  CustomerID: 'TRADH',
  OrderDate: '1998-01-13T00:00:00.000Z',
  ShippedDate: '1998-01-21T00:00:00.000Z',
  Freight: 81.83,
  ShipName: 'Tradição Hipermercados',
  ShipAddress: 'Av. Inês de Castro, 414',
  ShipCity: 'Sao Paulo',
```

```
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10831,
    CustomerID: 'SANTG',
    OrderDate: '1998-01-14T00:00:00.000Z',
    ShippedDate: '1998-01-23T00:00:00.000Z',
    Freight: 72.19,
    ShipName: 'Santé Gourmet',
    ShipAddress: 'Erling Skakkes gate 78',
    ShipCity: 'Stavern',
    ShipRegion: null,
    ShipCountry: 'Norway',
  },

  {
    OrderID: 10832,
    CustomerID: 'LAMAI',
    OrderDate: '1998-01-14T00:00:00.000Z',
    ShippedDate: '1998-01-19T00:00:00.000Z',
    Freight: 43.26,
    ShipName: "La maison d'Asie",
    ShipAddress: '1 rue Alsace-Lorraine',
    ShipCity: 'Toulouse',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10833,
    CustomerID: 'OTTIK',
    OrderDate: '1998-01-15T00:00:00.000Z',
    ShippedDate: '1998-01-23T00:00:00.000Z',
    Freight: 71.49,
    ShipName: 'Ottilies Käseladen',
    ShipAddress: 'Mehrheimerstr. 369',
    ShipCity: 'Köln',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10834,
    CustomerID: 'TRADH',
    OrderDate: '1998-01-15T00:00:00.000Z',
    ShippedDate: '1998-01-19T00:00:00.000Z',
    Freight: 29.78,
    ShipName: 'Tradiçao Hipermercados',
    ShipAddress: 'Av. Inês de Castro, 414',
    ShipCity: 'Sao Paulo',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },

  {
```

```
OrderID: 10835,
CustomerID: 'ALFKI',
OrderDate: '1998-01-15T00:00:00.000Z',
ShippedDate: '1998-01-21T00:00:00.000Z',
Freight: 69.53,
ShipName: "Alfred' Futterkiste",
ShipAddress: 'Obere Str. 57',
ShipCity: 'Berlin',
ShipRegion: null,
ShipCountry: 'Germany',
},

{
  OrderID: 10836,
  CustomerID: 'ERNSH',
  OrderDate: '1998-01-16T00:00:00.000Z',
  ShippedDate: '1998-01-21T00:00:00.000Z',
  Freight: 411.88,
  ShipName: 'Ernst Handel',
  ShipAddress: 'Kirchgasse 6',
  ShipCity: 'Graz',
  ShipRegion: null,
  ShipCountry: 'Austria',
},

{
  OrderID: 10837,
  CustomerID: 'BERGS',
  OrderDate: '1998-01-16T00:00:00.000Z',
  ShippedDate: '1998-01-23T00:00:00.000Z',
  Freight: 13.32,
  ShipName: 'Berglunds snabbköp',
  ShipAddress: 'Berguvsvägen 8',
  ShipCity: 'Luleå',
  ShipRegion: null,
  ShipCountry: 'Sweden',
},

{
  OrderID: 10838,
  CustomerID: 'LINOD',
  OrderDate: '1998-01-19T00:00:00.000Z',
  ShippedDate: '1998-01-23T00:00:00.000Z',
  Freight: 59.28,
  ShipName: 'LINO-Delicateses',
  ShipAddress: 'Ave. 5 de Mayo Porlamar',
  ShipCity: 'I. de Margarita',
  ShipRegion: 'Nueva Esparta',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10839,
  CustomerID: 'TRADH',
  OrderDate: '1998-01-19T00:00:00.000Z',
  ShippedDate: '1998-01-22T00:00:00.000Z',
  Freight: 35.43,
```

```
    ShipName: 'Tradição Hipermercados',
    ShipAddress: 'Av. Inês de Castro, 414',
    ShipCity: 'Sao Paulo',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10840,
    CustomerID: 'LINOD',
    OrderDate: '1998-01-19T00:00:00.000Z',
    ShippedDate: '1998-02-16T00:00:00.000Z',
    Freight: 2.71,
    ShipName: 'LINO-Delicateses',
    ShipAddress: 'Ave. 5 de Mayo Porlamar',
    ShipCity: 'I. de Margarita',
    ShipRegion: 'Nueva Esparta',
    ShipCountry: 'Venezuela',
  },

  {
    OrderID: 10841,
    CustomerID: 'SUPRD',
    OrderDate: '1998-01-20T00:00:00.000Z',
    ShippedDate: '1998-01-29T00:00:00.000Z',
    Freight: 424.3,
    ShipName: 'Suprêmes délices',
    ShipAddress: 'Boulevard Tirou, 255',
    ShipCity: 'Charleroi',
    ShipRegion: null,
    ShipCountry: 'Belgium',
  },

  {
    OrderID: 10842,
    CustomerID: 'TORTU',
    OrderDate: '1998-01-20T00:00:00.000Z',
    ShippedDate: '1998-01-29T00:00:00.000Z',
    Freight: 54.42,
    ShipName: 'Tortuga Restaurante',
    ShipAddress: 'Avda. Azteca 123',
    ShipCity: 'México D.F.',
    ShipRegion: null,
    ShipCountry: 'Mexico',
  },

  {
    OrderID: 10843,
    CustomerID: 'VICTE',
    OrderDate: '1998-01-21T00:00:00.000Z',
    ShippedDate: '1998-01-26T00:00:00.000Z',
    Freight: 9.26,
    ShipName: 'Victuailles en stock',
    ShipAddress: '2, rue du Commerce',
    ShipCity: 'Lyon',
    ShipRegion: null,
    ShipCountry: 'France',
  },
```

```
},  
  
{  
  OrderID: 10844,  
  CustomerID: 'PICCO',  
  OrderDate: '1998-01-21T00:00:00.000Z',  
  ShippedDate: '1998-01-26T00:00:00.000Z',  
  Freight: 25.22,  
  ShipName: 'Piccolo und mehr',  
  ShipAddress: 'Geislweg 14',  
  ShipCity: 'Salzburg',  
  ShipRegion: null,  
  ShipCountry: 'Austria',  
},  
  
{  
  OrderID: 10845,  
  CustomerID: 'QUICK',  
  OrderDate: '1998-01-21T00:00:00.000Z',  
  ShippedDate: '1998-01-30T00:00:00.000Z',  
  Freight: 212.98,  
  ShipName: 'QUICK-Stop',  
  ShipAddress: 'Taucherstraße 10',  
  ShipCity: 'Cunewalde',  
  ShipRegion: null,  
  ShipCountry: 'Germany',  
},  
  
{  
  OrderID: 10846,  
  CustomerID: 'SUPRD',  
  OrderDate: '1998-01-22T00:00:00.000Z',  
  ShippedDate: '1998-01-23T00:00:00.000Z',  
  Freight: 56.46,  
  ShipName: 'Suprêmes délices',  
  ShipAddress: 'Boulevard Tirou, 255',  
  ShipCity: 'Charleroi',  
  ShipRegion: null,  
  ShipCountry: 'Belgium',  
},  
  
{  
  OrderID: 10847,  
  CustomerID: 'SAVEA',  
  OrderDate: '1998-01-22T00:00:00.000Z',  
  ShippedDate: '1998-02-10T00:00:00.000Z',  
  Freight: 487.57,  
  ShipName: 'Save-a-lot Markets',  
  ShipAddress: '187 Suffolk Ln.',  
  ShipCity: 'Boise',  
  ShipRegion: 'ID',  
  ShipCountry: 'USA',  
},  
  
{  
  OrderID: 10848,  
  CustomerID: 'CONSH',
```



```
OrderDate: '1998-01-23T00:00:00.000Z',
ShippedDate: '1998-01-29T00:00:00.000Z',
Freight: 38.24,
ShipName: 'Consolidated Holdings',
ShipAddress: 'Berkeley Gardens 12 Brewery',
ShipCity: 'London',
ShipRegion: null,
ShipCountry: 'UK',
},

{
  OrderID: 10849,
  CustomerID: 'KOENE',
  OrderDate: '1998-01-23T00:00:00.000Z',
  ShippedDate: '1998-01-30T00:00:00.000Z',
  Freight: 0.56,
  ShipName: 'Königlich Essen',
  ShipAddress: 'Maubelstr. 90',
  ShipCity: 'Brandenburg',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10850,
  CustomerID: 'VICTE',
  OrderDate: '1998-01-23T00:00:00.000Z',
  ShippedDate: '1998-01-30T00:00:00.000Z',
  Freight: 49.19,
  ShipName: 'Victuailles en stock',
  ShipAddress: '2, rue du Commerce',
  ShipCity: 'Lyon',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10851,
  CustomerID: 'RICAR',
  OrderDate: '1998-01-26T00:00:00.000Z',
  ShippedDate: '1998-02-02T00:00:00.000Z',
  Freight: 160.55,
  ShipName: 'Ricardo Adocicados',
  ShipAddress: 'Av. Copacabana, 267',
  ShipCity: 'Rio de Janeiro',
  ShipRegion: 'RJ',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10852,
  CustomerID: 'RATTC',
  OrderDate: '1998-01-26T00:00:00.000Z',
  ShippedDate: '1998-01-30T00:00:00.000Z',
  Freight: 174.05,
  ShipName: 'Rattlesnake Canyon Grocery',
  ShipAddress: '2817 Milton Dr.',
```

```
    ShipCity: 'Albuquerque',
    ShipRegion: 'NM',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10853,
    CustomerID: 'BLAUS',
    OrderDate: '1998-01-27T00:00:00.000Z',
    ShippedDate: '1998-02-03T00:00:00.000Z',
    Freight: 53.83,
    ShipName: 'Blauer See Delikatessen',
    ShipAddress: 'Forsterstr. 57',
    ShipCity: 'Mannheim',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10854,
    CustomerID: 'ERNSH',
    OrderDate: '1998-01-27T00:00:00.000Z',
    ShippedDate: '1998-02-05T00:00:00.000Z',
    Freight: 100.22,
    ShipName: 'Ernst Handel',
    ShipAddress: 'Kirchgasse 6',
    ShipCity: 'Graz',
    ShipRegion: null,
    ShipCountry: 'Austria',
  },

  {
    OrderID: 10855,
    CustomerID: 'OLDWO',
    OrderDate: '1998-01-27T00:00:00.000Z',
    ShippedDate: '1998-02-04T00:00:00.000Z',
    Freight: 170.97,
    ShipName: 'Old World Delicatessen',
    ShipAddress: '2743 Bering St.',
    ShipCity: 'Anchorage',
    ShipRegion: 'AK',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10856,
    CustomerID: 'ANTON',
    OrderDate: '1998-01-28T00:00:00.000Z',
    ShippedDate: '1998-02-10T00:00:00.000Z',
    Freight: 58.43,
    ShipName: 'Antonio Moreno Taquería',
    ShipAddress: 'Mataderos 2312',
    ShipCity: 'México D.F.',
    ShipRegion: null,
    ShipCountry: 'Mexico',
  },
```

```
{
  OrderID: 10857,
  CustomerID: 'BERGS',
  OrderDate: '1998-01-28T00:00:00.000Z',
  ShippedDate: '1998-02-06T00:00:00.000Z',
  Freight: 188.85,
  ShipName: 'Berglunds snabbköp',
  ShipAddress: 'Berguvsvägen 8',
  ShipCity: 'Luleå',
  ShipRegion: null,
  ShipCountry: 'Sweden',
},

{
  OrderID: 10858,
  CustomerID: 'LACOR',
  OrderDate: '1998-01-29T00:00:00.000Z',
  ShippedDate: '1998-02-03T00:00:00.000Z',
  Freight: 52.51,
  ShipName: "La corne d'abondance",
  ShipAddress: "67, avenue de l'Europe",
  ShipCity: 'Versailles',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10859,
  CustomerID: 'FRANK',
  OrderDate: '1998-01-29T00:00:00.000Z',
  ShippedDate: '1998-02-02T00:00:00.000Z',
  Freight: 76.1,
  ShipName: 'Frankenversand',
  ShipAddress: 'Berliner Platz 43',
  ShipCity: 'München',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10860,
  CustomerID: 'FRANR',
  OrderDate: '1998-01-29T00:00:00.000Z',
  ShippedDate: '1998-02-04T00:00:00.000Z',
  Freight: 19.26,
  ShipName: 'France restauration',
  ShipAddress: '54, rue Royale',
  ShipCity: 'Nantes',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10861,
  CustomerID: 'WHITC',
  OrderDate: '1998-01-30T00:00:00.000Z',
  ShippedDate: '1998-02-17T00:00:00.000Z',
```

```
Freight: 14.93,
ShipName: 'White Clover Markets',
ShipAddress: '1029 - 12th Ave. S.',
ShipCity: 'Seattle',
ShipRegion: 'WA',
ShipCountry: 'USA',
},

{
  OrderID: 10862,
  CustomerID: 'LEHMS',
  OrderDate: '1998-01-30T00:00:00.000Z',
  ShippedDate: '1998-02-02T00:00:00.000Z',
  Freight: 53.23,
  ShipName: 'Lehmanns Marktstand',
  ShipAddress: 'Magazinweg 7',
  ShipCity: 'Frankfurt a.M.',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10863,
  CustomerID: 'HILAA',
  OrderDate: '1998-02-02T00:00:00.000Z',
  ShippedDate: '1998-02-17T00:00:00.000Z',
  Freight: 30.26,
  ShipName: 'HILARION-Abastos',
  ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
  ShipCity: 'San Cristóbal',
  ShipRegion: 'Táchira',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10864,
  CustomerID: 'AROUT',
  OrderDate: '1998-02-02T00:00:00.000Z',
  ShippedDate: '1998-02-09T00:00:00.000Z',
  Freight: 3.04,
  ShipName: 'Around the Horn',
  ShipAddress: 'Brook Farm Stratford St. Mary',
  ShipCity: 'Colchester',
  ShipRegion: 'Essex',
  ShipCountry: 'UK',
},

{
  OrderID: 10865,
  CustomerID: 'QUICK',
  OrderDate: '1998-02-02T00:00:00.000Z',
  ShippedDate: '1998-02-12T00:00:00.000Z',
  Freight: 348.14,
  ShipName: 'QUICK-Stop',
  ShipAddress: 'Taucherstraße 10',
  ShipCity: 'Cunewalde',
  ShipRegion: null,
```

```
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10866,
    CustomerID: 'BERGS',
    OrderDate: '1998-02-03T00:00:00.000Z',
    ShippedDate: '1998-02-12T00:00:00.000Z',
    Freight: 109.11,
    ShipName: 'Berglunds snabbköp',
    ShipAddress: 'Berguvsvägen 8',
    ShipCity: 'Luleå',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },

  {
    OrderID: 10867,
    CustomerID: 'LONEP',
    OrderDate: '1998-02-03T00:00:00.000Z',
    ShippedDate: '1998-02-11T00:00:00.000Z',
    Freight: 1.93,
    ShipName: 'Lonesome Pine Restaurant',
    ShipAddress: '89 Chiaroscuro Rd.',
    ShipCity: 'Portland',
    ShipRegion: 'OR',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10868,
    CustomerID: 'QUEEN',
    OrderDate: '1998-02-04T00:00:00.000Z',
    ShippedDate: '1998-02-23T00:00:00.000Z',
    Freight: 191.27,
    ShipName: 'Queen Cozinha',
    ShipAddress: 'Alameda dos Canários, 891',
    ShipCity: 'Sao Paulo',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10869,
    CustomerID: 'SEVES',
    OrderDate: '1998-02-04T00:00:00.000Z',
    ShippedDate: '1998-02-09T00:00:00.000Z',
    Freight: 143.28,
    ShipName: 'Seven Seas Imports',
    ShipAddress: '90 Wadhurst Rd.',
    ShipCity: 'London',
    ShipRegion: null,
    ShipCountry: 'UK',
  },

  {
    OrderID: 10870,
```

```
CustomerID: 'WOLZA',
OrderDate: '1998-02-04T00:00:00.000Z',
ShippedDate: '1998-02-13T00:00:00.000Z',
Freight: 12.04,
ShipName: 'Wolski Zajazd',
ShipAddress: 'ul. Filtrowa 68',
ShipCity: 'Warszawa',
ShipRegion: null,
ShipCountry: 'Poland',
},

{
  OrderID: 10871,
  CustomerID: 'BONAP',
  OrderDate: '1998-02-05T00:00:00.000Z',
  ShippedDate: '1998-02-10T00:00:00.000Z',
  Freight: 112.27,
  ShipName: 'Bon app',
  ShipAddress: '12, rue des Bouchers',
  ShipCity: 'Marseille',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10872,
  CustomerID: 'GODOS',
  OrderDate: '1998-02-05T00:00:00.000Z',
  ShippedDate: '1998-02-09T00:00:00.000Z',
  Freight: 175.32,
  ShipName: 'Godos Cocina Típica',
  ShipAddress: 'C/ Romero, 33',
  ShipCity: 'Sevilla',
  ShipRegion: null,
  ShipCountry: 'Spain',
},

{
  OrderID: 10873,
  CustomerID: 'WILMK',
  OrderDate: '1998-02-06T00:00:00.000Z',
  ShippedDate: '1998-02-09T00:00:00.000Z',
  Freight: 0.82,
  ShipName: 'Wilman Kala',
  ShipAddress: 'Keskuskatu 45',
  ShipCity: 'Helsinki',
  ShipRegion: null,
  ShipCountry: 'Finland',
},

{
  OrderID: 10874,
  CustomerID: 'GODOS',
  OrderDate: '1998-02-06T00:00:00.000Z',
  ShippedDate: '1998-02-11T00:00:00.000Z',
  Freight: 19.58,
  ShipName: 'Godos Cocina Típica',
```

```
    ShipAddress: 'C/ Romero, 33',
    ShipCity: 'Sevilla',
    ShipRegion: null,
    ShipCountry: 'Spain',
  },

  {
    OrderID: 10875,
    CustomerID: 'BERGS',
    OrderDate: '1998-02-06T00:00:00.000Z',
    ShippedDate: '1998-03-03T00:00:00.000Z',
    Freight: 32.37,
    ShipName: 'Berglunds snabbköp',
    ShipAddress: 'Berguvsvägen 8',
    ShipCity: 'Luleå',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },

  {
    OrderID: 10876,
    CustomerID: 'BONAP',
    OrderDate: '1998-02-09T00:00:00.000Z',
    ShippedDate: '1998-02-12T00:00:00.000Z',
    Freight: 60.42,
    ShipName: 'Bon app',
    ShipAddress: '12, rue des Bouchers',
    ShipCity: 'Marseille',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10877,
    CustomerID: 'RICAR',
    OrderDate: '1998-02-09T00:00:00.000Z',
    ShippedDate: '1998-02-19T00:00:00.000Z',
    Freight: 38.06,
    ShipName: 'Ricardo Adocicados',
    ShipAddress: 'Av. Copacabana, 267',
    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10878,
    CustomerID: 'QUICK',
    OrderDate: '1998-02-10T00:00:00.000Z',
    ShippedDate: '1998-02-12T00:00:00.000Z',
    Freight: 46.69,
    ShipName: 'QUICK-Stop',
    ShipAddress: 'Taucherstraße 10',
    ShipCity: 'Cunewalde',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },
},
```

```
{
  OrderID: 10879,
  CustomerID: 'WILMK',
  OrderDate: '1998-02-10T00:00:00.000Z',
  ShippedDate: '1998-02-12T00:00:00.000Z',
  Freight: 8.5,
  ShipName: 'Wilman Kala',
  ShipAddress: 'Keskuskatu 45',
  ShipCity: 'Helsinki',
  ShipRegion: null,
  ShipCountry: 'Finland',
},

{
  OrderID: 10880,
  CustomerID: 'FOLKO',
  OrderDate: '1998-02-10T00:00:00.000Z',
  ShippedDate: '1998-02-18T00:00:00.000Z',
  Freight: 88.01,
  ShipName: 'Folk och fä HB',
  ShipAddress: 'Åkergatan 24',
  ShipCity: 'Bräcke',
  ShipRegion: null,
  ShipCountry: 'Sweden',
},

{
  OrderID: 10881,
  CustomerID: 'CACTU',
  OrderDate: '1998-02-11T00:00:00.000Z',
  ShippedDate: '1998-02-18T00:00:00.000Z',
  Freight: 2.84,
  ShipName: 'Cactus Comidas para llevar',
  ShipAddress: 'Cerrito 333',
  ShipCity: 'Buenos Aires',
  ShipRegion: null,
  ShipCountry: 'Argentina',
},

{
  OrderID: 10882,
  CustomerID: 'SAVEA',
  OrderDate: '1998-02-11T00:00:00.000Z',
  ShippedDate: '1998-02-20T00:00:00.000Z',
  Freight: 23.1,
  ShipName: 'Save-a-lot Markets',
  ShipAddress: '187 Suffolk Ln.',
  ShipCity: 'Boise',
  ShipRegion: 'ID',
  ShipCountry: 'USA',
},

{
  OrderID: 10883,
  CustomerID: 'LONEP',
  OrderDate: '1998-02-12T00:00:00.000Z',
```



```
ShippedDate: '1998-02-20T00:00:00.000Z',
Freight: 0.53,
ShipName: 'Lonesome Pine Restaurant',
ShipAddress: '89 Chiaroscuro Rd.',
ShipCity: 'Portland',
ShipRegion: 'OR',
ShipCountry: 'USA',
},

{
  OrderID: 10884,
  CustomerID: 'LETSS',
  OrderDate: '1998-02-12T00:00:00.000Z',
  ShippedDate: '1998-02-13T00:00:00.000Z',
  Freight: 90.97,
  ShipName: "Let' Stop N Shop",
  ShipAddress: '87 Polk St. Suite 5',
  ShipCity: 'San Francisco',
  ShipRegion: 'CA',
  ShipCountry: 'USA',
},

{
  OrderID: 10885,
  CustomerID: 'SUPRD',
  OrderDate: '1998-02-12T00:00:00.000Z',
  ShippedDate: '1998-02-18T00:00:00.000Z',
  Freight: 5.64,
  ShipName: 'Suprêmes délices',
  ShipAddress: 'Boulevard Tirou, 255',
  ShipCity: 'Charleroi',
  ShipRegion: null,
  ShipCountry: 'Belgium',
},

{
  OrderID: 10886,
  CustomerID: 'HANAR',
  OrderDate: '1998-02-13T00:00:00.000Z',
  ShippedDate: '1998-03-02T00:00:00.000Z',
  Freight: 4.99,
  ShipName: 'Hanari Carnes',
  ShipAddress: 'Rua do Paço, 67',
  ShipCity: 'Rio de Janeiro',
  ShipRegion: 'RJ',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10887,
  CustomerID: 'GALED',
  OrderDate: '1998-02-13T00:00:00.000Z',
  ShippedDate: '1998-02-16T00:00:00.000Z',
  Freight: 1.25,
  ShipName: 'Galería del gastronómo',
  ShipAddress: 'Rambla de Cataluña, 23',
  ShipCity: 'Barcelona',
```

```
    ShipRegion: null,
    ShipCountry: 'Spain',
  },

  {
    OrderID: 10888,
    CustomerID: 'GODOS',
    OrderDate: '1998-02-16T00:00:00.000Z',
    ShippedDate: '1998-02-23T00:00:00.000Z',
    Freight: 51.87,
    ShipName: 'Godos Cocina Típica',
    ShipAddress: 'C/ Romero, 33',
    ShipCity: 'Sevilla',
    ShipRegion: null,
    ShipCountry: 'Spain',
  },

  {
    OrderID: 10889,
    CustomerID: 'RATTC',
    OrderDate: '1998-02-16T00:00:00.000Z',
    ShippedDate: '1998-02-23T00:00:00.000Z',
    Freight: 280.61,
    ShipName: 'Rattlesnake Canyon Grocery',
    ShipAddress: '2817 Milton Dr.',
    ShipCity: 'Albuquerque',
    ShipRegion: 'NM',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10890,
    CustomerID: 'DUMON',
    OrderDate: '1998-02-16T00:00:00.000Z',
    ShippedDate: '1998-02-18T00:00:00.000Z',
    Freight: 32.76,
    ShipName: 'Du monde entier',
    ShipAddress: '67, rue des Cinquante Otages',
    ShipCity: 'Nantes',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10891,
    CustomerID: 'LEHMS',
    OrderDate: '1998-02-17T00:00:00.000Z',
    ShippedDate: '1998-02-19T00:00:00.000Z',
    Freight: 20.37,
    ShipName: 'Lehmanns Marktstand',
    ShipAddress: 'Magazinweg 7',
    ShipCity: 'Frankfurt a.M.',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
```

```
OrderID: 10892,
CustomerID: 'MAISD',
OrderDate: '1998-02-17T00:00:00.000Z',
ShippedDate: '1998-02-19T00:00:00.000Z',
Freight: 120.27,
ShipName: 'Maison Dewey',
ShipAddress: 'Rue Joseph-Bens 532',
ShipCity: 'Bruxelles',
ShipRegion: null,
ShipCountry: 'Belgium',
},

{
  OrderID: 10893,
  CustomerID: 'KOENE',
  OrderDate: '1998-02-18T00:00:00.000Z',
  ShippedDate: '1998-02-20T00:00:00.000Z',
  Freight: 77.78,
  ShipName: 'Königlich Essen',
  ShipAddress: 'Maubelstr. 90',
  ShipCity: 'Brandenburg',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10894,
  CustomerID: 'SAVEA',
  OrderDate: '1998-02-18T00:00:00.000Z',
  ShippedDate: '1998-02-20T00:00:00.000Z',
  Freight: 116.13,
  ShipName: 'Save-a-lot Markets',
  ShipAddress: '187 Suffolk Ln.',
  ShipCity: 'Boise',
  ShipRegion: 'ID',
  ShipCountry: 'USA',
},

{
  OrderID: 10895,
  CustomerID: 'ERNSH',
  OrderDate: '1998-02-18T00:00:00.000Z',
  ShippedDate: '1998-02-23T00:00:00.000Z',
  Freight: 162.75,
  ShipName: 'Ernst Handel',
  ShipAddress: 'Kirchgasse 6',
  ShipCity: 'Graz',
  ShipRegion: null,
  ShipCountry: 'Austria',
},

{
  OrderID: 10896,
  CustomerID: 'MAISD',
  OrderDate: '1998-02-19T00:00:00.000Z',
  ShippedDate: '1998-02-27T00:00:00.000Z',
  Freight: 32.45,
```

```
    ShipName: 'Maison Dewey',
    ShipAddress: 'Rue Joseph-Bens 532',
    ShipCity: 'Bruxelles',
    ShipRegion: null,
    ShipCountry: 'Belgium',
  },

  {
    OrderID: 10897,
    CustomerID: 'HUNGO',
    OrderDate: '1998-02-19T00:00:00.000Z',
    ShippedDate: '1998-02-25T00:00:00.000Z',
    Freight: 603.54,
    ShipName: 'Hungry Owl All-Night Grocers',
    ShipAddress: '8 Johnstown Road',
    ShipCity: 'Cork',
    ShipRegion: 'Co. Cork',
    ShipCountry: 'Ireland',
  },

  {
    OrderID: 10898,
    CustomerID: 'OCEAN',
    OrderDate: '1998-02-20T00:00:00.000Z',
    ShippedDate: '1998-03-06T00:00:00.000Z',
    Freight: 1.27,
    ShipName: 'Océano Atlántico Ltda.',
    ShipAddress: 'Ing. Gustavo Moncada 8585 Piso 20-A',
    ShipCity: 'Buenos Aires',
    ShipRegion: null,
    ShipCountry: 'Argentina',
  },

  {
    OrderID: 10899,
    CustomerID: 'LILAS',
    OrderDate: '1998-02-20T00:00:00.000Z',
    ShippedDate: '1998-02-26T00:00:00.000Z',
    Freight: 1.21,
    ShipName: 'LILA-Supermercado',
    ShipAddress: 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    ShipCity: 'Barquisimeto',
    ShipRegion: 'Lara',
    ShipCountry: 'Venezuela',
  },

  {
    OrderID: 10900,
    CustomerID: 'WELLI',
    OrderDate: '1998-02-20T00:00:00.000Z',
    ShippedDate: '1998-03-04T00:00:00.000Z',
    Freight: 1.66,
    ShipName: 'Wellington Importadora',
    ShipAddress: 'Rua do Mercado, 12',
    ShipCity: 'Resende',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
```

```
},  
  
{  
  OrderID: 10901,  
  CustomerID: 'HILAA',  
  OrderDate: '1998-02-23T00:00:00.000Z',  
  ShippedDate: '1998-02-26T00:00:00.000Z',  
  Freight: 62.09,  
  ShipName: 'HILARION-Abastos',  
  ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',  
  ShipCity: 'San Cristóbal',  
  ShipRegion: 'Táchira',  
  ShipCountry: 'Venezuela',  
},  
  
{  
  OrderID: 10902,  
  CustomerID: 'FOLKO',  
  OrderDate: '1998-02-23T00:00:00.000Z',  
  ShippedDate: '1998-03-03T00:00:00.000Z',  
  Freight: 44.15,  
  ShipName: 'Folk och fä HB',  
  ShipAddress: 'Åkergatan 24',  
  ShipCity: 'Bräcke',  
  ShipRegion: null,  
  ShipCountry: 'Sweden',  
},  
  
{  
  OrderID: 10903,  
  CustomerID: 'HANAR',  
  OrderDate: '1998-02-24T00:00:00.000Z',  
  ShippedDate: '1998-03-04T00:00:00.000Z',  
  Freight: 36.71,  
  ShipName: 'Hanari Carnes',  
  ShipAddress: 'Rua do Paço, 67',  
  ShipCity: 'Rio de Janeiro',  
  ShipRegion: 'RJ',  
  ShipCountry: 'Brazil',  
},  
  
{  
  OrderID: 10904,  
  CustomerID: 'WHITC',  
  OrderDate: '1998-02-24T00:00:00.000Z',  
  ShippedDate: '1998-02-27T00:00:00.000Z',  
  Freight: 162.95,  
  ShipName: 'White Clover Markets',  
  ShipAddress: '1029 - 12th Ave. S.',  
  ShipCity: 'Seattle',  
  ShipRegion: 'WA',  
  ShipCountry: 'USA',  
},  
  
{  
  OrderID: 10905,  
  CustomerID: 'WELLI',
```

```
OrderDate: '1998-02-24T00:00:00.000Z',
ShippedDate: '1998-03-06T00:00:00.000Z',
Freight: 13.72,
ShipName: 'Wellington Importadora',
ShipAddress: 'Rua do Mercado, 12',
ShipCity: 'Resende',
ShipRegion: 'SP',
ShipCountry: 'Brazil',
},

{
  OrderID: 10906,
  CustomerID: 'WOLZA',
  OrderDate: '1998-02-25T00:00:00.000Z',
  ShippedDate: '1998-03-03T00:00:00.000Z',
  Freight: 26.29,
  ShipName: 'Wolski Zajazd',
  ShipAddress: 'ul. Filtrowa 68',
  ShipCity: 'Warszawa',
  ShipRegion: null,
  ShipCountry: 'Poland',
},

{
  OrderID: 10907,
  CustomerID: 'SPECB',
  OrderDate: '1998-02-25T00:00:00.000Z',
  ShippedDate: '1998-02-27T00:00:00.000Z',
  Freight: 9.19,
  ShipName: 'Spécialités du monde',
  ShipAddress: '25, rue Lauriston',
  ShipCity: 'Paris',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10908,
  CustomerID: 'REGGC',
  OrderDate: '1998-02-26T00:00:00.000Z',
  ShippedDate: '1998-03-06T00:00:00.000Z',
  Freight: 32.96,
  ShipName: 'Reggiani Caseifici',
  ShipAddress: 'Strada Provinciale 124',
  ShipCity: 'Reggio Emilia',
  ShipRegion: null,
  ShipCountry: 'Italy',
},

{
  OrderID: 10909,
  CustomerID: 'SANTG',
  OrderDate: '1998-02-26T00:00:00.000Z',
  ShippedDate: '1998-03-10T00:00:00.000Z',
  Freight: 53.05,
  ShipName: 'Santé Gourmet',
  ShipAddress: 'Erling Skakkes gate 78',
```

```
    ShipCity: 'Stavern',
    ShipRegion: null,
    ShipCountry: 'Norway',
  },

  {
    OrderID: 10910,
    CustomerID: 'WILMK',
    OrderDate: '1998-02-26T00:00:00.000Z',
    ShippedDate: '1998-03-04T00:00:00.000Z',
    Freight: 38.11,
    ShipName: 'Wilman Kala',
    ShipAddress: 'Keskuskatu 45',
    ShipCity: 'Helsinki',
    ShipRegion: null,
    ShipCountry: 'Finland',
  },

  {
    OrderID: 10911,
    CustomerID: 'GODOS',
    OrderDate: '1998-02-26T00:00:00.000Z',
    ShippedDate: '1998-03-05T00:00:00.000Z',
    Freight: 38.19,
    ShipName: 'Godos Cocina Típica',
    ShipAddress: 'C/ Romero, 33',
    ShipCity: 'Sevilla',
    ShipRegion: null,
    ShipCountry: 'Spain',
  },

  {
    OrderID: 10912,
    CustomerID: 'HUNGO',
    OrderDate: '1998-02-26T00:00:00.000Z',
    ShippedDate: '1998-03-18T00:00:00.000Z',
    Freight: 580.91,
    ShipName: 'Hungry Owl All-Night Grocers',
    ShipAddress: '8 Johnstown Road',
    ShipCity: 'Cork',
    ShipRegion: 'Co. Cork',
    ShipCountry: 'Ireland',
  },

  {
    OrderID: 10913,
    CustomerID: 'QUEEN',
    OrderDate: '1998-02-26T00:00:00.000Z',
    ShippedDate: '1998-03-04T00:00:00.000Z',
    Freight: 33.05,
    ShipName: 'Queen Cozinha',
    ShipAddress: 'Alameda dos Canários, 891',
    ShipCity: 'Sao Paulo',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },
```

```
{
  OrderID: 10914,
  CustomerID: 'QUEEN',
  OrderDate: '1998-02-27T00:00:00.000Z',
  ShippedDate: '1998-03-02T00:00:00.000Z',
  Freight: 21.19,
  ShipName: 'Queen Cozinha',
  ShipAddress: 'Alameda dos Canários, 891',
  ShipCity: 'Sao Paulo',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10915,
  CustomerID: 'TORTU',
  OrderDate: '1998-02-27T00:00:00.000Z',
  ShippedDate: '1998-03-02T00:00:00.000Z',
  Freight: 3.51,
  ShipName: 'Tortuga Restaurante',
  ShipAddress: 'Avda. Azteca 123',
  ShipCity: 'México D.F.',
  ShipRegion: null,
  ShipCountry: 'Mexico',
},

{
  OrderID: 10916,
  CustomerID: 'RANCH',
  OrderDate: '1998-02-27T00:00:00.000Z',
  ShippedDate: '1998-03-09T00:00:00.000Z',
  Freight: 63.77,
  ShipName: 'Rancho grande',
  ShipAddress: 'Av. del Libertador 900',
  ShipCity: 'Buenos Aires',
  ShipRegion: null,
  ShipCountry: 'Argentina',
},

{
  OrderID: 10917,
  CustomerID: 'ROMEY',
  OrderDate: '1998-03-02T00:00:00.000Z',
  ShippedDate: '1998-03-11T00:00:00.000Z',
  Freight: 8.29,
  ShipName: 'Romero y tomillo',
  ShipAddress: 'Gran Vía, 1',
  ShipCity: 'Madrid',
  ShipRegion: null,
  ShipCountry: 'Spain',
},

{
  OrderID: 10918,
  CustomerID: 'BOTTM',
  OrderDate: '1998-03-02T00:00:00.000Z',
  ShippedDate: '1998-03-11T00:00:00.000Z',
```



```
Freight: 48.83,
ShipName: 'Bottom-Dollar Markets',
ShipAddress: '23 Tsawassen Blvd.',
ShipCity: 'Tsawassen',
ShipRegion: 'BC',
ShipCountry: 'Canada',
},

{
  OrderID: 10919,
  CustomerID: 'LINOD',
  OrderDate: '1998-03-02T00:00:00.000Z',
  ShippedDate: '1998-03-04T00:00:00.000Z',
  Freight: 19.8,
  ShipName: 'LINO-Delicatesses',
  ShipAddress: 'Ave. 5 de Mayo Porlamar',
  ShipCity: 'I. de Margarita',
  ShipRegion: 'Nueva Esparta',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10920,
  CustomerID: 'AROUT',
  OrderDate: '1998-03-03T00:00:00.000Z',
  ShippedDate: '1998-03-09T00:00:00.000Z',
  Freight: 29.61,
  ShipName: 'Around the Horn',
  ShipAddress: 'Brook Farm Stratford St. Mary',
  ShipCity: 'Colchester',
  ShipRegion: 'Essex',
  ShipCountry: 'UK',
},

{
  OrderID: 10921,
  CustomerID: 'VAFFE',
  OrderDate: '1998-03-03T00:00:00.000Z',
  ShippedDate: '1998-03-09T00:00:00.000Z',
  Freight: 176.48,
  ShipName: 'Vaffeljernet',
  ShipAddress: 'Smagsloget 45',
  ShipCity: 'Århus',
  ShipRegion: null,
  ShipCountry: 'Denmark',
},

{
  OrderID: 10922,
  CustomerID: 'HANAR',
  OrderDate: '1998-03-03T00:00:00.000Z',
  ShippedDate: '1998-03-05T00:00:00.000Z',
  Freight: 62.74,
  ShipName: 'Hanari Carnes',
  ShipAddress: 'Rua do Paço, 67',
  ShipCity: 'Rio de Janeiro',
  ShipRegion: 'RJ',
```

```
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10923,
    CustomerID: 'LAMAI',
    OrderDate: '1998-03-03T00:00:00.000Z',
    ShippedDate: '1998-03-13T00:00:00.000Z',
    Freight: 68.26,
    ShipName: "La maison d'Asie",
    ShipAddress: '1 rue Alsace-Lorraine',
    ShipCity: 'Toulouse',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10924,
    CustomerID: 'BERGS',
    OrderDate: '1998-03-04T00:00:00.000Z',
    ShippedDate: '1998-04-08T00:00:00.000Z',
    Freight: 151.52,
    ShipName: 'Berglunds snabbköp',
    ShipAddress: 'Berguvsvägen 8',
    ShipCity: 'Luleå',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },

  {
    OrderID: 10925,
    CustomerID: 'HANAR',
    OrderDate: '1998-03-04T00:00:00.000Z',
    ShippedDate: '1998-03-13T00:00:00.000Z',
    Freight: 2.27,
    ShipName: 'Hanari Carnes',
    ShipAddress: 'Rua do Paço, 67',
    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10926,
    CustomerID: 'ANATR',
    OrderDate: '1998-03-04T00:00:00.000Z',
    ShippedDate: '1998-03-11T00:00:00.000Z',
    Freight: 39.92,
    ShipName: 'Ana Trujillo Emparedados y helados',
    ShipAddress: 'Avda. de la Constitución 2222',
    ShipCity: 'México D.F.',
    ShipRegion: null,
    ShipCountry: 'Mexico',
  },

  {
    OrderID: 10927,
```

```
CustomerID: 'LACOR',
OrderDate: '1998-03-05T00:00:00.000Z',
ShippedDate: '1998-04-08T00:00:00.000Z',
Freight: 19.79,
ShipName: "La corne d'abondance",
ShipAddress: "67, avenue de l'Europe",
ShipCity: 'Versailles',
ShipRegion: null,
ShipCountry: 'France',
},

{
  OrderID: 10928,
  CustomerID: 'GALED',
  OrderDate: '1998-03-05T00:00:00.000Z',
  ShippedDate: '1998-03-18T00:00:00.000Z',
  Freight: 1.36,
  ShipName: 'Galería del gastronómo',
  ShipAddress: 'Rambla de Cataluña, 23',
  ShipCity: 'Barcelona',
  ShipRegion: null,
  ShipCountry: 'Spain',
},

{
  OrderID: 10929,
  CustomerID: 'FRANK',
  OrderDate: '1998-03-05T00:00:00.000Z',
  ShippedDate: '1998-03-12T00:00:00.000Z',
  Freight: 33.93,
  ShipName: 'Frankenversand',
  ShipAddress: 'Berliner Platz 43',
  ShipCity: 'München',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10930,
  CustomerID: 'SUPRD',
  OrderDate: '1998-03-06T00:00:00.000Z',
  ShippedDate: '1998-03-18T00:00:00.000Z',
  Freight: 15.55,
  ShipName: 'Suprêmes délices',
  ShipAddress: 'Boulevard Tirou, 255',
  ShipCity: 'Charleroi',
  ShipRegion: null,
  ShipCountry: 'Belgium',
},

{
  OrderID: 10931,
  CustomerID: 'RICSU',
  OrderDate: '1998-03-06T00:00:00.000Z',
  ShippedDate: '1998-03-19T00:00:00.000Z',
  Freight: 13.6,
  ShipName: 'Richter Supermarkt',
```

```
    ShipAddress: 'Starenweg 5',
    ShipCity: 'Genève',
    ShipRegion: null,
    ShipCountry: 'Switzerland',
  },

  {
    OrderID: 10932,
    CustomerID: 'BONAP',
    OrderDate: '1998-03-06T00:00:00.000Z',
    ShippedDate: '1998-03-24T00:00:00.000Z',
    Freight: 134.64,
    ShipName: 'Bon app',
    ShipAddress: '12, rue des Bouchers',
    ShipCity: 'Marseille',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10933,
    CustomerID: 'ISLAT',
    OrderDate: '1998-03-06T00:00:00.000Z',
    ShippedDate: '1998-03-16T00:00:00.000Z',
    Freight: 54.15,
    ShipName: 'Island Trading',
    ShipAddress: 'Garden House Crowther Way',
    ShipCity: 'Cowes',
    ShipRegion: 'Isle of Wight',
    ShipCountry: 'UK',
  },

  {
    OrderID: 10934,
    CustomerID: 'LEHMS',
    OrderDate: '1998-03-09T00:00:00.000Z',
    ShippedDate: '1998-03-12T00:00:00.000Z',
    Freight: 32.01,
    ShipName: 'Lehmanns Marktstand',
    ShipAddress: 'Magazinweg 7',
    ShipCity: 'Frankfurt a.M.',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10935,
    CustomerID: 'WELLI',
    OrderDate: '1998-03-09T00:00:00.000Z',
    ShippedDate: '1998-03-18T00:00:00.000Z',
    Freight: 47.59,
    ShipName: 'Wellington Importadora',
    ShipAddress: 'Rua do Mercado, 12',
    ShipCity: 'Resende',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },
},
```

```
{
  OrderID: 10936,
  CustomerID: 'GREAL',
  OrderDate: '1998-03-09T00:00:00.000Z',
  ShippedDate: '1998-03-18T00:00:00.000Z',
  Freight: 33.68,
  ShipName: 'Great Lakes Food Market',
  ShipAddress: '2732 Baker Blvd.',
  ShipCity: 'Eugene',
  ShipRegion: 'OR',
  ShipCountry: 'USA',
},

{
  OrderID: 10937,
  CustomerID: 'CACTU',
  OrderDate: '1998-03-10T00:00:00.000Z',
  ShippedDate: '1998-03-13T00:00:00.000Z',
  Freight: 31.51,
  ShipName: 'Cactus Comidas para llevar',
  ShipAddress: 'Cerrito 333',
  ShipCity: 'Buenos Aires',
  ShipRegion: null,
  ShipCountry: 'Argentina',
},

{
  OrderID: 10938,
  CustomerID: 'QUICK',
  OrderDate: '1998-03-10T00:00:00.000Z',
  ShippedDate: '1998-03-16T00:00:00.000Z',
  Freight: 31.89,
  ShipName: 'QUICK-Stop',
  ShipAddress: 'Taucherstraße 10',
  ShipCity: 'Cunewalde',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10939,
  CustomerID: 'MAGAA',
  OrderDate: '1998-03-10T00:00:00.000Z',
  ShippedDate: '1998-03-13T00:00:00.000Z',
  Freight: 76.33,
  ShipName: 'Magazzini Alimentari Riuniti',
  ShipAddress: 'Via Ludovico il Moro 22',
  ShipCity: 'Bergamo',
  ShipRegion: null,
  ShipCountry: 'Italy',
},

{
  OrderID: 10940,
  CustomerID: 'BONAP',
  OrderDate: '1998-03-11T00:00:00.000Z',
```

```
ShippedDate: '1998-03-23T00:00:00.000Z',
Freight: 19.77,
ShipName: 'Bon app',
ShipAddress: '12, rue des Bouchers',
ShipCity: 'Marseille',
ShipRegion: null,
ShipCountry: 'France',
},

{
  OrderID: 10941,
  CustomerID: 'SAVEA',
  OrderDate: '1998-03-11T00:00:00.000Z',
  ShippedDate: '1998-03-20T00:00:00.000Z',
  Freight: 400.81,
  ShipName: 'Save-a-lot Markets',
  ShipAddress: '187 Suffolk Ln.',
  ShipCity: 'Boise',
  ShipRegion: 'ID',
  ShipCountry: 'USA',
},

{
  OrderID: 10942,
  CustomerID: 'REGGC',
  OrderDate: '1998-03-11T00:00:00.000Z',
  ShippedDate: '1998-03-18T00:00:00.000Z',
  Freight: 17.95,
  ShipName: 'Reggiani Caseifici',
  ShipAddress: 'Strada Provinciale 124',
  ShipCity: 'Reggio Emilia',
  ShipRegion: null,
  ShipCountry: 'Italy',
},

{
  OrderID: 10943,
  CustomerID: 'BSBEV',
  OrderDate: '1998-03-11T00:00:00.000Z',
  ShippedDate: '1998-03-19T00:00:00.000Z',
  Freight: 2.17,
  ShipName: "B' Beverages",
  ShipAddress: 'Fauntleroy Circus',
  ShipCity: 'London',
  ShipRegion: null,
  ShipCountry: 'UK',
},

{
  OrderID: 10944,
  CustomerID: 'BOTTM',
  OrderDate: '1998-03-12T00:00:00.000Z',
  ShippedDate: '1998-03-13T00:00:00.000Z',
  Freight: 52.92,
  ShipName: 'Bottom-Dollar Markets',
  ShipAddress: '23 Tsawassen Blvd.',
  ShipCity: 'Tsawassen',
```

```
    ShipRegion: 'BC',
    ShipCountry: 'Canada',
  },
  {
    OrderID: 10945,
    CustomerID: 'MORGK',
    OrderDate: '1998-03-12T00:00:00.000Z',
    ShippedDate: '1998-03-18T00:00:00.000Z',
    Freight: 10.22,
    ShipName: 'Morgenstern Gesundkost',
    ShipAddress: 'Heerstr. 22',
    ShipCity: 'Leipzig',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },
  {
    OrderID: 10946,
    CustomerID: 'VAFFE',
    OrderDate: '1998-03-12T00:00:00.000Z',
    ShippedDate: '1998-03-19T00:00:00.000Z',
    Freight: 27.2,
    ShipName: 'Vaffeljernet',
    ShipAddress: 'Smagsloget 45',
    ShipCity: 'Århus',
    ShipRegion: null,
    ShipCountry: 'Denmark',
  },
  {
    OrderID: 10947,
    CustomerID: 'BSBEV',
    OrderDate: '1998-03-13T00:00:00.000Z',
    ShippedDate: '1998-03-16T00:00:00.000Z',
    Freight: 3.26,
    ShipName: 'B' Beverages'',
    ShipAddress: 'Fauntleroy Circus',
    ShipCity: 'London',
    ShipRegion: null,
    ShipCountry: 'UK',
  },
  {
    OrderID: 10948,
    CustomerID: 'GODOS',
    OrderDate: '1998-03-13T00:00:00.000Z',
    ShippedDate: '1998-03-19T00:00:00.000Z',
    Freight: 23.39,
    ShipName: 'Godos Cocina Típica',
    ShipAddress: 'C/ Romero, 33',
    ShipCity: 'Sevilla',
    ShipRegion: null,
    ShipCountry: 'Spain',
  },
  {
```

```
OrderID: 10949,
CustomerID: 'BOTTM',
OrderDate: '1998-03-13T00:00:00.000Z',
ShippedDate: '1998-03-17T00:00:00.000Z',
Freight: 74.44,
ShipName: 'Bottom-Dollar Markets',
ShipAddress: '23 Tsawassen Blvd.',
ShipCity: 'Tsawassen',
ShipRegion: 'BC',
ShipCountry: 'Canada',
},

{
  OrderID: 10950,
  CustomerID: 'MAGAA',
  OrderDate: '1998-03-16T00:00:00.000Z',
  ShippedDate: '1998-03-23T00:00:00.000Z',
  Freight: 2.5,
  ShipName: 'Magazzini Alimentari Riuniti',
  ShipAddress: 'Via Ludovico il Moro 22',
  ShipCity: 'Bergamo',
  ShipRegion: null,
  ShipCountry: 'Italy',
},

{
  OrderID: 10951,
  CustomerID: 'RICSU',
  OrderDate: '1998-03-16T00:00:00.000Z',
  ShippedDate: '1998-04-07T00:00:00.000Z',
  Freight: 30.85,
  ShipName: 'Richter Supermarkt',
  ShipAddress: 'Starenweg 5',
  ShipCity: 'Genève',
  ShipRegion: null,
  ShipCountry: 'Switzerland',
},

{
  OrderID: 10952,
  CustomerID: 'ALFKI',
  OrderDate: '1998-03-16T00:00:00.000Z',
  ShippedDate: '1998-03-24T00:00:00.000Z',
  Freight: 40.42,
  ShipName: 'Alfred Futterkiste',
  ShipAddress: 'Obere Str. 57',
  ShipCity: 'Berlin',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10953,
  CustomerID: 'AROUT',
  OrderDate: '1998-03-16T00:00:00.000Z',
  ShippedDate: '1998-03-25T00:00:00.000Z',
  Freight: 23.72,
```



```
    ShipName: 'Around the Horn',
    ShipAddress: 'Brook Farm Stratford St. Mary',
    ShipCity: 'Colchester',
    ShipRegion: 'Essex',
    ShipCountry: 'UK',
  },

  {
    OrderID: 10954,
    CustomerID: 'LINOD',
    OrderDate: '1998-03-17T00:00:00.000Z',
    ShippedDate: '1998-03-20T00:00:00.000Z',
    Freight: 27.91,
    ShipName: 'LINO-Delicateses',
    ShipAddress: 'Ave. 5 de Mayo Porlamar',
    ShipCity: 'I. de Margarita',
    ShipRegion: 'Nueva Esparta',
    ShipCountry: 'Venezuela',
  },

  {
    OrderID: 10955,
    CustomerID: 'FOLKO',
    OrderDate: '1998-03-17T00:00:00.000Z',
    ShippedDate: '1998-03-20T00:00:00.000Z',
    Freight: 3.26,
    ShipName: 'Folk och fä HB',
    ShipAddress: 'Åkergatan 24',
    ShipCity: 'Bräcke',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },

  {
    OrderID: 10956,
    CustomerID: 'BLAUS',
    OrderDate: '1998-03-17T00:00:00.000Z',
    ShippedDate: '1998-03-20T00:00:00.000Z',
    Freight: 44.65,
    ShipName: 'Blauer See Delikatessen',
    ShipAddress: 'Forsterstr. 57',
    ShipCity: 'Mannheim',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10957,
    CustomerID: 'HILAA',
    OrderDate: '1998-03-18T00:00:00.000Z',
    ShippedDate: '1998-03-27T00:00:00.000Z',
    Freight: 105.36,
    ShipName: 'HILARION-Abastos',
    ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipCity: 'San Cristóbal',
    ShipRegion: 'Táchira',
    ShipCountry: 'Venezuela',
  },
```

```
},  
  
{  
  OrderID: 10958,  
  CustomerID: 'OCEAN',  
  OrderDate: '1998-03-18T00:00:00.000Z',  
  ShippedDate: '1998-03-27T00:00:00.000Z',  
  Freight: 49.56,  
  ShipName: 'Océano Atlántico Ltda.',  
  ShipAddress: 'Ing. Gustavo Moncada 8585 Piso 20-A',  
  ShipCity: 'Buenos Aires',  
  ShipRegion: null,  
  ShipCountry: 'Argentina',  
},  
  
{  
  OrderID: 10959,  
  CustomerID: 'GOURL',  
  OrderDate: '1998-03-18T00:00:00.000Z',  
  ShippedDate: '1998-03-23T00:00:00.000Z',  
  Freight: 4.98,  
  ShipName: 'Gourmet Lanchonetes',  
  ShipAddress: 'Av. Brasil, 442',  
  ShipCity: 'Campinas',  
  ShipRegion: 'SP',  
  ShipCountry: 'Brazil',  
},  
  
{  
  OrderID: 10960,  
  CustomerID: 'HILAA',  
  OrderDate: '1998-03-19T00:00:00.000Z',  
  ShippedDate: '1998-04-08T00:00:00.000Z',  
  Freight: 2.08,  
  ShipName: 'HILARION-Abastos',  
  ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',  
  ShipCity: 'San Cristóbal',  
  ShipRegion: 'Táchira',  
  ShipCountry: 'Venezuela',  
},  
  
{  
  OrderID: 10961,  
  CustomerID: 'QUEEN',  
  OrderDate: '1998-03-19T00:00:00.000Z',  
  ShippedDate: '1998-03-30T00:00:00.000Z',  
  Freight: 104.47,  
  ShipName: 'Queen Cozinha',  
  ShipAddress: 'Alameda dos Canários, 891',  
  ShipCity: 'Sao Paulo',  
  ShipRegion: 'SP',  
  ShipCountry: 'Brazil',  
},  
  
{  
  OrderID: 10962,  
  CustomerID: 'QUICK',
```

```
OrderDate: '1998-03-19T00:00:00.000Z',
ShippedDate: '1998-03-23T00:00:00.000Z',
Freight: 275.79,
ShipName: 'QUICK-Stop',
ShipAddress: 'Taucherstraße 10',
ShipCity: 'Cunewalde',
ShipRegion: null,
ShipCountry: 'Germany',
},

{
  OrderID: 10963,
  CustomerID: 'FURIB',
  OrderDate: '1998-03-19T00:00:00.000Z',
  ShippedDate: '1998-03-26T00:00:00.000Z',
  Freight: 2.7,
  ShipName: 'Furia Bacalhau e Frutos do Mar',
  ShipAddress: 'Jardim das rosas n. 32',
  ShipCity: 'Lisboa',
  ShipRegion: null,
  ShipCountry: 'Portugal',
},

{
  OrderID: 10964,
  CustomerID: 'SPECB',
  OrderDate: '1998-03-20T00:00:00.000Z',
  ShippedDate: '1998-03-24T00:00:00.000Z',
  Freight: 87.38,
  ShipName: 'Spécialités du monde',
  ShipAddress: '25, rue Lauriston',
  ShipCity: 'Paris',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10965,
  CustomerID: 'OLDWO',
  OrderDate: '1998-03-20T00:00:00.000Z',
  ShippedDate: '1998-03-30T00:00:00.000Z',
  Freight: 144.38,
  ShipName: 'Old World Delicatessen',
  ShipAddress: '2743 Bering St.',
  ShipCity: 'Anchorage',
  ShipRegion: 'AK',
  ShipCountry: 'USA',
},

{
  OrderID: 10966,
  CustomerID: 'CHOPS',
  OrderDate: '1998-03-20T00:00:00.000Z',
  ShippedDate: '1998-04-08T00:00:00.000Z',
  Freight: 27.19,
  ShipName: 'Chop-suey Chinese',
  ShipAddress: 'Hauptstr. 31',
```

```
    ShipCity: 'Bern',
    ShipRegion: null,
    ShipCountry: 'Switzerland',
  },

  {
    OrderID: 10967,
    CustomerID: 'TOMSP',
    OrderDate: '1998-03-23T00:00:00.000Z',
    ShippedDate: '1998-04-02T00:00:00.000Z',
    Freight: 62.22,
    ShipName: 'Toms Spezialitäten',
    ShipAddress: 'Luisenstr. 48',
    ShipCity: 'Münster',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10968,
    CustomerID: 'ERNSH',
    OrderDate: '1998-03-23T00:00:00.000Z',
    ShippedDate: '1998-04-01T00:00:00.000Z',
    Freight: 74.6,
    ShipName: 'Ernst Handel',
    ShipAddress: 'Kirchgasse 6',
    ShipCity: 'Graz',
    ShipRegion: null,
    ShipCountry: 'Austria',
  },

  {
    OrderID: 10969,
    CustomerID: 'COMMI',
    OrderDate: '1998-03-23T00:00:00.000Z',
    ShippedDate: '1998-03-30T00:00:00.000Z',
    Freight: 0.21,
    ShipName: 'Comércio Mineiro',
    ShipAddress: 'Av. dos Lusíadas, 23',
    ShipCity: 'Sao Paulo',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10970,
    CustomerID: 'BOLID',
    OrderDate: '1998-03-24T00:00:00.000Z',
    ShippedDate: '1998-04-24T00:00:00.000Z',
    Freight: 16.16,
    ShipName: 'Bólido Comidas preparadas',
    ShipAddress: 'C/ Araquil, 67',
    ShipCity: 'Madrid',
    ShipRegion: null,
    ShipCountry: 'Spain',
  },
},
```

```
{
  OrderID: 10971,
  CustomerID: 'FRANR',
  OrderDate: '1998-03-24T00:00:00.000Z',
  ShippedDate: '1998-04-02T00:00:00.000Z',
  Freight: 121.82,
  ShipName: 'France restauration',
  ShipAddress: '54, rue Royale',
  ShipCity: 'Nantes',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10972,
  CustomerID: 'LACOR',
  OrderDate: '1998-03-24T00:00:00.000Z',
  ShippedDate: '1998-03-26T00:00:00.000Z',
  Freight: 0.02,
  ShipName: "La corne d'abondance",
  ShipAddress: "67, avenue de l'Europe",
  ShipCity: 'Versailles',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10973,
  CustomerID: 'LACOR',
  OrderDate: '1998-03-24T00:00:00.000Z',
  ShippedDate: '1998-03-27T00:00:00.000Z',
  Freight: 15.17,
  ShipName: "La corne d'abondance",
  ShipAddress: "67, avenue de l'Europe",
  ShipCity: 'Versailles',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10974,
  CustomerID: 'SPLIR',
  OrderDate: '1998-03-25T00:00:00.000Z',
  ShippedDate: '1998-04-03T00:00:00.000Z',
  Freight: 12.96,
  ShipName: 'Split Rail Beer & Ale',
  ShipAddress: 'P.O. Box 555',
  ShipCity: 'Lander',
  ShipRegion: 'WY',
  ShipCountry: 'USA',
},

{
  OrderID: 10975,
  CustomerID: 'BOTTM',
  OrderDate: '1998-03-25T00:00:00.000Z',
  ShippedDate: '1998-03-27T00:00:00.000Z',
```

```
Freight: 32.27,
ShipName: 'Bottom-Dollar Markets',
ShipAddress: '23 Tsawassen Blvd.',
ShipCity: 'Tsawassen',
ShipRegion: 'BC',
ShipCountry: 'Canada',
},

{
  OrderID: 10976,
  CustomerID: 'HILAA',
  OrderDate: '1998-03-25T00:00:00.000Z',
  ShippedDate: '1998-04-03T00:00:00.000Z',
  Freight: 37.97,
  ShipName: 'HILARION-Abastos',
  ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
  ShipCity: 'San Cristóbal',
  ShipRegion: 'Táchira',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10977,
  CustomerID: 'FOLKO',
  OrderDate: '1998-03-26T00:00:00.000Z',
  ShippedDate: '1998-04-10T00:00:00.000Z',
  Freight: 208.5,
  ShipName: 'Folk och fä HB',
  ShipAddress: 'Åkergatan 24',
  ShipCity: 'Bräcke',
  ShipRegion: null,
  ShipCountry: 'Sweden',
},

{
  OrderID: 10978,
  CustomerID: 'MAISD',
  OrderDate: '1998-03-26T00:00:00.000Z',
  ShippedDate: '1998-04-23T00:00:00.000Z',
  Freight: 32.82,
  ShipName: 'Maison Dewey',
  ShipAddress: 'Rue Joseph-Bens 532',
  ShipCity: 'Bruxelles',
  ShipRegion: null,
  ShipCountry: 'Belgium',
},

{
  OrderID: 10979,
  CustomerID: 'ERNSH',
  OrderDate: '1998-03-26T00:00:00.000Z',
  ShippedDate: '1998-03-31T00:00:00.000Z',
  Freight: 353.07,
  ShipName: 'Ernst Handel',
  ShipAddress: 'Kirchgasse 6',
  ShipCity: 'Graz',
  ShipRegion: null,
```

```
    ShipCountry: 'Austria',
  },
  {
    OrderID: 10980,
    CustomerID: 'FOLKO',
    OrderDate: '1998-03-27T00:00:00.000Z',
    ShippedDate: '1998-04-17T00:00:00.000Z',
    Freight: 1.26,
    ShipName: 'Folk och fä HB',
    ShipAddress: 'Åkergatan 24',
    ShipCity: 'Bräcke',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },
  {
    OrderID: 10981,
    CustomerID: 'HANAR',
    OrderDate: '1998-03-27T00:00:00.000Z',
    ShippedDate: '1998-04-02T00:00:00.000Z',
    Freight: 193.37,
    ShipName: 'Hanari Carnes',
    ShipAddress: 'Rua do Paço, 67',
    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    ShipCountry: 'Brazil',
  },
  {
    OrderID: 10982,
    CustomerID: 'BOTTM',
    OrderDate: '1998-03-27T00:00:00.000Z',
    ShippedDate: '1998-04-08T00:00:00.000Z',
    Freight: 14.01,
    ShipName: 'Bottom-Dollar Markets',
    ShipAddress: '23 Tsawassen Blvd.',
    ShipCity: 'Tsawassen',
    ShipRegion: 'BC',
    ShipCountry: 'Canada',
  },
  {
    OrderID: 10983,
    CustomerID: 'SAVEA',
    OrderDate: '1998-03-27T00:00:00.000Z',
    ShippedDate: '1998-04-06T00:00:00.000Z',
    Freight: 657.54,
    ShipName: 'Save-a-lot Markets',
    ShipAddress: '187 Suffolk Ln.',
    ShipCity: 'Boise',
    ShipRegion: 'ID',
    ShipCountry: 'USA',
  },
  {
    OrderID: 10984,
```

```
CustomerID: 'SAVEA',
OrderDate: '1998-03-30T00:00:00.000Z',
ShippedDate: '1998-04-03T00:00:00.000Z',
Freight: 211.22,
ShipName: 'Save-a-lot Markets',
ShipAddress: '187 Suffolk Ln.',
ShipCity: 'Boise',
ShipRegion: 'ID',
ShipCountry: 'USA',
},

{
  OrderID: 10985,
  CustomerID: 'HUNGO',
  OrderDate: '1998-03-30T00:00:00.000Z',
  ShippedDate: '1998-04-02T00:00:00.000Z',
  Freight: 91.51,
  ShipName: 'Hungry Owl All-Night Grocers',
  ShipAddress: '8 Johnstown Road',
  ShipCity: 'Cork',
  ShipRegion: 'Co. Cork',
  ShipCountry: 'Ireland',
},

{
  OrderID: 10986,
  CustomerID: 'OCEAN',
  OrderDate: '1998-03-30T00:00:00.000Z',
  ShippedDate: '1998-04-21T00:00:00.000Z',
  Freight: 217.86,
  ShipName: 'Océano Atlántico Ltda.',
  ShipAddress: 'Ing. Gustavo Moncada 8585 Piso 20-A',
  ShipCity: 'Buenos Aires',
  ShipRegion: null,
  ShipCountry: 'Argentina',
},

{
  OrderID: 10987,
  CustomerID: 'EASTC',
  OrderDate: '1998-03-31T00:00:00.000Z',
  ShippedDate: '1998-04-06T00:00:00.000Z',
  Freight: 185.48,
  ShipName: 'Eastern Connection',
  ShipAddress: '35 King George',
  ShipCity: 'London',
  ShipRegion: null,
  ShipCountry: 'UK',
},

{
  OrderID: 10988,
  CustomerID: 'RATTC',
  OrderDate: '1998-03-31T00:00:00.000Z',
  ShippedDate: '1998-04-10T00:00:00.000Z',
  Freight: 61.14,
  ShipName: 'Rattlesnake Canyon Grocery',
```



```
    ShipAddress: '2817 Milton Dr.',
    ShipCity: 'Albuquerque',
    ShipRegion: 'NM',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10989,
    CustomerID: 'QUEDE',
    OrderDate: '1998-03-31T00:00:00.000Z',
    ShippedDate: '1998-04-02T00:00:00.000Z',
    Freight: 34.76,
    ShipName: 'Que Delícia',
    ShipAddress: 'Rua da Panificadora, 12',
    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10990,
    CustomerID: 'ERNSH',
    OrderDate: '1998-04-01T00:00:00.000Z',
    ShippedDate: '1998-04-07T00:00:00.000Z',
    Freight: 117.61,
    ShipName: 'Ernst Handel',
    ShipAddress: 'Kirchgasse 6',
    ShipCity: 'Graz',
    ShipRegion: null,
    ShipCountry: 'Austria',
  },

  {
    OrderID: 10991,
    CustomerID: 'QUICK',
    OrderDate: '1998-04-01T00:00:00.000Z',
    ShippedDate: '1998-04-07T00:00:00.000Z',
    Freight: 38.51,
    ShipName: 'QUICK-Stop',
    ShipAddress: 'Taucherstraße 10',
    ShipCity: 'Cunewalde',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10992,
    CustomerID: 'THEBI',
    OrderDate: '1998-04-01T00:00:00.000Z',
    ShippedDate: '1998-04-03T00:00:00.000Z',
    Freight: 4.27,
    ShipName: 'The Big Cheese',
    ShipAddress: '89 Jefferson Way Suite 2',
    ShipCity: 'Portland',
    ShipRegion: 'OR',
    ShipCountry: 'USA',
  },
},
```

```
{
  OrderID: 10993,
  CustomerID: 'FOLKO',
  OrderDate: '1998-04-01T00:00:00.000Z',
  ShippedDate: '1998-04-10T00:00:00.000Z',
  Freight: 8.81,
  ShipName: 'Folk och fä HB',
  ShipAddress: 'Åkergatan 24',
  ShipCity: 'Bräcke',
  ShipRegion: null,
  ShipCountry: 'Sweden',
},

{
  OrderID: 10994,
  CustomerID: 'VAFFE',
  OrderDate: '1998-04-02T00:00:00.000Z',
  ShippedDate: '1998-04-09T00:00:00.000Z',
  Freight: 65.53,
  ShipName: 'Vaffeljernet',
  ShipAddress: 'Smagsloget 45',
  ShipCity: 'Århus',
  ShipRegion: null,
  ShipCountry: 'Denmark',
},

{
  OrderID: 10995,
  CustomerID: 'PERIC',
  OrderDate: '1998-04-02T00:00:00.000Z',
  ShippedDate: '1998-04-06T00:00:00.000Z',
  Freight: 46,
  ShipName: 'Pericles Comidas clásicas',
  ShipAddress: 'Calle Dr. Jorge Cash 321',
  ShipCity: 'México D.F.',
  ShipRegion: null,
  ShipCountry: 'Mexico',
},

{
  OrderID: 10996,
  CustomerID: 'QUICK',
  OrderDate: '1998-04-02T00:00:00.000Z',
  ShippedDate: '1998-04-10T00:00:00.000Z',
  Freight: 1.12,
  ShipName: 'QUICK-Stop',
  ShipAddress: 'Taucherstraße 10',
  ShipCity: 'Cunewalde',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10997,
  CustomerID: 'LILAS',
  OrderDate: '1998-04-03T00:00:00.000Z',
```

```
ShippedDate: '1998-04-13T00:00:00.000Z',
Freight: 73.91,
ShipName: 'LILA-Supermercado',
ShipAddress: 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
ShipCity: 'Barquisimeto',
ShipRegion: 'Lara',
ShipCountry: 'Venezuela',
},

{
  OrderID: 10998,
  CustomerID: 'WOLZA',
  OrderDate: '1998-04-03T00:00:00.000Z',
  ShippedDate: '1998-04-17T00:00:00.000Z',
  Freight: 20.31,
  ShipName: 'Wolski Zajazd',
  ShipAddress: 'ul. Filtrowa 68',
  ShipCity: 'Warszawa',
  ShipRegion: null,
  ShipCountry: 'Poland',
},

{
  OrderID: 10999,
  CustomerID: 'OTTIK',
  OrderDate: '1998-04-03T00:00:00.000Z',
  ShippedDate: '1998-04-10T00:00:00.000Z',
  Freight: 96.35,
  ShipName: 'Ottilies Käseladen',
  ShipAddress: 'Mehrheimerstr. 369',
  ShipCity: 'Köln',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 11000,
  CustomerID: 'RATTC',
  OrderDate: '1998-04-06T00:00:00.000Z',
  ShippedDate: '1998-04-14T00:00:00.000Z',
  Freight: 55.12,
  ShipName: 'Rattlesnake Canyon Grocery',
  ShipAddress: '2817 Milton Dr.',
  ShipCity: 'Albuquerque',
  ShipRegion: 'NM',
  ShipCountry: 'USA',
},

{
  OrderID: 11001,
  CustomerID: 'FOLKO',
  OrderDate: '1998-04-06T00:00:00.000Z',
  ShippedDate: '1998-04-14T00:00:00.000Z',
  Freight: 197.3,
  ShipName: 'Folk och fä HB',
  ShipAddress: 'Åkergatan 24',
  ShipCity: 'Bräcke',
```

```
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },

  {
    OrderID: 11002,
    CustomerID: 'SAVEA',
    OrderDate: '1998-04-06T00:00:00.000Z',
    ShippedDate: '1998-04-16T00:00:00.000Z',
    Freight: 141.16,
    ShipName: 'Save-a-lot Markets',
    ShipAddress: '187 Suffolk Ln.',
    ShipCity: 'Boise',
    ShipRegion: 'ID',
    ShipCountry: 'USA',
  },

  {
    OrderID: 11003,
    CustomerID: 'THECR',
    OrderDate: '1998-04-06T00:00:00.000Z',
    ShippedDate: '1998-04-08T00:00:00.000Z',
    Freight: 14.91,
    ShipName: 'The Cracker Box',
    ShipAddress: '55 Grizzly Peak Rd.',
    ShipCity: 'Butte',
    ShipRegion: 'MT',
    ShipCountry: 'USA',
  },

  {
    OrderID: 11004,
    CustomerID: 'MAISD',
    OrderDate: '1998-04-07T00:00:00.000Z',
    ShippedDate: '1998-04-20T00:00:00.000Z',
    Freight: 44.84,
    ShipName: 'Maison Dewey',
    ShipAddress: 'Rue Joseph-Bens 532',
    ShipCity: 'Bruxelles',
    ShipRegion: null,
    ShipCountry: 'Belgium',
  },

  {
    OrderID: 11005,
    CustomerID: 'WILMK',
    OrderDate: '1998-04-07T00:00:00.000Z',
    ShippedDate: '1998-04-10T00:00:00.000Z',
    Freight: 0.75,
    ShipName: 'Wilman Kala',
    ShipAddress: 'Keskuskatu 45',
    ShipCity: 'Helsinki',
    ShipRegion: null,
    ShipCountry: 'Finland',
  },

  {
```

```
OrderID: 11006,
CustomerID: 'GREAL',
OrderDate: '1998-04-07T00:00:00.000Z',
ShippedDate: '1998-04-15T00:00:00.000Z',
Freight: 25.19,
ShipName: 'Great Lakes Food Market',
ShipAddress: '2732 Baker Blvd.',
ShipCity: 'Eugene',
ShipRegion: 'OR',
ShipCountry: 'USA',
},

{
  OrderID: 11007,
  CustomerID: 'PRINI',
  OrderDate: '1998-04-08T00:00:00.000Z',
  ShippedDate: '1998-04-13T00:00:00.000Z',
  Freight: 202.24,
  ShipName: 'Princesa Isabel Vinhos',
  ShipAddress: 'Estrada da saúde n. 58',
  ShipCity: 'Lisboa',
  ShipRegion: null,
  ShipCountry: 'Portugal',
},

{
  OrderID: 11008,
  CustomerID: 'ERNSH',
  OrderDate: '1998-04-08T00:00:00.000Z',
  ShippedDate: null,
  Freight: 79.46,
  ShipName: 'Ernst Handel',
  ShipAddress: 'Kirchgasse 6',
  ShipCity: 'Graz',
  ShipRegion: null,
  ShipCountry: 'Austria',
},

{
  OrderID: 11009,
  CustomerID: 'GODOS',
  OrderDate: '1998-04-08T00:00:00.000Z',
  ShippedDate: '1998-04-10T00:00:00.000Z',
  Freight: 59.11,
  ShipName: 'Godos Cocina Típica',
  ShipAddress: 'C/ Romero, 33',
  ShipCity: 'Sevilla',
  ShipRegion: null,
  ShipCountry: 'Spain',
},

{
  OrderID: 11010,
  CustomerID: 'REGGC',
  OrderDate: '1998-04-09T00:00:00.000Z',
  ShippedDate: '1998-04-21T00:00:00.000Z',
  Freight: 28.71,
```

```
    ShipName: 'Reggiani Caseifici',
    ShipAddress: 'Strada Provinciale 124',
    ShipCity: 'Reggio Emilia',
    ShipRegion: null,
    ShipCountry: 'Italy',
  },

  {
    OrderID: 11011,
    CustomerID: 'ALFKI',
    OrderDate: '1998-04-09T00:00:00.000Z',
    ShippedDate: '1998-04-13T00:00:00.000Z',
    Freight: 1.21,
    ShipName: 'Alfred Futterkiste',
    ShipAddress: 'Obere Str. 57',
    ShipCity: 'Berlin',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 11012,
    CustomerID: 'FRANK',
    OrderDate: '1998-04-09T00:00:00.000Z',
    ShippedDate: '1998-04-17T00:00:00.000Z',
    Freight: 242.95,
    ShipName: 'Frankenversand',
    ShipAddress: 'Berliner Platz 43',
    ShipCity: 'München',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 11013,
    CustomerID: 'ROMEY',
    OrderDate: '1998-04-09T00:00:00.000Z',
    ShippedDate: '1998-04-10T00:00:00.000Z',
    Freight: 32.99,
    ShipName: 'Romero y tomillo',
    ShipAddress: 'Gran Vía, 1',
    ShipCity: 'Madrid',
    ShipRegion: null,
    ShipCountry: 'Spain',
  },

  {
    OrderID: 11014,
    CustomerID: 'LINOD',
    OrderDate: '1998-04-10T00:00:00.000Z',
    ShippedDate: '1998-04-15T00:00:00.000Z',
    Freight: 23.6,
    ShipName: 'LINO-Delicateses',
    ShipAddress: 'Ave. 5 de Mayo Porlamar',
    ShipCity: 'I. de Margarita',
    ShipRegion: 'Nueva Esparta',
    ShipCountry: 'Venezuela',
  },
```

```
},  
  
{  
  OrderID: 11015,  
  CustomerID: 'SANTG',  
  OrderDate: '1998-04-10T00:00:00.000Z',  
  ShippedDate: '1998-04-20T00:00:00.000Z',  
  Freight: 4.62,  
  ShipName: 'Santé Gourmet',  
  ShipAddress: 'Erling Skakkes gate 78',  
  ShipCity: 'Stavern',  
  ShipRegion: null,  
  ShipCountry: 'Norway',  
},  
  
{  
  OrderID: 11016,  
  CustomerID: 'AROUT',  
  OrderDate: '1998-04-10T00:00:00.000Z',  
  ShippedDate: '1998-04-13T00:00:00.000Z',  
  Freight: 33.8,  
  ShipName: 'Around the Horn',  
  ShipAddress: 'Brook Farm Stratford St. Mary',  
  ShipCity: 'Colchester',  
  ShipRegion: 'Essex',  
  ShipCountry: 'UK',  
},  
  
{  
  OrderID: 11017,  
  CustomerID: 'ERNSH',  
  OrderDate: '1998-04-13T00:00:00.000Z',  
  ShippedDate: '1998-04-20T00:00:00.000Z',  
  Freight: 754.26,  
  ShipName: 'Ernst Handel',  
  ShipAddress: 'Kirchgasse 6',  
  ShipCity: 'Graz',  
  ShipRegion: null,  
  ShipCountry: 'Austria',  
},  
  
{  
  OrderID: 11018,  
  CustomerID: 'LONEP',  
  OrderDate: '1998-04-13T00:00:00.000Z',  
  ShippedDate: '1998-04-16T00:00:00.000Z',  
  Freight: 11.65,  
  ShipName: 'Lonesome Pine Restaurant',  
  ShipAddress: '89 Chiaroscuro Rd.',  
  ShipCity: 'Portland',  
  ShipRegion: 'OR',  
  ShipCountry: 'USA',  
},  
  
{  
  OrderID: 11019,  
  CustomerID: 'RANCH',
```

```
OrderDate: '1998-04-13T00:00:00.000Z',
ShippedDate: null,
Freight: 3.17,
ShipName: 'Rancho grande',
ShipAddress: 'Av. del Libertador 900',
ShipCity: 'Buenos Aires',
ShipRegion: null,
ShipCountry: 'Argentina',
},

{
  OrderID: 11020,
  CustomerID: 'OTTIK',
  OrderDate: '1998-04-14T00:00:00.000Z',
  ShippedDate: '1998-04-16T00:00:00.000Z',
  Freight: 43.3,
  ShipName: 'Ottilies Käseladen',
  ShipAddress: 'Mehrheimerstr. 369',
  ShipCity: 'Köln',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 11021,
  CustomerID: 'QUICK',
  OrderDate: '1998-04-14T00:00:00.000Z',
  ShippedDate: '1998-04-21T00:00:00.000Z',
  Freight: 297.18,
  ShipName: 'QUICK-Stop',
  ShipAddress: 'Taucherstraße 10',
  ShipCity: 'Cunewalde',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 11022,
  CustomerID: 'HANAR',
  OrderDate: '1998-04-14T00:00:00.000Z',
  ShippedDate: '1998-05-04T00:00:00.000Z',
  Freight: 6.27,
  ShipName: 'Hanari Carnes',
  ShipAddress: 'Rua do Paço, 67',
  ShipCity: 'Rio de Janeiro',
  ShipRegion: 'RJ',
  ShipCountry: 'Brazil',
},

{
  OrderID: 11023,
  CustomerID: 'BSBEV',
  OrderDate: '1998-04-14T00:00:00.000Z',
  ShippedDate: '1998-04-24T00:00:00.000Z',
  Freight: 123.83,
  ShipName: "B' Beverages",
  ShipAddress: 'Fauntleroy Circus',
```



```
    ShipCity: 'London',
    ShipRegion: null,
    ShipCountry: 'UK',
  },

  {
    OrderID: 11024,
    CustomerID: 'EASTC',
    OrderDate: '1998-04-15T00:00:00.000Z',
    ShippedDate: '1998-04-20T00:00:00.000Z',
    Freight: 74.36,
    ShipName: 'Eastern Connection',
    ShipAddress: '35 King George',
    ShipCity: 'London',
    ShipRegion: null,
    ShipCountry: 'UK',
  },

  {
    OrderID: 11025,
    CustomerID: 'WARTH',
    OrderDate: '1998-04-15T00:00:00.000Z',
    ShippedDate: '1998-04-24T00:00:00.000Z',
    Freight: 29.17,
    ShipName: 'Wartian Herkku',
    ShipAddress: 'Torikatu 38',
    ShipCity: 'Oulu',
    ShipRegion: null,
    ShipCountry: 'Finland',
  },

  {
    OrderID: 11026,
    CustomerID: 'FRANS',
    OrderDate: '1998-04-15T00:00:00.000Z',
    ShippedDate: '1998-04-28T00:00:00.000Z',
    Freight: 47.09,
    ShipName: 'Franchi S.p.A.',
    ShipAddress: 'Via Monte Bianco 34',
    ShipCity: 'Torino',
    ShipRegion: null,
    ShipCountry: 'Italy',
  },

  {
    OrderID: 11027,
    CustomerID: 'BOTTM',
    OrderDate: '1998-04-16T00:00:00.000Z',
    ShippedDate: '1998-04-20T00:00:00.000Z',
    Freight: 52.52,
    ShipName: 'Bottom-Dollar Markets',
    ShipAddress: '23 Tsawassen Blvd.',
    ShipCity: 'Tsawassen',
    ShipRegion: 'BC',
    ShipCountry: 'Canada',
  },
}
```

```
{
  OrderID: 11028,
  CustomerID: 'KOENE',
  OrderDate: '1998-04-16T00:00:00.000Z',
  ShippedDate: '1998-04-22T00:00:00.000Z',
  Freight: 29.59,
  ShipName: 'Königlich Essen',
  ShipAddress: 'Maubelstr. 90',
  ShipCity: 'Brandenburg',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 11029,
  CustomerID: 'CHOPS',
  OrderDate: '1998-04-16T00:00:00.000Z',
  ShippedDate: '1998-04-27T00:00:00.000Z',
  Freight: 47.84,
  ShipName: 'Chop-suey Chinese',
  ShipAddress: 'Hauptstr. 31',
  ShipCity: 'Bern',
  ShipRegion: null,
  ShipCountry: 'Switzerland',
},

{
  OrderID: 11030,
  CustomerID: 'SAVEA',
  OrderDate: '1998-04-17T00:00:00.000Z',
  ShippedDate: '1998-04-27T00:00:00.000Z',
  Freight: 830.75,
  ShipName: 'Save-a-lot Markets',
  ShipAddress: '187 Suffolk Ln.',
  ShipCity: 'Boise',
  ShipRegion: 'ID',
  ShipCountry: 'USA',
},

{
  OrderID: 11031,
  CustomerID: 'SAVEA',
  OrderDate: '1998-04-17T00:00:00.000Z',
  ShippedDate: '1998-04-24T00:00:00.000Z',
  Freight: 227.22,
  ShipName: 'Save-a-lot Markets',
  ShipAddress: '187 Suffolk Ln.',
  ShipCity: 'Boise',
  ShipRegion: 'ID',
  ShipCountry: 'USA',
},

{
  OrderID: 11032,
  CustomerID: 'WHITC',
  OrderDate: '1998-04-17T00:00:00.000Z',
  ShippedDate: '1998-04-23T00:00:00.000Z',
```

```
Freight: 606.19,
ShipName: 'White Clover Markets',
ShipAddress: '1029 - 12th Ave. S.',
ShipCity: 'Seattle',
ShipRegion: 'WA',
ShipCountry: 'USA',
},

{
  OrderID: 11033,
  CustomerID: 'RICSU',
  OrderDate: '1998-04-17T00:00:00.000Z',
  ShippedDate: '1998-04-23T00:00:00.000Z',
  Freight: 84.74,
  ShipName: 'Richter Supermarkt',
  ShipAddress: 'Starenweg 5',
  ShipCity: 'Genève',
  ShipRegion: null,
  ShipCountry: 'Switzerland',
},

{
  OrderID: 11034,
  CustomerID: 'OLDWO',
  OrderDate: '1998-04-20T00:00:00.000Z',
  ShippedDate: '1998-04-27T00:00:00.000Z',
  Freight: 40.32,
  ShipName: 'Old World Delicatessen',
  ShipAddress: '2743 Bering St.',
  ShipCity: 'Anchorage',
  ShipRegion: 'AK',
  ShipCountry: 'USA',
},

{
  OrderID: 11035,
  CustomerID: 'SUPRD',
  OrderDate: '1998-04-20T00:00:00.000Z',
  ShippedDate: '1998-04-24T00:00:00.000Z',
  Freight: 0.17,
  ShipName: 'Suprêmes délices',
  ShipAddress: 'Boulevard Tirou, 255',
  ShipCity: 'Charleroi',
  ShipRegion: null,
  ShipCountry: 'Belgium',
},

{
  OrderID: 11036,
  CustomerID: 'DRACD',
  OrderDate: '1998-04-20T00:00:00.000Z',
  ShippedDate: '1998-04-22T00:00:00.000Z',
  Freight: 149.47,
  ShipName: 'Drachenblut Delikatessen',
  ShipAddress: 'Walserweg 21',
  ShipCity: 'Aachen',
  ShipRegion: null,
```

```
    ShipCountry: 'Germany',
  },
  {
    OrderID: 11037,
    CustomerID: 'GODOS',
    OrderDate: '1998-04-21T00:00:00.000Z',
    ShippedDate: '1998-04-27T00:00:00.000Z',
    Freight: 3.2,
    ShipName: 'Godos Cocina Típica',
    ShipAddress: 'C/ Romero, 33',
    ShipCity: 'Sevilla',
    ShipRegion: null,
    ShipCountry: 'Spain',
  },
  {
    OrderID: 11038,
    CustomerID: 'SUPRD',
    OrderDate: '1998-04-21T00:00:00.000Z',
    ShippedDate: '1998-04-30T00:00:00.000Z',
    Freight: 29.59,
    ShipName: 'Suprêmes délices',
    ShipAddress: 'Boulevard Tirou, 255',
    ShipCity: 'Charleroi',
    ShipRegion: null,
    ShipCountry: 'Belgium',
  },
  {
    OrderID: 11039,
    CustomerID: 'LINOD',
    OrderDate: '1998-04-21T00:00:00.000Z',
    ShippedDate: null,
    Freight: 65,
    ShipName: 'LINO-Delicateses',
    ShipAddress: 'Ave. 5 de Mayo Porlamar',
    ShipCity: 'I. de Margarita',
    ShipRegion: 'Nueva Esparta',
    ShipCountry: 'Venezuela',
  },
  {
    OrderID: 11040,
    CustomerID: 'GREAL',
    OrderDate: '1998-04-22T00:00:00.000Z',
    ShippedDate: null,
    Freight: 18.84,
    ShipName: 'Great Lakes Food Market',
    ShipAddress: '2732 Baker Blvd.',
    ShipCity: 'Eugene',
    ShipRegion: 'OR',
    ShipCountry: 'USA',
  },
  {
    OrderID: 11041,
```

```
CustomerID: 'CHOPS',
OrderDate: '1998-04-22T00:00:00.000Z',
ShippedDate: '1998-04-28T00:00:00.000Z',
Freight: 48.22,
ShipName: 'Chop-suey Chinese',
ShipAddress: 'Hauptstr. 31',
ShipCity: 'Bern',
ShipRegion: null,
ShipCountry: 'Switzerland',
},

{
  OrderID: 11042,
  CustomerID: 'COMMI',
  OrderDate: '1998-04-22T00:00:00.000Z',
  ShippedDate: '1998-05-01T00:00:00.000Z',
  Freight: 29.99,
  ShipName: 'Comércio Mineiro',
  ShipAddress: 'Av. dos Lusíadas, 23',
  ShipCity: 'Sao Paulo',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 11043,
  CustomerID: 'SPECB',
  OrderDate: '1998-04-22T00:00:00.000Z',
  ShippedDate: '1998-04-29T00:00:00.000Z',
  Freight: 8.8,
  ShipName: 'Spécialités du monde',
  ShipAddress: '25, rue Lauriston',
  ShipCity: 'Paris',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 11044,
  CustomerID: 'WOLZA',
  OrderDate: '1998-04-23T00:00:00.000Z',
  ShippedDate: '1998-05-01T00:00:00.000Z',
  Freight: 8.72,
  ShipName: 'Wolski Zajazd',
  ShipAddress: 'ul. Filtrowa 68',
  ShipCity: 'Warszawa',
  ShipRegion: null,
  ShipCountry: 'Poland',
},

{
  OrderID: 11045,
  CustomerID: 'BOTTM',
  OrderDate: '1998-04-23T00:00:00.000Z',
  ShippedDate: null,
  Freight: 70.58,
  ShipName: 'Bottom-Dollar Markets',
```

```
    ShipAddress: '23 Tsawassen Blvd.',
    ShipCity: 'Tsawassen',
    ShipRegion: 'BC',
    ShipCountry: 'Canada',
  },

  {
    OrderID: 11046,
    CustomerID: 'WANDK',
    OrderDate: '1998-04-23T00:00:00.000Z',
    ShippedDate: '1998-04-24T00:00:00.000Z',
    Freight: 71.64,
    ShipName: 'Die Wandernde Kuh',
    ShipAddress: 'Adenauerallee 900',
    ShipCity: 'Stuttgart',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 11047,
    CustomerID: 'EASTC',
    OrderDate: '1998-04-24T00:00:00.000Z',
    ShippedDate: '1998-05-01T00:00:00.000Z',
    Freight: 46.62,
    ShipName: 'Eastern Connection',
    ShipAddress: '35 King George',
    ShipCity: 'London',
    ShipRegion: null,
    ShipCountry: 'UK',
  },

  {
    OrderID: 11048,
    CustomerID: 'BOTTM',
    OrderDate: '1998-04-24T00:00:00.000Z',
    ShippedDate: '1998-04-30T00:00:00.000Z',
    Freight: 24.12,
    ShipName: 'Bottom-Dollar Markets',
    ShipAddress: '23 Tsawassen Blvd.',
    ShipCity: 'Tsawassen',
    ShipRegion: 'BC',
    ShipCountry: 'Canada',
  },

  {
    OrderID: 11049,
    CustomerID: 'GOURL',
    OrderDate: '1998-04-24T00:00:00.000Z',
    ShippedDate: '1998-05-04T00:00:00.000Z',
    Freight: 8.34,
    ShipName: 'Gourmet Lanchonetes',
    ShipAddress: 'Av. Brasil, 442',
    ShipCity: 'Campinas',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },
},
```

```
{
  OrderID: 11050,
  CustomerID: 'FOLKO',
  OrderDate: '1998-04-27T00:00:00.000Z',
  ShippedDate: '1998-05-05T00:00:00.000Z',
  Freight: 59.41,
  ShipName: 'Folk och fä HB',
  ShipAddress: 'Åkergatan 24',
  ShipCity: 'Bräcke',
  ShipRegion: null,
  ShipCountry: 'Sweden',
},

{
  OrderID: 11051,
  CustomerID: 'LAMAI',
  OrderDate: '1998-04-27T00:00:00.000Z',
  ShippedDate: null,
  Freight: 2.79,
  ShipName: "La maison d'Asie",
  ShipAddress: '1 rue Alsace-Lorraine',
  ShipCity: 'Toulouse',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 11052,
  CustomerID: 'HANAR',
  OrderDate: '1998-04-27T00:00:00.000Z',
  ShippedDate: '1998-05-01T00:00:00.000Z',
  Freight: 67.26,
  ShipName: 'Hanari Carnes',
  ShipAddress: 'Rua do Paço, 67',
  ShipCity: 'Rio de Janeiro',
  ShipRegion: 'RJ',
  ShipCountry: 'Brazil',
},

{
  OrderID: 11053,
  CustomerID: 'PICCO',
  OrderDate: '1998-04-27T00:00:00.000Z',
  ShippedDate: '1998-04-29T00:00:00.000Z',
  Freight: 53.05,
  ShipName: 'Piccolo und mehr',
  ShipAddress: 'Geislweg 14',
  ShipCity: 'Salzburg',
  ShipRegion: null,
  ShipCountry: 'Austria',
},

{
  OrderID: 11054,
  CustomerID: 'CACTU',
  OrderDate: '1998-04-28T00:00:00.000Z',
```

```
    ShippedDate: null,
    Freight: 0.33,
    ShipName: 'Cactus Comidas para llevar',
    ShipAddress: 'Cerrito 333',
    ShipCity: 'Buenos Aires',
    ShipRegion: null,
    ShipCountry: 'Argentina',
  },

  {
    OrderID: 11055,
    CustomerID: 'HILAA',
    OrderDate: '1998-04-28T00:00:00.000Z',
    ShippedDate: '1998-05-05T00:00:00.000Z',
    Freight: 120.92,
    ShipName: 'HILARION-Abastos',
    ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipCity: 'San Cristóbal',
    ShipRegion: 'Táchira',
    ShipCountry: 'Venezuela',
  },

  {
    OrderID: 11056,
    CustomerID: 'EASTC',
    OrderDate: '1998-04-28T00:00:00.000Z',
    ShippedDate: '1998-05-01T00:00:00.000Z',
    Freight: 278.96,
    ShipName: 'Eastern Connection',
    ShipAddress: '35 King George',
    ShipCity: 'London',
    ShipRegion: null,
    ShipCountry: 'UK',
  },

  {
    OrderID: 11057,
    CustomerID: 'NORTS',
    OrderDate: '1998-04-29T00:00:00.000Z',
    ShippedDate: '1998-05-01T00:00:00.000Z',
    Freight: 4.13,
    ShipName: 'North/South',
    ShipAddress: 'South House 300 Queensbridge',
    ShipCity: 'London',
    ShipRegion: null,
    ShipCountry: 'UK',
  },

  {
    OrderID: 11058,
    CustomerID: 'BLAUS',
    OrderDate: '1998-04-29T00:00:00.000Z',
    ShippedDate: null,
    Freight: 31.14,
    ShipName: 'Blauer See Delikatessen',
    ShipAddress: 'Forsterstr. 57',
    ShipCity: 'Mannheim',
```



```
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 11059,
    CustomerID: 'RICAR',
    OrderDate: '1998-04-29T00:00:00.000Z',
    ShippedDate: null,
    Freight: 85.8,
    ShipName: 'Ricardo Adocicados',
    ShipAddress: 'Av. Copacabana, 267',
    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 11060,
    CustomerID: 'FRANS',
    OrderDate: '1998-04-30T00:00:00.000Z',
    ShippedDate: '1998-05-04T00:00:00.000Z',
    Freight: 10.98,
    ShipName: 'Franchi S.p.A.',
    ShipAddress: 'Via Monte Bianco 34',
    ShipCity: 'Torino',
    ShipRegion: null,
    ShipCountry: 'Italy',
  },

  {
    OrderID: 11061,
    CustomerID: 'GREAL',
    OrderDate: '1998-04-30T00:00:00.000Z',
    ShippedDate: null,
    Freight: 14.01,
    ShipName: 'Great Lakes Food Market',
    ShipAddress: '2732 Baker Blvd.',
    ShipCity: 'Eugene',
    ShipRegion: 'OR',
    ShipCountry: 'USA',
  },

  {
    OrderID: 11062,
    CustomerID: 'REGGC',
    OrderDate: '1998-04-30T00:00:00.000Z',
    ShippedDate: null,
    Freight: 29.93,
    ShipName: 'Reggiani Caseifici',
    ShipAddress: 'Strada Provinciale 124',
    ShipCity: 'Reggio Emilia',
    ShipRegion: null,
    ShipCountry: 'Italy',
  },

  {
```

```
OrderID: 11063,
CustomerID: 'HUNGO',
OrderDate: '1998-04-30T00:00:00.000Z',
ShippedDate: '1998-05-06T00:00:00.000Z',
Freight: 81.73,
ShipName: 'Hungry Owl All-Night Grocers',
ShipAddress: '8 Johnstown Road',
ShipCity: 'Cork',
ShipRegion: 'Co. Cork',
ShipCountry: 'Ireland',
},

{
  OrderID: 11064,
  CustomerID: 'SAVEA',
  OrderDate: '1998-05-01T00:00:00.000Z',
  ShippedDate: '1998-05-04T00:00:00.000Z',
  Freight: 30.09,
  ShipName: 'Save-a-lot Markets',
  ShipAddress: '187 Suffolk Ln.',
  ShipCity: 'Boise',
  ShipRegion: 'ID',
  ShipCountry: 'USA',
},

{
  OrderID: 11065,
  CustomerID: 'LILAS',
  OrderDate: '1998-05-01T00:00:00.000Z',
  ShippedDate: null,
  Freight: 12.91,
  ShipName: 'LILA-Supermercado',
  ShipAddress: 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
  ShipCity: 'Barquisimeto',
  ShipRegion: 'Lara',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 11066,
  CustomerID: 'WHITC',
  OrderDate: '1998-05-01T00:00:00.000Z',
  ShippedDate: '1998-05-04T00:00:00.000Z',
  Freight: 44.72,
  ShipName: 'White Clover Markets',
  ShipAddress: '1029 - 12th Ave. S.',
  ShipCity: 'Seattle',
  ShipRegion: 'WA',
  ShipCountry: 'USA',
},

{
  OrderID: 11067,
  CustomerID: 'DRACD',
  OrderDate: '1998-05-04T00:00:00.000Z',
  ShippedDate: '1998-05-06T00:00:00.000Z',
  Freight: 7.98,
```

```
    ShipName: 'Drachenblut Delikatessen',
    ShipAddress: 'Walserweg 21',
    ShipCity: 'Aachen',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 11068,
    CustomerID: 'QUEEN',
    OrderDate: '1998-05-04T00:00:00.000Z',
    ShippedDate: null,
    Freight: 81.75,
    ShipName: 'Queen Cozinha',
    ShipAddress: 'Alameda dos Canários, 891',
    ShipCity: 'Sao Paulo',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 11069,
    CustomerID: 'TORTU',
    OrderDate: '1998-05-04T00:00:00.000Z',
    ShippedDate: '1998-05-06T00:00:00.000Z',
    Freight: 15.67,
    ShipName: 'Tortuga Restaurante',
    ShipAddress: 'Avda. Azteca 123',
    ShipCity: 'México D.F.',
    ShipRegion: null,
    ShipCountry: 'Mexico',
  },

  {
    OrderID: 11070,
    CustomerID: 'LEHMS',
    OrderDate: '1998-05-05T00:00:00.000Z',
    ShippedDate: null,
    Freight: 136,
    ShipName: 'Lehmanns Marktstand',
    ShipAddress: 'Magazinweg 7',
    ShipCity: 'Frankfurt a.M.',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 11071,
    CustomerID: 'LILAS',
    OrderDate: '1998-05-05T00:00:00.000Z',
    ShippedDate: null,
    Freight: 0.93,
    ShipName: 'LILA-Supermercado',
    ShipAddress: 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    ShipCity: 'Barquisimeto',
    ShipRegion: 'Lara',
    ShipCountry: 'Venezuela',
  },
```

```
},  
  
{  
  OrderID: 11072,  
  CustomerID: 'ERNSH',  
  OrderDate: '1998-05-05T00:00:00.000Z',  
  ShippedDate: null,  
  Freight: 258.64,  
  ShipName: 'Ernst Handel',  
  ShipAddress: 'Kirchgasse 6',  
  ShipCity: 'Graz',  
  ShipRegion: null,  
  ShipCountry: 'Austria',  
},  
  
{  
  OrderID: 11073,  
  CustomerID: 'PERIC',  
  OrderDate: '1998-05-05T00:00:00.000Z',  
  ShippedDate: null,  
  Freight: 24.95,  
  ShipName: 'Pericles Comidas clásicas',  
  ShipAddress: 'Calle Dr. Jorge Cash 321',  
  ShipCity: 'México D.F.',  
  ShipRegion: null,  
  ShipCountry: 'Mexico',  
},  
  
{  
  OrderID: 11074,  
  CustomerID: 'SIMOB',  
  OrderDate: '1998-05-06T00:00:00.000Z',  
  ShippedDate: null,  
  Freight: 18.44,  
  ShipName: 'Simons bistro',  
  ShipAddress: 'Vinbæltet 34',  
  ShipCity: 'Kobenhavn',  
  ShipRegion: null,  
  ShipCountry: 'Denmark',  
},  
  
{  
  OrderID: 11075,  
  CustomerID: 'RICSU',  
  OrderDate: '1998-05-06T00:00:00.000Z',  
  ShippedDate: null,  
  Freight: 6.19,  
  ShipName: 'Richter Supermarkt',  
  ShipAddress: 'Starenweg 5',  
  ShipCity: 'Genève',  
  ShipRegion: null,  
  ShipCountry: 'Switzerland',  
},  
  
{  
  OrderID: 11076,  
  CustomerID: 'BONAP',
```

```

    OrderDate: '1998-05-06T00:00:00.000Z',
    ShippedDate: null,
    Freight: 38.28,
    ShipName: 'Bon app',
    ShipAddress: '12, rue des Bouchers',
    ShipCity: 'Marseille',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 11077,
    CustomerID: 'RATTC',
    OrderDate: '1998-05-06T00:00:00.000Z',
    ShippedDate: null,
    Freight: 8.53,
    ShipName: 'Rattlesnake Canyon Grocery',
    ShipAddress: '2817 Milton Dr.',
    ShipCity: 'Albuquerque',
    ShipRegion: 'NM',
    ShipCountry: 'USA',
  },
]);

export const orderData = JSON.parse(
  stringData,
  (field, value) => {
    let dupValue = value;
    if (
      typeof value === 'string' &&
      /^(\\d{4}\\-\\d\\d\\-\\d\\d([tT][\\d:\\.]*){1})([zZ]|([+\\-
    ]) (\\d\\d):?(\\d\\d))?$/ .test(
      value
    )
  ) {
    let arr = dupValue.split(/^[^0-9]/);
    let arg = parseInt(arr[4], 10);
    let arg1 = parseInt(arr[5], 10);

    value = new Date(
      parseInt(arr[0], 10),
      parseInt(arr[1], 10) - 1,
      parseInt(arr[2], 10),
      parseInt(arr[3], 10),
      arg,
      arg1
    );
  }
  return value;
});
export const customerData = [
  {
    CustomerID: 'ALFKI',
    ContactName: 'Maria ',
    CompanyName: 'Alfreds Futterkiste',
    Address: 'Obere Str. 57',
  },

```

```
Country: 'Germany',
},

{
  CustomerID: 'ANATR',
  ContactName: 'Ana Trujillo',
  CompanyName: 'Ana Trujillo Emparedados y helados',
  Address: 'Avda. de la Constitución 2222',
  Country: 'Mexico',
},

{
  CustomerID: 'ANTON',
  ContactName: 'Antonio Moreno',
  CompanyName: 'Antonio Moreno Taquería',
  Address: 'Mataderos 2312',
  Country: 'Mexico',
},

{
  CustomerID: 'AROUT',
  ContactName: 'Thomas Hardy',
  CompanyName: 'Around the Horn',
  Address: '120 Hanover Sq.',
  Country: 'UK',
},

{
  CustomerID: 'BERGS',
  ContactName: 'Christina Berglund',
  CompanyName: 'Berglunds snabbköp',
  Address: 'Berguvsvägen 8',
  Country: 'Sweden',
},

{
  CustomerID: 'BLAUS',
  ContactName: 'Hanna Moos',
  CompanyName: 'Blauer See Delikatessen',
  Address: 'Forsterstr. 57',
  Country: 'Germany',
},

{
  CustomerID: 'BLONP',
  ContactName: 'Frédérique Citeaux',
  CompanyName: 'Blondesddsl père et fils',
  Address: '24, place Kléber',
  Country: 'France',
},

{
  CustomerID: 'BOLID',
  ContactName: 'Martín Sommer',
  CompanyName: 'Bólido Comidas preparadas',
  Address: 'C/ Araquil, 67',
  Country: 'Spain',
}
```

```
    },
    {
      CustomerID: 'BONAP',
      ContactName: 'Laurence Lebihan',
      CompanyName: 'Bon app',
      Address: '12, rue des Bouchers',
      Country: 'France',
    },
    {
      CustomerID: 'BOTTM',
      ContactName: 'Elizabeth Lincoln',
      CompanyName: 'Bottom-Dollar Markets',
      Address: '23 Tsawassen Blvd.',
      Country: 'Canada',
    },
    {
      CustomerID: 'BSBEV',
      ContactName: 'Victoria Ashworth',
      CompanyName: 'B's Beverages',
      Address: 'Fauntleroy Circus',
      Country: 'UK',
    },
    {
      CustomerID: 'CACTU',
      ContactName: 'Patricio Simpson',
      CompanyName: 'Cactus Comidas para llevar',
      Address: 'Cerrito 333',
      Country: 'Argentina',
    },
    {
      CustomerID: 'CENTC',
      ContactName: 'Francisco Chang',
      CompanyName: 'Centro comercial Moctezuma',
      Address: 'Sierras de Granada 9993',
      Country: 'Mexico',
    },
    {
      CustomerID: 'CHOPS',
      ContactName: 'Yang Wang',
      CompanyName: 'Chop-suey Chinese',
      Address: 'Hauptstr. 29',
      Country: 'Switzerland',
    },
    {
      CustomerID: 'COMMI',
      ContactName: 'Pedro Afonso',
      CompanyName: 'Comércio Mineiro',
      Address: 'Av. dos Lusíadas, 23',
      Country: 'Brazil',
    },
  ],
```

```
{
  CustomerID: 'CONSH',
  ContactName: 'Elizabeth Brown',
  CompanyName: 'Consolidated Holdings',
  Address: 'Berkeley Gardens 12 Brewery',
  Country: 'UK',
},

{
  CustomerID: 'DRACD',
  ContactName: 'Sven Ottlieb',
  CompanyName: 'Drachenblut Delikatessen',
  Address: 'Walserweg 21',
  Country: 'Germany',
},

{
  CustomerID: 'DUMON',
  ContactName: 'Janine Labrune',
  CompanyName: 'Du monde entier',
  Address: '67, rue des Cinquante Otages',
  Country: 'France',
},

{
  CustomerID: 'EASTC',
  ContactName: 'Ann Devon',
  CompanyName: 'Eastern Connection',
  Address: '35 King George',
  Country: 'UK',
},

{
  CustomerID: 'ERNSH',
  ContactName: 'Roland Mendel',
  CompanyName: 'Ernst Handel',
  Address: 'Kirchgasse 6',
  Country: 'Austria',
},

{
  CustomerID: 'FAMIA',
  ContactName: 'Aria Cruz',
  CompanyName: 'Familia Arquibaldo',
  Address: 'Rua Orós, 92',
  Country: 'Brazil',
},

{
  CustomerID: 'FISSA',
  ContactName: 'Diego Roel',
  CompanyName: 'FISSA Fabrica Inter. Salchichas S.A.',
  Address: 'C/ Moralzarzal, 86',
  Country: 'Spain',
},
```



```
{
  CustomerID: 'FOLIG',
  ContactName: 'Martine Rancé',
  CompanyName: 'Folies gourmandes',
  Address: '184, chaussée de Tournai',
  Country: 'France',
},

{
  CustomerID: 'FOLKO',
  ContactName: 'Maria Larsson',
  CompanyName: 'Folk och fä HB',
  Address: 'Åkergatan 24',
  Country: 'Sweden',
},

{
  CustomerID: 'FRANK',
  ContactName: 'Peter Franken',
  CompanyName: 'Frankenversand',
  Address: 'Berliner Platz 43',
  Country: 'Germany',
},

{
  CustomerID: 'FRANR',
  ContactName: 'Carine Schmitt',
  CompanyName: 'France restauration',
  Address: '54, rue Royale',
  Country: 'France',
},

{
  CustomerID: 'FRANS',
  ContactName: 'Paolo Accorti',
  CompanyName: 'Franchi S.p.A.',
  Address: 'Via Monte Bianco 34',
  Country: 'Italy',
},

{
  CustomerID: 'FURIB',
  ContactName: 'Lino Rodriguez',
  CompanyName: 'Furia Bacalhau e Frutos do Mar',
  Address: 'Jardim das rosas n. 32',
  Country: 'Portugal',
},

{
  CustomerID: 'GALED',
  ContactName: 'Eduardo Saavedra',
  CompanyName: 'Galería del gastrónomo',
  Address: 'Rambla de Cataluña, 23',
  Country: 'Spain',
},

{
```

```
CustomerID: 'GODOS',
ContactName: 'José Pedro Freyre',
CompanyName: 'Godos Cocina Típica',
Address: 'C/ Romero, 33',
Country: 'Spain',
},

{
  CustomerID: 'GOURL',
  ContactName: 'André Fonseca',
  CompanyName: 'Gourmet Lanchonetes',
  Address: 'Av. Brasil, 442',
  Country: 'Brazil',
},

{
  CustomerID: 'GREAL',
  ContactName: 'Howard Snyder',
  CompanyName: 'Great Lakes Food Market',
  Address: '2732 Baker Blvd.',
  Country: 'USA',
},

{
  CustomerID: 'GROSR',
  ContactName: 'Manuel Pereira',
  CompanyName: 'GROSELLA-Restaurante',
  Address: '5ª Ave. Los Palos Grandes',
  Country: 'Venezuela',
},

{
  CustomerID: 'HANAR',
  ContactName: 'Mario Pontes',
  CompanyName: 'Hanari Carnes',
  Address: 'Rua do Paço, 67',
  Country: 'Brazil',
},

{
  CustomerID: 'HILAA',
  ContactName: 'Carlos Hernández',
  CompanyName: 'HILARION-Abastos',
  Address: 'Carrera 22 con Ave. Carlos Soublette #8-35',
  Country: 'Venezuela',
},

{
  CustomerID: 'HUNGC',
  ContactName: 'Yoshi Latimer',
  CompanyName: 'Hungry Coyote Import Store',
  Address: 'City Center Plaza 516 Main St.',
  Country: 'USA',
},

{
  CustomerID: 'HUNGO',
```

```
    ContactName: 'Patricia McKenna',
    CompanyName: 'Hungry Owl All-Night Grocers',
    Address: '8 Johnstown Road',
    Country: 'Ireland',
  },

  {
    CustomerID: 'ISLAT',
    ContactName: 'Helen Bennett',
    CompanyName: 'Island Trading',
    Address: 'Garden House Crowther Way',
    Country: 'UK',
  },

  {
    CustomerID: 'KOENE',
    ContactName: 'Philip Cramer',
    CompanyName: 'Königlich Essen',
    Address: 'Maubelstr. 90',
    Country: 'Germany',
  },

  {
    CustomerID: 'LACOR',
    ContactName: 'Daniel Tonini',
    CompanyName: 'La corne d'abondance',
    Address: '67, avenue de l'Europe',
    Country: 'France',
  },

  {
    CustomerID: 'LAMAI',
    ContactName: 'Annette Roulet',
    CompanyName: 'La maison d'Asie',
    Address: '1 rue Alsace-Lorraine',
    Country: 'France',
  },

  {
    CustomerID: 'LAUGB',
    ContactName: 'Yoshi Tannamuri',
    CompanyName: 'Laughing Bacchus Wine Cellars',
    Address: '1900 Oak St.',
    Country: 'Canada',
  },

  {
    CustomerID: 'LAZYK',
    ContactName: 'John Steel',
    CompanyName: 'Lazy K Kountry Store',
    Address: '12 Orchestra Terrace',
    Country: 'USA',
  },

  {
    CustomerID: 'LEHMS',
    ContactName: 'Renate Messner',
```

```
    CompanyName: 'Lehmanns Marktstand',
    Address: 'Magazinweg 7',
    Country: 'Germany',
  },

  {
    CustomerID: 'LETSS',
    ContactName: 'Jaime Yorres',
    CompanyName: 'Let's Stop N Shop',
    Address: '87 Polk St. Suite 5',
    Country: 'USA',
  },

  {
    CustomerID: 'LILAS',
    ContactName: 'Carlos González',
    CompanyName: 'LILA-Supermercado',
    Address: 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    Country: 'Venezuela',
  },

  {
    CustomerID: 'LINOD',
    ContactName: 'Felipe Izquierdo',
    CompanyName: 'LINO-Delicateses',
    Address: 'Ave. 5 de Mayo Porlamar',
    Country: 'Venezuela',
  },

  {
    CustomerID: 'LONEP',
    ContactName: 'Fran Wilson',
    CompanyName: 'Lonesome Pine Restaurant',
    Address: '89 Chiaroscuro Rd.',
    Country: 'USA',
  },

  {
    CustomerID: 'MAGAA',
    ContactName: 'Giovanni Rovelli',
    CompanyName: 'Magazzini Alimentari Riuniti',
    Address: 'Via Ludovico il Moro 22',
    Country: 'Italy',
  },

  {
    CustomerID: 'MAISD',
    ContactName: 'Catherine Dewey',
    CompanyName: 'Maison Dewey',
    Address: 'Rue Joseph-Bens 532',
    Country: 'Belgium',
  },

  {
    CustomerID: 'MEREP',
    ContactName: 'Jean Fresnière',
    CompanyName: 'Mère Paillarde',
```

```
Address: '43 rue St. Laurent',
Country: 'Canada',
},

{
  CustomerID: 'MORGK',
  ContactName: 'Alexander Feuer',
  CompanyName: 'Morgenstern Gesundkost',
  Address: 'Heerstr. 22',
  Country: 'Germany',
},

{
  CustomerID: 'NORTS',
  ContactName: 'Simon Crowther',
  CompanyName: 'North/South',
  Address: 'South House 300 Queensbridge',
  Country: 'UK',
},

{
  CustomerID: 'OCEAN',
  ContactName: 'Yvonne Moncada',
  CompanyName: 'Océano Atlántico Ltda.',
  Address: 'Ing. Gustavo Moncada 8585 Piso 20-A',
  Country: 'Argentina',
},

{
  CustomerID: 'OLDWO',
  ContactName: 'Rene Phillips',
  CompanyName: 'Old World Delicatessen',
  Address: '2743 Bering St.',
  Country: 'USA',
},

{
  CustomerID: 'OTTIK',
  ContactName: 'Henriette Pfalzheim',
  CompanyName: 'Ottilies Käseladen',
  Address: 'Mehrheimerstr. 369',
  Country: 'Germany',
},

{
  CustomerID: 'PARIS',
  ContactName: 'Marie Bertrand',
  CompanyName: 'Paris spécialités',
  Address: '265, boulevard Charonne',
  Country: 'France',
},

{
  CustomerID: 'PERIC',
  ContactName: 'Guillermo Fernández',
  CompanyName: 'Pericles Comidas clásicas',
  Address: 'Calle Dr. Jorge Cash 321',
```

```
Country: 'Mexico',
},

{
  CustomerID: 'PICCO',
  ContactName: 'Georg Pipps',
  CompanyName: 'Piccolo und mehr',
  Address: 'Geislweg 14',
  Country: 'Austria',
},

{
  CustomerID: 'PRINI',
  ContactName: 'Isabel de Castro',
  CompanyName: 'Princesa Isabel Vinhos',
  Address: 'Estrada da saúde n. 58',
  Country: 'Portugal',
},

{
  CustomerID: 'QUEDE',
  ContactName: 'Bernardo Batista',
  CompanyName: 'Que Delícia',
  Address: 'Rua da Panificadora, 12',
  Country: 'Brazil',
},

{
  CustomerID: 'QUEEN',
  ContactName: 'Lúcia Carvalho',
  CompanyName: 'Queen Cozinha',
  Address: 'Alameda dos Canários, 891',
  Country: 'Brazil',
},

{
  CustomerID: 'QUICK',
  ContactName: 'Horst Kloss',
  CompanyName: 'QUICK-Stop',
  Address: 'Taucherstraße 10',
  Country: 'Germany',
},

{
  CustomerID: 'RANCH',
  ContactName: 'Sergio Gutiérrez',
  CompanyName: 'Rancho grande',
  Address: 'Av. del Libertador 900',
  Country: 'Argentina',
},

{
  CustomerID: 'RATTC',
  ContactName: 'Paula Wilson',
  CompanyName: 'Rattlesnake Canyon Grocery',
  Address: '2817 Milton Dr.',
  Country: 'USA',
}
```

```
    },
    {
      CustomerID: 'REGGC',
      ContactName: 'Maurizio Moroni',
      CompanyName: 'Reggiani Caseifici',
      Address: 'Strada Provinciale 124',
      Country: 'Italy',
    },
    {
      CustomerID: 'RICAR',
      ContactName: 'Janete Limeira',
      CompanyName: 'Ricardo Adocicados',
      Address: 'Av. Copacabana, 267',
      Country: 'Brazil',
    },
    {
      CustomerID: 'RICSU',
      ContactName: 'Michael Holz',
      CompanyName: 'Richter Supermarkt',
      Address: 'Grenzacherweg 237',
      Country: 'Switzerland',
    },
    {
      CustomerID: 'ROMEY',
      ContactName: 'Alejandra Camino',
      CompanyName: 'Romero y tomillo',
      Address: 'Gran Vía, 1',
      Country: 'Spain',
    },
    {
      CustomerID: 'SANTG',
      ContactName: 'Jonas Bergulfsen',
      CompanyName: 'Santé Gourmet',
      Address: 'Erling Skakkes gate 78',
      Country: 'Norway',
    },
    {
      CustomerID: 'SAVEA',
      ContactName: 'Jose Pavarotti',
      CompanyName: 'Save-a-lot Markets',
      Address: '187 Suffolk Ln.',
      Country: 'USA',
    },
    {
      CustomerID: 'SEVES',
      ContactName: 'Hari Kumar',
      CompanyName: 'Seven Seas Imports',
      Address: '90 Wadhurst Rd.',
      Country: 'UK',
    },
  ],
```

```
{
  CustomerID: 'SIMOB',
  ContactName: 'Jytte Petersen',
  CompanyName: 'Simons bistro',
  Address: 'Vinbæltet 34',
  Country: 'Denmark',
},

{
  CustomerID: 'SPECB',
  ContactName: 'Dominique Perrier',
  CompanyName: 'Spécialités du monde',
  Address: '25, rue Lauriston',
  Country: 'France',
},

{
  CustomerID: 'SPLIR',
  ContactName: 'Art Braunschweiger',
  CompanyName: 'Split Rail Beer & Ale',
  Address: 'P.O. Box 555',
  Country: 'USA',
},

{
  CustomerID: 'SUPRD',
  ContactName: 'Pascale Cartrain',
  CompanyName: 'Suprêmes délices',
  Address: 'Boulevard Tirou, 255',
  Country: 'Belgium',
},

{
  CustomerID: 'THEBI',
  ContactName: 'Liz Nixon',
  CompanyName: 'The Big Cheese',
  Address: '89 Jefferson Way Suite 2',
  Country: 'USA',
},

{
  CustomerID: 'THECR',
  ContactName: 'Liu Wong',
  CompanyName: 'The Cracker Box',
  Address: '55 Grizzly Peak Rd.',
  Country: 'USA',
},

{
  CustomerID: 'TOMSP',
  ContactName: 'Karin Josephs',
  CompanyName: 'Toms Spezialitäten',
  Address: 'Luisenstr. 48',
  Country: 'Germany',
},
```



```
{
  CustomerID: 'TORTU',
  ContactName: 'Miguel Angel Paolino',
  CompanyName: 'Tortuga Restaurante',
  Address: 'Avda. Azteca 123',
  Country: 'Mexico',
},

{
  CustomerID: 'TRADH',
  ContactName: 'Anabela Domingues',
  CompanyName: 'Tradição Hipermercados',
  Address: 'Av. Inês de Castro, 414',
  Country: 'Brazil',
},

{
  CustomerID: 'TRAIH',
  ContactName: 'Helvetius Nagy',
  CompanyName: "Trail's Head Gourmet Provisioners",
  Address: '722 DaVinci Blvd.',
  Country: 'USA',
},

{
  CustomerID: 'VAFFE',
  ContactName: 'Palle Ibsen',
  CompanyName: 'Vaffeljernet',
  Address: 'Smagsloget 45',
  Country: 'Denmark',
},

{
  CustomerID: 'VICTE',
  ContactName: 'Mary Saveley',
  CompanyName: 'Victuailles en stock',
  Address: '2, rue du Commerce',
  Country: 'France',
},

{
  CustomerID: 'VINET',
  ContactName: 'Paul Henriot',
  CompanyName: 'Vins et alcools Chevalier',
  Address: "59 rue de l'Abbaye",
  Country: 'France',
},

{
  CustomerID: 'WANDK',
  ContactName: 'Rita Müller',
  CompanyName: 'Die Wandernde Kuh',
  Address: 'Adenauerallee 900',
  Country: 'Germany',
},

{
```

```

    CustomerID: 'WARTH',
    ContactName: 'Pirkko Koskitalo',
    CompanyName: 'Wartian Herkku',
    Address: 'Torikatu 38',
    Country: 'Finland',
  },

  {
    CustomerID: 'WELLI',
    ContactName: 'Paula Parente',
    CompanyName: 'Wellington Importadora',
    Address: 'Rua do Mercado, 12',
    Country: 'Brazil',
  },

  {
    CustomerID: 'WHITC',
    ContactName: 'Karl Jablonski',
    CompanyName: 'White Clover Markets',
    Address: '305 - 14th Ave. S. Suite 3B',
    Country: 'USA',
  },

  {
    CustomerID: 'WILMK',
    ContactName: 'Matti Karttunen',
    CompanyName: 'Wilman Kala',
    Address: 'Keskuskatu 45',
    Country: 'Finland',
  },

  {
    CustomerID: 'WOLZA',
    ContactName: 'Zbyszek Piestrzeniewicz',
    CompanyName: 'Wolski Zajazd',
    Address: 'ul. Filtrowa 68',
    Country: 'Poland',
  },
];

export const data = orderData.map((item) => {
  let name = (customerData).filter((cItem) => {
    return cItem.CustomerID === item.CustomerID;
  })[0];
  item.CustomerName = (name || {}).ContactName;
  return item;
});

```

DATASOURCE.TSX

```

let stringData: string = JSON.stringify([
  {
    OrderID: 10248,
    CustomerID: 'VINET',
    OrderDate: '1996-07-04T00:00:00.000Z',
    ShippedDate: '1996-07-16T00:00:00.000Z',
  }
]);

```

```
Freight: 32.38,
ShipName: 'Vins et alcools Chevalier',
ShipAddress: '59 rue de l'Abbaye',
ShipCity: 'Reims',
ShipRegion: null,
ShipCountry: 'France',
},

{
  OrderID: 10249,
  CustomerID: 'TOMSP',
  OrderDate: '1996-07-05T00:00:00.000Z',
  ShippedDate: '1996-07-10T00:00:00.000Z',
  Freight: 11.61,
  ShipName: 'Toms Spezialitäten',
  ShipAddress: 'Luisenstr. 48',
  ShipCity: 'Münster',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10250,
  CustomerID: 'HANAR',
  OrderDate: '1996-07-08T00:00:00.000Z',
  ShippedDate: '1996-07-12T00:00:00.000Z',
  Freight: 65.83,
  ShipName: 'Hanari Carnes',
  ShipAddress: 'Rua do Paço, 67',
  ShipCity: 'Rio de Janeiro',
  ShipRegion: 'RJ',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10251,
  CustomerID: 'VICTE',
  OrderDate: '1996-07-08T00:00:00.000Z',
  ShippedDate: '1996-07-15T00:00:00.000Z',
  Freight: 41.34,
  ShipName: 'Victuailles en stock',
  ShipAddress: '2, rue du Commerce',
  ShipCity: 'Lyon',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10252,
  CustomerID: 'SUPRD',
  OrderDate: '1996-07-09T00:00:00.000Z',
  ShippedDate: '1996-07-11T00:00:00.000Z',
  Freight: 51.3,
  ShipName: 'Suprêmes délices',
  ShipAddress: 'Boulevard Tirou, 255',
  ShipCity: 'Charleroi',
  ShipRegion: null,
```

```
    ShipCountry: 'Belgium',
  },

  {
    OrderID: 10253,
    CustomerID: 'HANAR',
    OrderDate: '1996-07-10T00:00:00.000Z',
    ShippedDate: '1996-07-16T00:00:00.000Z',
    Freight: 58.17,
    ShipName: 'Hanari Carnes',
    ShipAddress: 'Rua do Paço, 67',
    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10254,
    CustomerID: 'CHOPS',
    OrderDate: '1996-07-11T00:00:00.000Z',
    ShippedDate: '1996-07-23T00:00:00.000Z',
    Freight: 22.98,
    ShipName: 'Chop-suey Chinese',
    ShipAddress: 'Hauptstr. 31',
    ShipCity: 'Bern',
    ShipRegion: null,
    ShipCountry: 'Switzerland',
  },

  {
    OrderID: 10255,
    CustomerID: 'RICSU',
    OrderDate: '1996-07-12T00:00:00.000Z',
    ShippedDate: '1996-07-15T00:00:00.000Z',
    Freight: 148.33,
    ShipName: 'Richter Supermarkt',
    ShipAddress: 'Starenweg 5',
    ShipCity: 'Genève',
    ShipRegion: null,
    ShipCountry: 'Switzerland',
  },

  {
    OrderID: 10256,
    CustomerID: 'WELLI',
    OrderDate: '1996-07-15T00:00:00.000Z',
    ShippedDate: '1996-07-17T00:00:00.000Z',
    Freight: 13.97,
    ShipName: 'Wellington Importadora',
    ShipAddress: 'Rua do Mercado, 12',
    ShipCity: 'Resende',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10257,
```

```
CustomerID: 'HILAA',
OrderDate: '1996-07-16T00:00:00.000Z',
ShippedDate: '1996-07-22T00:00:00.000Z',
Freight: 81.91,
ShipName: 'HILARION-Abastos',
ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
ShipCity: 'San Cristóbal',
ShipRegion: 'Táchira',
ShipCountry: 'Venezuela',
},

{
  OrderID: 10258,
  CustomerID: 'ERNSH',
  OrderDate: '1996-07-17T00:00:00.000Z',
  ShippedDate: '1996-07-23T00:00:00.000Z',
  Freight: 140.51,
  ShipName: 'Ernst Handel',
  ShipAddress: 'Kirchgasse 6',
  ShipCity: 'Graz',
  ShipRegion: null,
  ShipCountry: 'Austria',
},

{
  OrderID: 10259,
  CustomerID: 'CENTC',
  OrderDate: '1996-07-18T00:00:00.000Z',
  ShippedDate: '1996-07-25T00:00:00.000Z',
  Freight: 3.25,
  ShipName: 'Centro comercial Moctezuma',
  ShipAddress: 'Sierras de Granada 9993',
  ShipCity: 'México D.F.',
  ShipRegion: null,
  ShipCountry: 'Mexico',
},

{
  OrderID: 10260,
  CustomerID: 'OTTIK',
  OrderDate: '1996-07-19T00:00:00.000Z',
  ShippedDate: '1996-07-29T00:00:00.000Z',
  Freight: 55.09,
  ShipName: 'Ottilies Käseladen',
  ShipAddress: 'Mehrheimerstr. 369',
  ShipCity: 'Köln',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10261,
  CustomerID: 'QUEDE',
  OrderDate: '1996-07-19T00:00:00.000Z',
  ShippedDate: '1996-07-30T00:00:00.000Z',
  Freight: 3.05,
  ShipName: 'Que Delícia',
```

```
    ShipAddress: 'Rua da Panificadora, 12',
    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10262,
    CustomerID: 'RATTC',
    OrderDate: '1996-07-22T00:00:00.000Z',
    ShippedDate: '1996-07-25T00:00:00.000Z',
    Freight: 48.29,
    ShipName: 'Rattlesnake Canyon Grocery',
    ShipAddress: '2817 Milton Dr.',
    ShipCity: 'Albuquerque',
    ShipRegion: 'NM',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10263,
    CustomerID: 'ERNSH',
    OrderDate: '1996-07-23T00:00:00.000Z',
    ShippedDate: '1996-07-31T00:00:00.000Z',
    Freight: 146.06,
    ShipName: 'Ernst Handel',
    ShipAddress: 'Kirchgasse 6',
    ShipCity: 'Graz',
    ShipRegion: null,
    ShipCountry: 'Austria',
  },

  {
    OrderID: 10264,
    CustomerID: 'FOLKO',
    OrderDate: '1996-07-24T00:00:00.000Z',
    ShippedDate: '1996-08-23T00:00:00.000Z',
    Freight: 3.67,
    ShipName: 'Folk och fä HB',
    ShipAddress: 'Åkergatan 24',
    ShipCity: 'Bräcke',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },

  {
    OrderID: 10265,
    CustomerID: 'BLONP',
    OrderDate: '1996-07-25T00:00:00.000Z',
    ShippedDate: '1996-08-12T00:00:00.000Z',
    Freight: 55.28,
    ShipName: 'Blondel père et fils',
    ShipAddress: '24, place Kléber',
    ShipCity: 'Strasbourg',
    ShipRegion: null,
    ShipCountry: 'France',
  },
},
```

```
{
  OrderID: 10266,
  CustomerID: 'WARTH',
  OrderDate: '1996-07-26T00:00:00.000Z',
  ShippedDate: '1996-07-31T00:00:00.000Z',
  Freight: 25.73,
  ShipName: 'Wartian Herkku',
  ShipAddress: 'Torikatu 38',
  ShipCity: 'Oulu',
  ShipRegion: null,
  ShipCountry: 'Finland',
},

{
  OrderID: 10267,
  CustomerID: 'FRANK',
  OrderDate: '1996-07-29T00:00:00.000Z',
  ShippedDate: '1996-08-06T00:00:00.000Z',
  Freight: 208.58,
  ShipName: 'Frankenversand',
  ShipAddress: 'Berliner Platz 43',
  ShipCity: 'München',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10268,
  CustomerID: 'GROSR',
  OrderDate: '1996-07-30T00:00:00.000Z',
  ShippedDate: '1996-08-02T00:00:00.000Z',
  Freight: 66.29,
  ShipName: 'GROSELLA-Restaurante',
  ShipAddress: '5a Ave. Los Palos Grandes',
  ShipCity: 'Caracas',
  ShipRegion: 'DF',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10269,
  CustomerID: 'WHITC',
  OrderDate: '1996-07-31T00:00:00.000Z',
  ShippedDate: '1996-08-09T00:00:00.000Z',
  Freight: 4.56,
  ShipName: 'White Clover Markets',
  ShipAddress: '1029 - 12th Ave. S.',
  ShipCity: 'Seattle',
  ShipRegion: 'WA',
  ShipCountry: 'USA',
},

{
  OrderID: 10270,
  CustomerID: 'WARTH',
  OrderDate: '1996-08-01T00:00:00.000Z',
```

```

    ShippedDate: '1996-08-02T00:00:00.000Z',
    Freight: 136.54,
    ShipName: 'Wartian Herkku',
    ShipAddress: 'Torikatu 38',
    ShipCity: 'Oulu',
    ShipRegion: null,
    ShipCountry: 'Finland',
  },

  {
    OrderID: 10271,
    CustomerID: 'SPLIR',
    OrderDate: '1996-08-01T00:00:00.000Z',
    ShippedDate: '1996-08-30T00:00:00.000Z',
    Freight: 4.54,
    ShipName: 'Split Rail Beer & Ale',
    ShipAddress: 'P.O. Box 555',
    ShipCity: 'Lander',
    ShipRegion: 'WY',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10272,
    CustomerID: 'RATTC',
    OrderDate: '1996-08-02T00:00:00.000Z',
    ShippedDate: '1996-08-06T00:00:00.000Z',
    Freight: 98.03,
    ShipName: 'Rattlesnake Canyon Grocery',
    ShipAddress: '2817 Milton Dr.',
    ShipCity: 'Albuquerque',
    ShipRegion: 'NM',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10273,
    CustomerID: 'QUICK',
    OrderDate: '1996-08-05T00:00:00.000Z',
    ShippedDate: '1996-08-12T00:00:00.000Z',
    Freight: 76.07,
    ShipName: 'QUICK-Stop',
    ShipAddress: 'Taucherstraße 10',
    ShipCity: 'Cunewalde',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10274,
    CustomerID: 'VINET',
    OrderDate: '1996-08-06T00:00:00.000Z',
    ShippedDate: '1996-08-16T00:00:00.000Z',
    Freight: 6.01,
    ShipName: 'Vins et alcools Chevalier',
    ShipAddress: "59 rue de l'Abbaye",
    ShipCity: 'Reims',
  },

```



```
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10275,
    CustomerID: 'MAGAA',
    OrderDate: '1996-08-07T00:00:00.000Z',
    ShippedDate: '1996-08-09T00:00:00.000Z',
    Freight: 26.93,
    ShipName: 'Magazzini Alimentari Riuniti',
    ShipAddress: 'Via Ludovico il Moro 22',
    ShipCity: 'Bergamo',
    ShipRegion: null,
    ShipCountry: 'Italy',
  },

  {
    OrderID: 10276,
    CustomerID: 'TORTU',
    OrderDate: '1996-08-08T00:00:00.000Z',
    ShippedDate: '1996-08-14T00:00:00.000Z',
    Freight: 13.84,
    ShipName: 'Tortuga Restaurante',
    ShipAddress: 'Avda. Azteca 123',
    ShipCity: 'México D.F.',
    ShipRegion: null,
    ShipCountry: 'Mexico',
  },

  {
    OrderID: 10277,
    CustomerID: 'MORGK',
    OrderDate: '1996-08-09T00:00:00.000Z',
    ShippedDate: '1996-08-13T00:00:00.000Z',
    Freight: 125.77,
    ShipName: 'Morgenstern Gesundkost',
    ShipAddress: 'Heerstr. 22',
    ShipCity: 'Leipzig',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10278,
    CustomerID: 'BERGS',
    OrderDate: '1996-08-12T00:00:00.000Z',
    ShippedDate: '1996-08-16T00:00:00.000Z',
    Freight: 92.69,
    ShipName: 'Berglunds snabbköp',
    ShipAddress: 'Berguvsvägen 8',
    ShipCity: 'Luleå',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },

  {
```

```
OrderID: 10279,
CustomerID: 'LEHMS',
OrderDate: '1996-08-13T00:00:00.000Z',
ShippedDate: '1996-08-16T00:00:00.000Z',
Freight: 25.83,
ShipName: 'Lehmanns Marktstand',
ShipAddress: 'Magazinweg 7',
ShipCity: 'Frankfurt a.M.',
ShipRegion: null,
ShipCountry: 'Germany',
},

{
  OrderID: 10280,
  CustomerID: 'BERGS',
  OrderDate: '1996-08-14T00:00:00.000Z',
  ShippedDate: '1996-09-12T00:00:00.000Z',
  Freight: 8.98,
  ShipName: 'Berglunds snabbköp',
  ShipAddress: 'Berguvsvägen 8',
  ShipCity: 'Luleå',
  ShipRegion: null,
  ShipCountry: 'Sweden',
},

{
  OrderID: 10281,
  CustomerID: 'ROMEY',
  OrderDate: '1996-08-14T00:00:00.000Z',
  ShippedDate: '1996-08-21T00:00:00.000Z',
  Freight: 2.94,
  ShipName: 'Romero y tomillo',
  ShipAddress: 'Gran Vía, 1',
  ShipCity: 'Madrid',
  ShipRegion: null,
  ShipCountry: 'Spain',
},

{
  OrderID: 10282,
  CustomerID: 'ROMEY',
  OrderDate: '1996-08-15T00:00:00.000Z',
  ShippedDate: '1996-08-21T00:00:00.000Z',
  Freight: 12.69,
  ShipName: 'Romero y tomillo',
  ShipAddress: 'Gran Vía, 1',
  ShipCity: 'Madrid',
  ShipRegion: null,
  ShipCountry: 'Spain',
},

{
  OrderID: 10283,
  CustomerID: 'LILAS',
  OrderDate: '1996-08-16T00:00:00.000Z',
  ShippedDate: '1996-08-23T00:00:00.000Z',
  Freight: 84.81,
```

```
    ShipName: 'LILA-Supermercado',
    ShipAddress: 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    ShipCity: 'Barquisimeto',
    ShipRegion: 'Lara',
    ShipCountry: 'Venezuela',
  },

  {
    OrderID: 10284,
    CustomerID: 'LEHMS',
    OrderDate: '1996-08-19T00:00:00.000Z',
    ShippedDate: '1996-08-27T00:00:00.000Z',
    Freight: 76.56,
    ShipName: 'Lehmanns Marktstand',
    ShipAddress: 'Magazinweg 7',
    ShipCity: 'Frankfurt a.M.',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10285,
    CustomerID: 'QUICK',
    OrderDate: '1996-08-20T00:00:00.000Z',
    ShippedDate: '1996-08-26T00:00:00.000Z',
    Freight: 76.83,
    ShipName: 'QUICK-Stop',
    ShipAddress: 'Taucherstraße 10',
    ShipCity: 'Cunewalde',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10286,
    CustomerID: 'QUICK',
    OrderDate: '1996-08-21T00:00:00.000Z',
    ShippedDate: '1996-08-30T00:00:00.000Z',
    Freight: 229.24,
    ShipName: 'QUICK-Stop',
    ShipAddress: 'Taucherstraße 10',
    ShipCity: 'Cunewalde',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10287,
    CustomerID: 'RICAR',
    OrderDate: '1996-08-22T00:00:00.000Z',
    ShippedDate: '1996-08-28T00:00:00.000Z',
    Freight: 12.76,
    ShipName: 'Ricardo Adocicados',
    ShipAddress: 'Av. Copacabana, 267',
    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    ShipCountry: 'Brazil',
```

```
},  
  
{  
  OrderID: 10288,  
  CustomerID: 'REGGC',  
  OrderDate: '1996-08-23T00:00:00.000Z',  
  ShippedDate: '1996-09-03T00:00:00.000Z',  
  Freight: 7.45,  
  ShipName: 'Reggiani Caseifici',  
  ShipAddress: 'Strada Provinciale 124',  
  ShipCity: 'Reggio Emilia',  
  ShipRegion: null,  
  ShipCountry: 'Italy',  
},  
  
{  
  OrderID: 10289,  
  CustomerID: 'BSBEV',  
  OrderDate: '1996-08-26T00:00:00.000Z',  
  ShippedDate: '1996-08-28T00:00:00.000Z',  
  Freight: 22.77,  
  ShipName: "B' Beverages",  
  ShipAddress: 'Fauntleroy Circus',  
  ShipCity: 'London',  
  ShipRegion: null,  
  ShipCountry: 'UK',  
},  
  
{  
  OrderID: 10290,  
  CustomerID: 'COMMI',  
  OrderDate: '1996-08-27T00:00:00.000Z',  
  ShippedDate: '1996-09-03T00:00:00.000Z',  
  Freight: 79.7,  
  ShipName: 'Comércio Mineiro',  
  ShipAddress: 'Av. dos Lusíadas, 23',  
  ShipCity: 'Sao Paulo',  
  ShipRegion: 'SP',  
  ShipCountry: 'Brazil',  
},  
  
{  
  OrderID: 10291,  
  CustomerID: 'QUEDE',  
  OrderDate: '1996-08-27T00:00:00.000Z',  
  ShippedDate: '1996-09-04T00:00:00.000Z',  
  Freight: 6.4,  
  ShipName: 'Que Delícia',  
  ShipAddress: 'Rua da Panificadora, 12',  
  ShipCity: 'Rio de Janeiro',  
  ShipRegion: 'RJ',  
  ShipCountry: 'Brazil',  
},  
  
{  
  OrderID: 10292,  
  CustomerID: 'TRADH',
```

```
OrderDate: '1996-08-28T00:00:00.000Z',
ShippedDate: '1996-09-02T00:00:00.000Z',
Freight: 1.35,
ShipName: 'Tradiçao Hipermercados',
ShipAddress: 'Av. Inês de Castro, 414',
ShipCity: 'Sao Paulo',
ShipRegion: 'SP',
ShipCountry: 'Brazil',
},

{
  OrderID: 10293,
  CustomerID: 'TORTU',
  OrderDate: '1996-08-29T00:00:00.000Z',
  ShippedDate: '1996-09-11T00:00:00.000Z',
  Freight: 21.18,
  ShipName: 'Tortuga Restaurante',
  ShipAddress: 'Avda. Azteca 123',
  ShipCity: 'México D.F.',
  ShipRegion: null,
  ShipCountry: 'Mexico',
},

{
  OrderID: 10294,
  CustomerID: 'RATTC',
  OrderDate: '1996-08-30T00:00:00.000Z',
  ShippedDate: '1996-09-05T00:00:00.000Z',
  Freight: 147.26,
  ShipName: 'Rattlesnake Canyon Grocery',
  ShipAddress: '2817 Milton Dr.',
  ShipCity: 'Albuquerque',
  ShipRegion: 'NM',
  ShipCountry: 'USA',
},

{
  OrderID: 10295,
  CustomerID: 'VINET',
  OrderDate: '1996-09-02T00:00:00.000Z',
  ShippedDate: '1996-09-10T00:00:00.000Z',
  Freight: 1.15,
  ShipName: 'Vins et alcools Chevalier',
  ShipAddress: '59 rue de l'Abbaye',
  ShipCity: 'Reims',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10296,
  CustomerID: 'LILAS',
  OrderDate: '1996-09-03T00:00:00.000Z',
  ShippedDate: '1996-09-11T00:00:00.000Z',
  Freight: 0.12,
  ShipName: 'LILA-Supermercado',
  ShipAddress: 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
```

```
    ShipCity: 'Barquisimeto',
    ShipRegion: 'Lara',
    ShipCountry: 'Venezuela',
  },

  {
    OrderID: 10297,
    CustomerID: 'BLONP',
    OrderDate: '1996-09-04T00:00:00.000Z',
    ShippedDate: '1996-09-10T00:00:00.000Z',
    Freight: 5.74,
    ShipName: 'Blondel père et fils',
    ShipAddress: '24, place Kléber',
    ShipCity: 'Strasbourg',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10298,
    CustomerID: 'HUNGO',
    OrderDate: '1996-09-05T00:00:00.000Z',
    ShippedDate: '1996-09-11T00:00:00.000Z',
    Freight: 168.22,
    ShipName: 'Hungry Owl All-Night Grocers',
    ShipAddress: '8 Johnstown Road',
    ShipCity: 'Cork',
    ShipRegion: 'Co. Cork',
    ShipCountry: 'Ireland',
  },

  {
    OrderID: 10299,
    CustomerID: 'RICAR',
    OrderDate: '1996-09-06T00:00:00.000Z',
    ShippedDate: '1996-09-13T00:00:00.000Z',
    Freight: 29.76,
    ShipName: 'Ricardo Adocicados',
    ShipAddress: 'Av. Copacabana, 267',
    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10300,
    CustomerID: 'MAGAA',
    OrderDate: '1996-09-09T00:00:00.000Z',
    ShippedDate: '1996-09-18T00:00:00.000Z',
    Freight: 17.68,
    ShipName: 'Magazzini Alimentari Riuniti',
    ShipAddress: 'Via Ludovico il Moro 22',
    ShipCity: 'Bergamo',
    ShipRegion: null,
    ShipCountry: 'Italy',
  },
```

```
{
  OrderID: 10301,
  CustomerID: 'WANDK',
  OrderDate: '1996-09-09T00:00:00.000Z',
  ShippedDate: '1996-09-17T00:00:00.000Z',
  Freight: 45.08,
  ShipName: 'Die Wandernde Kuh',
  ShipAddress: 'Adenauerallee 900',
  ShipCity: 'Stuttgart',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10302,
  CustomerID: 'SUPRD',
  OrderDate: '1996-09-10T00:00:00.000Z',
  ShippedDate: '1996-10-09T00:00:00.000Z',
  Freight: 6.27,
  ShipName: 'Suprêmes délices',
  ShipAddress: 'Boulevard Tirou, 255',
  ShipCity: 'Charleroi',
  ShipRegion: null,
  ShipCountry: 'Belgium',
},

{
  OrderID: 10303,
  CustomerID: 'GODOS',
  OrderDate: '1996-09-11T00:00:00.000Z',
  ShippedDate: '1996-09-18T00:00:00.000Z',
  Freight: 107.83,
  ShipName: 'Godos Cocina Típica',
  ShipAddress: 'C/ Romero, 33',
  ShipCity: 'Sevilla',
  ShipRegion: null,
  ShipCountry: 'Spain',
},

{
  OrderID: 10304,
  CustomerID: 'TORTU',
  OrderDate: '1996-09-12T00:00:00.000Z',
  ShippedDate: '1996-09-17T00:00:00.000Z',
  Freight: 63.79,
  ShipName: 'Tortuga Restaurante',
  ShipAddress: 'Avda. Azteca 123',
  ShipCity: 'México D.F.',
  ShipRegion: null,
  ShipCountry: 'Mexico',
},

{
  OrderID: 10305,
  CustomerID: 'OLDWO',
  OrderDate: '1996-09-13T00:00:00.000Z',
  ShippedDate: '1996-10-09T00:00:00.000Z',
```

```
Freight: 257.62,
ShipName: 'Old World Delicatessen',
ShipAddress: '2743 Bering St.',
ShipCity: 'Anchorage',
ShipRegion: 'AK',
ShipCountry: 'USA',
},

{
  OrderID: 10306,
  CustomerID: 'ROMEY',
  OrderDate: '1996-09-16T00:00:00.000Z',
  ShippedDate: '1996-09-23T00:00:00.000Z',
  Freight: 7.56,
  ShipName: 'Romero y tomillo',
  ShipAddress: 'Gran Vía, 1',
  ShipCity: 'Madrid',
  ShipRegion: null,
  ShipCountry: 'Spain',
},

{
  OrderID: 10307,
  CustomerID: 'LONEP',
  OrderDate: '1996-09-17T00:00:00.000Z',
  ShippedDate: '1996-09-25T00:00:00.000Z',
  Freight: 0.56,
  ShipName: 'Lonesome Pine Restaurant',
  ShipAddress: '89 Chiaroscuro Rd.',
  ShipCity: 'Portland',
  ShipRegion: 'OR',
  ShipCountry: 'USA',
},

{
  OrderID: 10308,
  CustomerID: 'ANATR',
  OrderDate: '1996-09-18T00:00:00.000Z',
  ShippedDate: '1996-09-24T00:00:00.000Z',
  Freight: 1.61,
  ShipName: 'Ana Trujillo Emparedados y helados',
  ShipAddress: 'Avda. de la Constitución 2222',
  ShipCity: 'México D.F.',
  ShipRegion: null,
  ShipCountry: 'Mexico',
},

{
  OrderID: 10309,
  CustomerID: 'HUNGO',
  OrderDate: '1996-09-19T00:00:00.000Z',
  ShippedDate: '1996-10-23T00:00:00.000Z',
  Freight: 47.3,
  ShipName: 'Hungry Owl All-Night Grocers',
  ShipAddress: '8 Johnstown Road',
  ShipCity: 'Cork',
  ShipRegion: 'Co. Cork',
```



```
    ShipCountry: 'Ireland',
  },

  {
    OrderID: 10310,
    CustomerID: 'THEBI',
    OrderDate: '1996-09-20T00:00:00.000Z',
    ShippedDate: '1996-09-27T00:00:00.000Z',
    Freight: 17.52,
    ShipName: 'The Big Cheese',
    ShipAddress: '89 Jefferson Way Suite 2',
    ShipCity: 'Portland',
    ShipRegion: 'OR',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10311,
    CustomerID: 'DUMON',
    OrderDate: '1996-09-20T00:00:00.000Z',
    ShippedDate: '1996-09-26T00:00:00.000Z',
    Freight: 24.69,
    ShipName: 'Du monde entier',
    ShipAddress: '67, rue des Cinquante Otages',
    ShipCity: 'Nantes',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10312,
    CustomerID: 'WANDK',
    OrderDate: '1996-09-23T00:00:00.000Z',
    ShippedDate: '1996-10-03T00:00:00.000Z',
    Freight: 40.26,
    ShipName: 'Die Wandernde Kuh',
    ShipAddress: 'Adenauerallee 900',
    ShipCity: 'Stuttgart',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10313,
    CustomerID: 'QUICK',
    OrderDate: '1996-09-24T00:00:00.000Z',
    ShippedDate: '1996-10-04T00:00:00.000Z',
    Freight: 1.96,
    ShipName: 'QUICK-Stop',
    ShipAddress: 'Taucherstraße 10',
    ShipCity: 'Cunewalde',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10314,
```

```
CustomerID: 'RATTC',
OrderDate: '1996-09-25T00:00:00.000Z',
ShippedDate: '1996-10-04T00:00:00.000Z',
Freight: 74.16,
ShipName: 'Rattlesnake Canyon Grocery',
ShipAddress: '2817 Milton Dr.',
ShipCity: 'Albuquerque',
ShipRegion: 'NM',
ShipCountry: 'USA',
},

{
  OrderID: 10315,
  CustomerID: 'ISLAT',
  OrderDate: '1996-09-26T00:00:00.000Z',
  ShippedDate: '1996-10-03T00:00:00.000Z',
  Freight: 41.76,
  ShipName: 'Island Trading',
  ShipAddress: 'Garden House Crowther Way',
  ShipCity: 'Cowes',
  ShipRegion: 'Isle of Wight',
  ShipCountry: 'UK',
},

{
  OrderID: 10316,
  CustomerID: 'RATTC',
  OrderDate: '1996-09-27T00:00:00.000Z',
  ShippedDate: '1996-10-08T00:00:00.000Z',
  Freight: 150.15,
  ShipName: 'Rattlesnake Canyon Grocery',
  ShipAddress: '2817 Milton Dr.',
  ShipCity: 'Albuquerque',
  ShipRegion: 'NM',
  ShipCountry: 'USA',
},

{
  OrderID: 10317,
  CustomerID: 'LONEP',
  OrderDate: '1996-09-30T00:00:00.000Z',
  ShippedDate: '1996-10-10T00:00:00.000Z',
  Freight: 12.69,
  ShipName: 'Lonesome Pine Restaurant',
  ShipAddress: '89 Chiaroscuro Rd.',
  ShipCity: 'Portland',
  ShipRegion: 'OR',
  ShipCountry: 'USA',
},

{
  OrderID: 10318,
  CustomerID: 'ISLAT',
  OrderDate: '1996-10-01T00:00:00.000Z',
  ShippedDate: '1996-10-04T00:00:00.000Z',
  Freight: 4.73,
  ShipName: 'Island Trading',
```

```
    ShipAddress: 'Garden House Crowther Way',
    ShipCity: 'Cowes',
    ShipRegion: 'Isle of Wight',
    ShipCountry: 'UK',
  },

  {
    OrderID: 10319,
    CustomerID: 'TORTU',
    OrderDate: '1996-10-02T00:00:00.000Z',
    ShippedDate: '1996-10-11T00:00:00.000Z',
    Freight: 64.5,
    ShipName: 'Tortuga Restaurante',
    ShipAddress: 'Avda. Azteca 123',
    ShipCity: 'México D.F.',
    ShipRegion: null,
    ShipCountry: 'Mexico',
  },

  {
    OrderID: 10320,
    CustomerID: 'WARTH',
    OrderDate: '1996-10-03T00:00:00.000Z',
    ShippedDate: '1996-10-18T00:00:00.000Z',
    Freight: 34.57,
    ShipName: 'Wartian Herkku',
    ShipAddress: 'Torikatu 38',
    ShipCity: 'Oulu',
    ShipRegion: null,
    ShipCountry: 'Finland',
  },

  {
    OrderID: 10321,
    CustomerID: 'ISLAT',
    OrderDate: '1996-10-03T00:00:00.000Z',
    ShippedDate: '1996-10-11T00:00:00.000Z',
    Freight: 3.43,
    ShipName: 'Island Trading',
    ShipAddress: 'Garden House Crowther Way',
    ShipCity: 'Cowes',
    ShipRegion: 'Isle of Wight',
    ShipCountry: 'UK',
  },

  {
    OrderID: 10322,
    CustomerID: 'PERIC',
    OrderDate: '1996-10-04T00:00:00.000Z',
    ShippedDate: '1996-10-23T00:00:00.000Z',
    Freight: 0.4,
    ShipName: 'Pericles Comidas clásicas',
    ShipAddress: 'Calle Dr. Jorge Cash 321',
    ShipCity: 'México D.F.',
    ShipRegion: null,
    ShipCountry: 'Mexico',
  },
},
```

```
{
  OrderID: 10323,
  CustomerID: 'KOENE',
  OrderDate: '1996-10-07T00:00:00.000Z',
  ShippedDate: '1996-10-14T00:00:00.000Z',
  Freight: 4.88,
  ShipName: 'Königlich Essen',
  ShipAddress: 'Maubelstr. 90',
  ShipCity: 'Brandenburg',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10324,
  CustomerID: 'SAVEA',
  OrderDate: '1996-10-08T00:00:00.000Z',
  ShippedDate: '1996-10-10T00:00:00.000Z',
  Freight: 214.27,
  ShipName: 'Save-a-lot Markets',
  ShipAddress: '187 Suffolk Ln.',
  ShipCity: 'Boise',
  ShipRegion: 'ID',
  ShipCountry: 'USA',
},

{
  OrderID: 10325,
  CustomerID: 'KOENE',
  OrderDate: '1996-10-09T00:00:00.000Z',
  ShippedDate: '1996-10-14T00:00:00.000Z',
  Freight: 64.86,
  ShipName: 'Königlich Essen',
  ShipAddress: 'Maubelstr. 90',
  ShipCity: 'Brandenburg',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10326,
  CustomerID: 'BOLID',
  OrderDate: '1996-10-10T00:00:00.000Z',
  ShippedDate: '1996-10-14T00:00:00.000Z',
  Freight: 77.92,
  ShipName: 'Bólido Comidas preparadas',
  ShipAddress: 'C/ Araquil, 67',
  ShipCity: 'Madrid',
  ShipRegion: null,
  ShipCountry: 'Spain',
},

{
  OrderID: 10327,
  CustomerID: 'FOLKO',
  OrderDate: '1996-10-11T00:00:00.000Z',
```

```
ShippedDate: '1996-10-14T00:00:00.000Z',
Freight: 63.36,
ShipName: 'Folk och fä HB',
ShipAddress: 'Åkergatan 24',
ShipCity: 'Bräcke',
ShipRegion: null,
ShipCountry: 'Sweden',
},

{
  OrderID: 10328,
  CustomerID: 'FURIB',
  OrderDate: '1996-10-14T00:00:00.000Z',
  ShippedDate: '1996-10-17T00:00:00.000Z',
  Freight: 87.03,
  ShipName: 'Furia Bacalhau e Frutos do Mar',
  ShipAddress: 'Jardim das rosas n. 32',
  ShipCity: 'Lisboa',
  ShipRegion: null,
  ShipCountry: 'Portugal',
},

{
  OrderID: 10329,
  CustomerID: 'SPLIR',
  OrderDate: '1996-10-15T00:00:00.000Z',
  ShippedDate: '1996-10-23T00:00:00.000Z',
  Freight: 191.67,
  ShipName: 'Split Rail Beer & Ale',
  ShipAddress: 'P.O. Box 555',
  ShipCity: 'Lander',
  ShipRegion: 'WY',
  ShipCountry: 'USA',
},

{
  OrderID: 10330,
  CustomerID: 'LILAS',
  OrderDate: '1996-10-16T00:00:00.000Z',
  ShippedDate: '1996-10-28T00:00:00.000Z',
  Freight: 12.75,
  ShipName: 'LILA-Supermercado',
  ShipAddress: 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
  ShipCity: 'Barquisimeto',
  ShipRegion: 'Lara',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10331,
  CustomerID: 'BONAP',
  OrderDate: '1996-10-16T00:00:00.000Z',
  ShippedDate: '1996-10-21T00:00:00.000Z',
  Freight: 10.19,
  ShipName: 'Bon app',
  ShipAddress: '12, rue des Bouchers',
  ShipCity: 'Marseille',
```

```
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10332,
    CustomerID: 'MEREP',
    OrderDate: '1996-10-17T00:00:00.000Z',
    ShippedDate: '1996-10-21T00:00:00.000Z',
    Freight: 52.84,
    ShipName: 'Mère Paillarde',
    ShipAddress: '43 rue St. Laurent',
    ShipCity: 'Montréal',
    ShipRegion: 'Québec',
    ShipCountry: 'Canada',
  },

  {
    OrderID: 10333,
    CustomerID: 'WARTH',
    OrderDate: '1996-10-18T00:00:00.000Z',
    ShippedDate: '1996-10-25T00:00:00.000Z',
    Freight: 0.59,
    ShipName: 'Wartian Herkku',
    ShipAddress: 'Torikatu 38',
    ShipCity: 'Oulu',
    ShipRegion: null,
    ShipCountry: 'Finland',
  },

  {
    OrderID: 10334,
    CustomerID: 'VICTE',
    OrderDate: '1996-10-21T00:00:00.000Z',
    ShippedDate: '1996-10-28T00:00:00.000Z',
    Freight: 8.56,
    ShipName: 'Victuailles en stock',
    ShipAddress: '2, rue du Commerce',
    ShipCity: 'Lyon',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10335,
    CustomerID: 'HUNGO',
    OrderDate: '1996-10-22T00:00:00.000Z',
    ShippedDate: '1996-10-24T00:00:00.000Z',
    Freight: 42.11,
    ShipName: 'Hungry Owl All-Night Grocers',
    ShipAddress: '8 Johnstown Road',
    ShipCity: 'Cork',
    ShipRegion: 'Co. Cork',
    ShipCountry: 'Ireland',
  },

  {
```

```
OrderID: 10336,
CustomerID: 'PRINI',
OrderDate: '1996-10-23T00:00:00.000Z',
ShippedDate: '1996-10-25T00:00:00.000Z',
Freight: 15.51,
ShipName: 'Princesa Isabel Vinhos',
ShipAddress: 'Estrada da saúde n. 58',
ShipCity: 'Lisboa',
ShipRegion: null,
ShipCountry: 'Portugal',
},

{
  OrderID: 10337,
  CustomerID: 'FRANK',
  OrderDate: '1996-10-24T00:00:00.000Z',
  ShippedDate: '1996-10-29T00:00:00.000Z',
  Freight: 108.26,
  ShipName: 'Frankenversand',
  ShipAddress: 'Berliner Platz 43',
  ShipCity: 'München',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10338,
  CustomerID: 'OLDWO',
  OrderDate: '1996-10-25T00:00:00.000Z',
  ShippedDate: '1996-10-29T00:00:00.000Z',
  Freight: 84.21,
  ShipName: 'Old World Delicatessen',
  ShipAddress: '2743 Bering St.',
  ShipCity: 'Anchorage',
  ShipRegion: 'AK',
  ShipCountry: 'USA',
},

{
  OrderID: 10339,
  CustomerID: 'MEREP',
  OrderDate: '1996-10-28T00:00:00.000Z',
  ShippedDate: '1996-11-04T00:00:00.000Z',
  Freight: 15.66,
  ShipName: 'Mère Paillarde',
  ShipAddress: '43 rue St. Laurent',
  ShipCity: 'Montréal',
  ShipRegion: 'Québec',
  ShipCountry: 'Canada',
},

{
  OrderID: 10340,
  CustomerID: 'BONAP',
  OrderDate: '1996-10-29T00:00:00.000Z',
  ShippedDate: '1996-11-08T00:00:00.000Z',
  Freight: 166.31,
```

```
    ShipName: 'Bon app',
    ShipAddress: '12, rue des Bouchers',
    ShipCity: 'Marseille',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10341,
    CustomerID: 'SIMOB',
    OrderDate: '1996-10-29T00:00:00.000Z',
    ShippedDate: '1996-11-05T00:00:00.000Z',
    Freight: 26.78,
    ShipName: 'Simons bistro',
    ShipAddress: 'Vinbæltet 34',
    ShipCity: 'Kobenhavn',
    ShipRegion: null,
    ShipCountry: 'Denmark',
  },

  {
    OrderID: 10342,
    CustomerID: 'FRANK',
    OrderDate: '1996-10-30T00:00:00.000Z',
    ShippedDate: '1996-11-04T00:00:00.000Z',
    Freight: 54.83,
    ShipName: 'Frankenversand',
    ShipAddress: 'Berliner Platz 43',
    ShipCity: 'München',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10343,
    CustomerID: 'LEHMS',
    OrderDate: '1996-10-31T00:00:00.000Z',
    ShippedDate: '1996-11-06T00:00:00.000Z',
    Freight: 110.37,
    ShipName: 'Lehmanns Marktstand',
    ShipAddress: 'Magazinweg 7',
    ShipCity: 'Frankfurt a.M.',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10344,
    CustomerID: 'WHITC',
    OrderDate: '1996-11-01T00:00:00.000Z',
    ShippedDate: '1996-11-05T00:00:00.000Z',
    Freight: 23.29,
    ShipName: 'White Clover Markets',
    ShipAddress: '1029 - 12th Ave. S.',
    ShipCity: 'Seattle',
    ShipRegion: 'WA',
    ShipCountry: 'USA',
  },
```



```
},  
  
{  
  OrderID: 10345,  
  CustomerID: 'QUICK',  
  OrderDate: '1996-11-04T00:00:00.000Z',  
  ShippedDate: '1996-11-11T00:00:00.000Z',  
  Freight: 249.06,  
  ShipName: 'QUICK-Stop',  
  ShipAddress: 'Taucherstraße 10',  
  ShipCity: 'Cunewalde',  
  ShipRegion: null,  
  ShipCountry: 'Germany',  
},  
  
{  
  OrderID: 10346,  
  CustomerID: 'RATTC',  
  OrderDate: '1996-11-05T00:00:00.000Z',  
  ShippedDate: '1996-11-08T00:00:00.000Z',  
  Freight: 142.08,  
  ShipName: 'Rattlesnake Canyon Grocery',  
  ShipAddress: '2817 Milton Dr.',  
  ShipCity: 'Albuquerque',  
  ShipRegion: 'NM',  
  ShipCountry: 'USA',  
},  
  
{  
  OrderID: 10347,  
  CustomerID: 'FAMIA',  
  OrderDate: '1996-11-06T00:00:00.000Z',  
  ShippedDate: '1996-11-08T00:00:00.000Z',  
  Freight: 3.1,  
  ShipName: 'Familia Arquibaldo',  
  ShipAddress: 'Rua Orós, 92',  
  ShipCity: 'Sao Paulo',  
  ShipRegion: 'SP',  
  ShipCountry: 'Brazil',  
},  
  
{  
  OrderID: 10348,  
  CustomerID: 'WANDK',  
  OrderDate: '1996-11-07T00:00:00.000Z',  
  ShippedDate: '1996-11-15T00:00:00.000Z',  
  Freight: 0.78,  
  ShipName: 'Die Wandernde Kuh',  
  ShipAddress: 'Adenauerallee 900',  
  ShipCity: 'Stuttgart',  
  ShipRegion: null,  
  ShipCountry: 'Germany',  
},  
  
{  
  OrderID: 10349,  
  CustomerID: 'SPLIR',
```

```
OrderDate: '1996-11-08T00:00:00.000Z',
ShippedDate: '1996-11-15T00:00:00.000Z',
Freight: 8.63,
ShipName: 'Split Rail Beer & Ale',
ShipAddress: 'P.O. Box 555',
ShipCity: 'Lander',
ShipRegion: 'WY',
ShipCountry: 'USA',
},

{
  OrderID: 10350,
  CustomerID: 'LAMAI',
  OrderDate: '1996-11-11T00:00:00.000Z',
  ShippedDate: '1996-12-03T00:00:00.000Z',
  Freight: 64.19,
  ShipName: "La maison d'Asie",
  ShipAddress: '1 rue Alsace-Lorraine',
  ShipCity: 'Toulouse',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10351,
  CustomerID: 'ERNSH',
  OrderDate: '1996-11-11T00:00:00.000Z',
  ShippedDate: '1996-11-20T00:00:00.000Z',
  Freight: 162.33,
  ShipName: 'Ernst Handel',
  ShipAddress: 'Kirchgasse 6',
  ShipCity: 'Graz',
  ShipRegion: null,
  ShipCountry: 'Austria',
},

{
  OrderID: 10352,
  CustomerID: 'FURIB',
  OrderDate: '1996-11-12T00:00:00.000Z',
  ShippedDate: '1996-11-18T00:00:00.000Z',
  Freight: 1.3,
  ShipName: 'Furia Bacalhau e Frutos do Mar',
  ShipAddress: 'Jardim das rosas n. 32',
  ShipCity: 'Lisboa',
  ShipRegion: null,
  ShipCountry: 'Portugal',
},

{
  OrderID: 10353,
  CustomerID: 'PICCO',
  OrderDate: '1996-11-13T00:00:00.000Z',
  ShippedDate: '1996-11-25T00:00:00.000Z',
  Freight: 360.63,
  ShipName: 'Piccolo und mehr',
  ShipAddress: 'Geislweg 14',
```

```
    ShipCity: 'Salzburg',
    ShipRegion: null,
    ShipCountry: 'Austria',
  },

  {
    OrderID: 10354,
    CustomerID: 'PERIC',
    OrderDate: '1996-11-14T00:00:00.000Z',
    ShippedDate: '1996-11-20T00:00:00.000Z',
    Freight: 53.8,
    ShipName: 'Pericles Comidas clásicas',
    ShipAddress: 'Calle Dr. Jorge Cash 321',
    ShipCity: 'México D.F.',
    ShipRegion: null,
    ShipCountry: 'Mexico',
  },

  {
    OrderID: 10355,
    CustomerID: 'AROUT',
    OrderDate: '1996-11-15T00:00:00.000Z',
    ShippedDate: '1996-11-20T00:00:00.000Z',
    Freight: 41.95,
    ShipName: 'Around the Horn',
    ShipAddress: 'Brook Farm Stratford St. Mary',
    ShipCity: 'Colchester',
    ShipRegion: 'Essex',
    ShipCountry: 'UK',
  },

  {
    OrderID: 10356,
    CustomerID: 'WANDK',
    OrderDate: '1996-11-18T00:00:00.000Z',
    ShippedDate: '1996-11-27T00:00:00.000Z',
    Freight: 36.71,
    ShipName: 'Die Wandernde Kuh',
    ShipAddress: 'Adenauerallee 900',
    ShipCity: 'Stuttgart',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10357,
    CustomerID: 'LILAS',
    OrderDate: '1996-11-19T00:00:00.000Z',
    ShippedDate: '1996-12-02T00:00:00.000Z',
    Freight: 34.88,
    ShipName: 'LILA-Supermercado',
    ShipAddress: 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    ShipCity: 'Barquisimeto',
    ShipRegion: 'Lara',
    ShipCountry: 'Venezuela',
  },
```

```
{
  OrderID: 10358,
  CustomerID: 'LAMAI',
  OrderDate: '1996-11-20T00:00:00.000Z',
  ShippedDate: '1996-11-27T00:00:00.000Z',
  Freight: 19.64,
  ShipName: 'La maison d'Asie',
  ShipAddress: '1 rue Alsace-Lorraine',
  ShipCity: 'Toulouse',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10359,
  CustomerID: 'SEVES',
  OrderDate: '1996-11-21T00:00:00.000Z',
  ShippedDate: '1996-11-26T00:00:00.000Z',
  Freight: 288.43,
  ShipName: 'Seven Seas Imports',
  ShipAddress: '90 Wadhurst Rd.',
  ShipCity: 'London',
  ShipRegion: null,
  ShipCountry: 'UK',
},

{
  OrderID: 10360,
  CustomerID: 'BLONP',
  OrderDate: '1996-11-22T00:00:00.000Z',
  ShippedDate: '1996-12-02T00:00:00.000Z',
  Freight: 131.7,
  ShipName: 'Blondel père et fils',
  ShipAddress: '24, place Kléber',
  ShipCity: 'Strasbourg',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10361,
  CustomerID: 'QUICK',
  OrderDate: '1996-11-22T00:00:00.000Z',
  ShippedDate: '1996-12-03T00:00:00.000Z',
  Freight: 183.17,
  ShipName: 'QUICK-Stop',
  ShipAddress: 'Taucherstraße 10',
  ShipCity: 'Cunewalde',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10362,
  CustomerID: 'BONAP',
  OrderDate: '1996-11-25T00:00:00.000Z',
  ShippedDate: '1996-11-28T00:00:00.000Z',
```

```
Freight: 96.04,
ShipName: 'Bon app',
ShipAddress: '12, rue des Bouchers',
ShipCity: 'Marseille',
ShipRegion: null,
ShipCountry: 'France',
},

{
  OrderID: 10363,
  CustomerID: 'DRACD',
  OrderDate: '1996-11-26T00:00:00.000Z',
  ShippedDate: '1996-12-04T00:00:00.000Z',
  Freight: 30.54,
  ShipName: 'Drachenblut Delikatessen',
  ShipAddress: 'Walserweg 21',
  ShipCity: 'Aachen',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10364,
  CustomerID: 'EASTC',
  OrderDate: '1996-11-26T00:00:00.000Z',
  ShippedDate: '1996-12-04T00:00:00.000Z',
  Freight: 71.97,
  ShipName: 'Eastern Connection',
  ShipAddress: '35 King George',
  ShipCity: 'London',
  ShipRegion: null,
  ShipCountry: 'UK',
},

{
  OrderID: 10365,
  CustomerID: 'ANTON',
  OrderDate: '1996-11-27T00:00:00.000Z',
  ShippedDate: '1996-12-02T00:00:00.000Z',
  Freight: 22,
  ShipName: 'Antonio Moreno Taquería',
  ShipAddress: 'Mataderos 2312',
  ShipCity: 'México D.F.',
  ShipRegion: null,
  ShipCountry: 'Mexico',
},

{
  OrderID: 10366,
  CustomerID: 'GALED',
  OrderDate: '1996-11-28T00:00:00.000Z',
  ShippedDate: '1996-12-30T00:00:00.000Z',
  Freight: 10.14,
  ShipName: 'Galería del gastronómo',
  ShipAddress: 'Rambla de Cataluña, 23',
  ShipCity: 'Barcelona',
  ShipRegion: null,
```

```
    ShipCountry: 'Spain',
  },

  {
    OrderID: 10367,
    CustomerID: 'VAFFE',
    OrderDate: '1996-11-28T00:00:00.000Z',
    ShippedDate: '1996-12-02T00:00:00.000Z',
    Freight: 13.55,
    ShipName: 'Vaffeljernet',
    ShipAddress: 'Smagsloget 45',
    ShipCity: 'Århus',
    ShipRegion: null,
    ShipCountry: 'Denmark',
  },

  {
    OrderID: 10368,
    CustomerID: 'ERNSH',
    OrderDate: '1996-11-29T00:00:00.000Z',
    ShippedDate: '1996-12-02T00:00:00.000Z',
    Freight: 101.95,
    ShipName: 'Ernst Handel',
    ShipAddress: 'Kirchgasse 6',
    ShipCity: 'Graz',
    ShipRegion: null,
    ShipCountry: 'Austria',
  },

  {
    OrderID: 10369,
    CustomerID: 'SPLIR',
    OrderDate: '1996-12-02T00:00:00.000Z',
    ShippedDate: '1996-12-09T00:00:00.000Z',
    Freight: 195.68,
    ShipName: 'Split Rail Beer & Ale',
    ShipAddress: 'P.O. Box 555',
    ShipCity: 'Lander',
    ShipRegion: 'WY',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10370,
    CustomerID: 'CHOPS',
    OrderDate: '1996-12-03T00:00:00.000Z',
    ShippedDate: '1996-12-27T00:00:00.000Z',
    Freight: 1.17,
    ShipName: 'Chop-suey Chinese',
    ShipAddress: 'Hauptstr. 31',
    ShipCity: 'Bern',
    ShipRegion: null,
    ShipCountry: 'Switzerland',
  },

  {
    OrderID: 10371,
```

```
CustomerID: 'LAMAI',
OrderDate: '1996-12-03T00:00:00.000Z',
ShippedDate: '1996-12-24T00:00:00.000Z',
Freight: 0.45,
ShipName: "La maison d'Asie",
ShipAddress: '1 rue Alsace-Lorraine',
ShipCity: 'Toulouse',
ShipRegion: null,
ShipCountry: 'France',
},

{
  OrderID: 10372,
  CustomerID: 'QUEEN',
  OrderDate: '1996-12-04T00:00:00.000Z',
  ShippedDate: '1996-12-09T00:00:00.000Z',
  Freight: 890.78,
  ShipName: 'Queen Cozinha',
  ShipAddress: 'Alameda dos Canários, 891',
  ShipCity: 'Sao Paulo',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10373,
  CustomerID: 'HUNGO',
  OrderDate: '1996-12-05T00:00:00.000Z',
  ShippedDate: '1996-12-11T00:00:00.000Z',
  Freight: 124.12,
  ShipName: 'Hungry Owl All-Night Grocers',
  ShipAddress: '8 Johnstown Road',
  ShipCity: 'Cork',
  ShipRegion: 'Co. Cork',
  ShipCountry: 'Ireland',
},

{
  OrderID: 10374,
  CustomerID: 'WOLZA',
  OrderDate: '1996-12-05T00:00:00.000Z',
  ShippedDate: '1996-12-09T00:00:00.000Z',
  Freight: 3.94,
  ShipName: 'Wolski Zajazd',
  ShipAddress: 'ul. Filtrowa 68',
  ShipCity: 'Warszawa',
  ShipRegion: null,
  ShipCountry: 'Poland',
},

{
  OrderID: 10375,
  CustomerID: 'HUNGC',
  OrderDate: '1996-12-06T00:00:00.000Z',
  ShippedDate: '1996-12-09T00:00:00.000Z',
  Freight: 20.12,
  ShipName: 'Hungry Coyote Import Store',
```

```
    ShipAddress: 'City Center Plaza 516 Main St.',
    ShipCity: 'Elgin',
    ShipRegion: 'OR',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10376,
    CustomerID: 'MEREP',
    OrderDate: '1996-12-09T00:00:00.000Z',
    ShippedDate: '1996-12-13T00:00:00.000Z',
    Freight: 20.39,
    ShipName: 'Mère Paillarde',
    ShipAddress: '43 rue St. Laurent',
    ShipCity: 'Montréal',
    ShipRegion: 'Québec',
    ShipCountry: 'Canada',
  },

  {
    OrderID: 10377,
    CustomerID: 'SEVES',
    OrderDate: '1996-12-09T00:00:00.000Z',
    ShippedDate: '1996-12-13T00:00:00.000Z',
    Freight: 22.21,
    ShipName: 'Seven Seas Imports',
    ShipAddress: '90 Wadhurst Rd.',
    ShipCity: 'London',
    ShipRegion: null,
    ShipCountry: 'UK',
  },

  {
    OrderID: 10378,
    CustomerID: 'FOLKO',
    OrderDate: '1996-12-10T00:00:00.000Z',
    ShippedDate: '1996-12-19T00:00:00.000Z',
    Freight: 5.44,
    ShipName: 'Folk och fä HB',
    ShipAddress: 'Åkergatan 24',
    ShipCity: 'Bräcke',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },

  {
    OrderID: 10379,
    CustomerID: 'QUEDE',
    OrderDate: '1996-12-11T00:00:00.000Z',
    ShippedDate: '1996-12-13T00:00:00.000Z',
    Freight: 45.03,
    ShipName: 'Que Delícia',
    ShipAddress: 'Rua da Panificadora, 12',
    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    ShipCountry: 'Brazil',
  },
},
```



```
{
  OrderID: 10380,
  CustomerID: 'HUNGO',
  OrderDate: '1996-12-12T00:00:00.000Z',
  ShippedDate: '1997-01-16T00:00:00.000Z',
  Freight: 35.03,
  ShipName: 'Hungry Owl All-Night Grocers',
  ShipAddress: '8 Johnstown Road',
  ShipCity: 'Cork',
  ShipRegion: 'Co. Cork',
  ShipCountry: 'Ireland',
},

{
  OrderID: 10381,
  CustomerID: 'LILAS',
  OrderDate: '1996-12-12T00:00:00.000Z',
  ShippedDate: '1996-12-13T00:00:00.000Z',
  Freight: 7.99,
  ShipName: 'LILA-Supermercado',
  ShipAddress: 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
  ShipCity: 'Barquisimeto',
  ShipRegion: 'Lara',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10382,
  CustomerID: 'ERNSH',
  OrderDate: '1996-12-13T00:00:00.000Z',
  ShippedDate: '1996-12-16T00:00:00.000Z',
  Freight: 94.77,
  ShipName: 'Ernst Handel',
  ShipAddress: 'Kirchgasse 6',
  ShipCity: 'Graz',
  ShipRegion: null,
  ShipCountry: 'Austria',
},

{
  OrderID: 10383,
  CustomerID: 'AROUT',
  OrderDate: '1996-12-16T00:00:00.000Z',
  ShippedDate: '1996-12-18T00:00:00.000Z',
  Freight: 34.24,
  ShipName: 'Around the Horn',
  ShipAddress: 'Brook Farm Stratford St. Mary',
  ShipCity: 'Colchester',
  ShipRegion: 'Essex',
  ShipCountry: 'UK',
},

{
  OrderID: 10384,
  CustomerID: 'BERGS',
  OrderDate: '1996-12-16T00:00:00.000Z',
```

```
ShippedDate: '1996-12-20T00:00:00.000Z',
Freight: 168.64,
ShipName: 'Berglunds snabbköp',
ShipAddress: 'Berguvsvägen 8',
ShipCity: 'Luleå',
ShipRegion: null,
ShipCountry: 'Sweden',
},

{
  OrderID: 10385,
  CustomerID: 'SPLIR',
  OrderDate: '1996-12-17T00:00:00.000Z',
  ShippedDate: '1996-12-23T00:00:00.000Z',
  Freight: 30.96,
  ShipName: 'Split Rail Beer & Ale',
  ShipAddress: 'P.O. Box 555',
  ShipCity: 'Lander',
  ShipRegion: 'WY',
  ShipCountry: 'USA',
},

{
  OrderID: 10386,
  CustomerID: 'FAMIA',
  OrderDate: '1996-12-18T00:00:00.000Z',
  ShippedDate: '1996-12-25T00:00:00.000Z',
  Freight: 13.99,
  ShipName: 'Familia Arquibaldo',
  ShipAddress: 'Rua Orós, 92',
  ShipCity: 'Sao Paulo',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10387,
  CustomerID: 'SANTG',
  OrderDate: '1996-12-18T00:00:00.000Z',
  ShippedDate: '1996-12-20T00:00:00.000Z',
  Freight: 93.63,
  ShipName: 'Santé Gourmet',
  ShipAddress: 'Erling Skakkes gate 78',
  ShipCity: 'Stavern',
  ShipRegion: null,
  ShipCountry: 'Norway',
},

{
  OrderID: 10388,
  CustomerID: 'SEVES',
  OrderDate: '1996-12-19T00:00:00.000Z',
  ShippedDate: '1996-12-20T00:00:00.000Z',
  Freight: 34.86,
  ShipName: 'Seven Seas Imports',
  ShipAddress: '90 Wadhurst Rd.',
  ShipCity: 'London',
```

```
    ShipRegion: null,
    ShipCountry: 'UK',
  },

  {
    OrderID: 10389,
    CustomerID: 'BOTTM',
    OrderDate: '1996-12-20T00:00:00.000Z',
    ShippedDate: '1996-12-24T00:00:00.000Z',
    Freight: 47.42,
    ShipName: 'Bottom-Dollar Markets',
    ShipAddress: '23 Tsawassen Blvd.',
    ShipCity: 'Tsawassen',
    ShipRegion: 'BC',
    ShipCountry: 'Canada',
  },

  {
    OrderID: 10390,
    CustomerID: 'ERNSH',
    OrderDate: '1996-12-23T00:00:00.000Z',
    ShippedDate: '1996-12-26T00:00:00.000Z',
    Freight: 126.38,
    ShipName: 'Ernst Handel',
    ShipAddress: 'Kirchgasse 6',
    ShipCity: 'Graz',
    ShipRegion: null,
    ShipCountry: 'Austria',
  },

  {
    OrderID: 10391,
    CustomerID: 'DRACD',
    OrderDate: '1996-12-23T00:00:00.000Z',
    ShippedDate: '1996-12-31T00:00:00.000Z',
    Freight: 5.45,
    ShipName: 'Drachenblut Delikatessen',
    ShipAddress: 'Walserweg 21',
    ShipCity: 'Aachen',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10392,
    CustomerID: 'PICCO',
    OrderDate: '1996-12-24T00:00:00.000Z',
    ShippedDate: '1997-01-01T00:00:00.000Z',
    Freight: 122.46,
    ShipName: 'Piccolo und mehr',
    ShipAddress: 'Geislweg 14',
    ShipCity: 'Salzburg',
    ShipRegion: null,
    ShipCountry: 'Austria',
  },

  {
```

```
OrderID: 10393,
CustomerID: 'SAVEA',
OrderDate: '1996-12-25T00:00:00.000Z',
ShippedDate: '1997-01-03T00:00:00.000Z',
Freight: 126.56,
ShipName: 'Save-a-lot Markets',
ShipAddress: '187 Suffolk Ln.',
ShipCity: 'Boise',
ShipRegion: 'ID',
ShipCountry: 'USA',
},

{
  OrderID: 10394,
  CustomerID: 'HUNGC',
  OrderDate: '1996-12-25T00:00:00.000Z',
  ShippedDate: '1997-01-03T00:00:00.000Z',
  Freight: 30.34,
  ShipName: 'Hungry Coyote Import Store',
  ShipAddress: 'City Center Plaza 516 Main St.',
  ShipCity: 'Elgin',
  ShipRegion: 'OR',
  ShipCountry: 'USA',
},

{
  OrderID: 10395,
  CustomerID: 'HILAA',
  OrderDate: '1996-12-26T00:00:00.000Z',
  ShippedDate: '1997-01-03T00:00:00.000Z',
  Freight: 184.41,
  ShipName: 'HILARION-Abastos',
  ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
  ShipCity: 'San Cristóbal',
  ShipRegion: 'Táchira',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10396,
  CustomerID: 'FRANK',
  OrderDate: '1996-12-27T00:00:00.000Z',
  ShippedDate: '1997-01-06T00:00:00.000Z',
  Freight: 135.35,
  ShipName: 'Frankenversand',
  ShipAddress: 'Berliner Platz 43',
  ShipCity: 'München',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10397,
  CustomerID: 'PRINI',
  OrderDate: '1996-12-27T00:00:00.000Z',
  ShippedDate: '1997-01-02T00:00:00.000Z',
  Freight: 60.26,
```

```
    ShipName: 'Princesa Isabel Vinhos',
    ShipAddress: 'Estrada da saúde n. 58',
    ShipCity: 'Lisboa',
    ShipRegion: null,
    ShipCountry: 'Portugal',
  },

  {
    OrderID: 10398,
    CustomerID: 'SAVEA',
    OrderDate: '1996-12-30T00:00:00.000Z',
    ShippedDate: '1997-01-09T00:00:00.000Z',
    Freight: 89.16,
    ShipName: 'Save-a-lot Markets',
    ShipAddress: '187 Suffolk Ln.',
    ShipCity: 'Boise',
    ShipRegion: 'ID',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10399,
    CustomerID: 'VAFFE',
    OrderDate: '1996-12-31T00:00:00.000Z',
    ShippedDate: '1997-01-08T00:00:00.000Z',
    Freight: 27.36,
    ShipName: 'Vaffeljernet',
    ShipAddress: 'Smagsloget 45',
    ShipCity: 'Århus',
    ShipRegion: null,
    ShipCountry: 'Denmark',
  },

  {
    OrderID: 10400,
    CustomerID: 'EASTC',
    OrderDate: '1997-01-01T00:00:00.000Z',
    ShippedDate: '1997-01-16T00:00:00.000Z',
    Freight: 83.93,
    ShipName: 'Eastern Connection',
    ShipAddress: '35 King George',
    ShipCity: 'London',
    ShipRegion: null,
    ShipCountry: 'UK',
  },

  {
    OrderID: 10401,
    CustomerID: 'RATTC',
    OrderDate: '1997-01-01T00:00:00.000Z',
    ShippedDate: '1997-01-10T00:00:00.000Z',
    Freight: 12.51,
    ShipName: 'Rattlesnake Canyon Grocery',
    ShipAddress: '2817 Milton Dr.',
    ShipCity: 'Albuquerque',
    ShipRegion: 'NM',
    ShipCountry: 'USA',
  },
```

```
},  
  
{  
  OrderID: 10402,  
  CustomerID: 'ERNSH',  
  OrderDate: '1997-01-02T00:00:00.000Z',  
  ShippedDate: '1997-01-10T00:00:00.000Z',  
  Freight: 67.88,  
  ShipName: 'Ernst Handel',  
  ShipAddress: 'Kirchgasse 6',  
  ShipCity: 'Graz',  
  ShipRegion: null,  
  ShipCountry: 'Austria',  
},  
  
{  
  OrderID: 10403,  
  CustomerID: 'ERNSH',  
  OrderDate: '1997-01-03T00:00:00.000Z',  
  ShippedDate: '1997-01-09T00:00:00.000Z',  
  Freight: 73.79,  
  ShipName: 'Ernst Handel',  
  ShipAddress: 'Kirchgasse 6',  
  ShipCity: 'Graz',  
  ShipRegion: null,  
  ShipCountry: 'Austria',  
},  
  
{  
  OrderID: 10404,  
  CustomerID: 'MAGAA',  
  OrderDate: '1997-01-03T00:00:00.000Z',  
  ShippedDate: '1997-01-08T00:00:00.000Z',  
  Freight: 155.97,  
  ShipName: 'Magazzini Alimentari Riuniti',  
  ShipAddress: 'Via Ludovico il Moro 22',  
  ShipCity: 'Bergamo',  
  ShipRegion: null,  
  ShipCountry: 'Italy',  
},  
  
{  
  OrderID: 10405,  
  CustomerID: 'LINOD',  
  OrderDate: '1997-01-06T00:00:00.000Z',  
  ShippedDate: '1997-01-22T00:00:00.000Z',  
  Freight: 34.82,  
  ShipName: 'LINO-Delicateses',  
  ShipAddress: 'Ave. 5 de Mayo Porlamar',  
  ShipCity: 'I. de Margarita',  
  ShipRegion: 'Nueva Esparta',  
  ShipCountry: 'Venezuela',  
},  
  
{  
  OrderID: 10406,  
  CustomerID: 'QUEEN',
```

```
OrderDate: '1997-01-07T00:00:00.000Z',
ShippedDate: '1997-01-13T00:00:00.000Z',
Freight: 108.04,
ShipName: 'Queen Cozinha',
ShipAddress: 'Alameda dos Canários, 891',
ShipCity: 'Sao Paulo',
ShipRegion: 'SP',
ShipCountry: 'Brazil',
},

{
  OrderID: 10407,
  CustomerID: 'OTTIK',
  OrderDate: '1997-01-07T00:00:00.000Z',
  ShippedDate: '1997-01-30T00:00:00.000Z',
  Freight: 91.48,
  ShipName: 'Ottilies Käseladen',
  ShipAddress: 'Mehrheimerstr. 369',
  ShipCity: 'Köln',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10408,
  CustomerID: 'FOLIG',
  OrderDate: '1997-01-08T00:00:00.000Z',
  ShippedDate: '1997-01-14T00:00:00.000Z',
  Freight: 11.26,
  ShipName: 'Folies gourmandes',
  ShipAddress: '184, chaussée de Tournai',
  ShipCity: 'Lille',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10409,
  CustomerID: 'OCEAN',
  OrderDate: '1997-01-09T00:00:00.000Z',
  ShippedDate: '1997-01-14T00:00:00.000Z',
  Freight: 29.83,
  ShipName: 'Océano Atlántico Ltda.',
  ShipAddress: 'Ing. Gustavo Moncada 8585 Piso 20-A',
  ShipCity: 'Buenos Aires',
  ShipRegion: null,
  ShipCountry: 'Argentina',
},

{
  OrderID: 10410,
  CustomerID: 'BOTTM',
  OrderDate: '1997-01-10T00:00:00.000Z',
  ShippedDate: '1997-01-15T00:00:00.000Z',
  Freight: 2.4,
  ShipName: 'Bottom-Dollar Markets',
  ShipAddress: '23 Tsawassen Blvd.',
```

```
    ShipCity: 'Tsawassen',
    ShipRegion: 'BC',
    ShipCountry: 'Canada',
  },

  {
    OrderID: 10411,
    CustomerID: 'BOTTM',
    OrderDate: '1997-01-10T00:00:00.000Z',
    ShippedDate: '1997-01-21T00:00:00.000Z',
    Freight: 23.65,
    ShipName: 'Bottom-Dollar Markets',
    ShipAddress: '23 Tsawassen Blvd.',
    ShipCity: 'Tsawassen',
    ShipRegion: 'BC',
    ShipCountry: 'Canada',
  },

  {
    OrderID: 10412,
    CustomerID: 'WARTH',
    OrderDate: '1997-01-13T00:00:00.000Z',
    ShippedDate: '1997-01-15T00:00:00.000Z',
    Freight: 3.77,
    ShipName: 'Wartian Herkku',
    ShipAddress: 'Torikatu 38',
    ShipCity: 'Oulu',
    ShipRegion: null,
    ShipCountry: 'Finland',
  },

  {
    OrderID: 10413,
    CustomerID: 'LAMAI',
    OrderDate: '1997-01-14T00:00:00.000Z',
    ShippedDate: '1997-01-16T00:00:00.000Z',
    Freight: 95.66,
    ShipName: "La maison d'Asie",
    ShipAddress: '1 rue Alsace-Lorraine',
    ShipCity: 'Toulouse',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10414,
    CustomerID: 'FAMIA',
    OrderDate: '1997-01-14T00:00:00.000Z',
    ShippedDate: '1997-01-17T00:00:00.000Z',
    Freight: 21.48,
    ShipName: 'Familia Arquibaldo',
    ShipAddress: 'Rua Orós, 92',
    ShipCity: 'Sao Paulo',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },
}
```



```
{
  OrderID: 10415,
  CustomerID: 'HUNGC',
  OrderDate: '1997-01-15T00:00:00.000Z',
  ShippedDate: '1997-01-24T00:00:00.000Z',
  Freight: 0.2,
  ShipName: 'Hungry Coyote Import Store',
  ShipAddress: 'City Center Plaza 516 Main St.',
  ShipCity: 'Elgin',
  ShipRegion: 'OR',
  ShipCountry: 'USA',
},

{
  OrderID: 10416,
  CustomerID: 'WARTH',
  OrderDate: '1997-01-16T00:00:00.000Z',
  ShippedDate: '1997-01-27T00:00:00.000Z',
  Freight: 22.72,
  ShipName: 'Wartian Herkku',
  ShipAddress: 'Torikatu 38',
  ShipCity: 'Oulu',
  ShipRegion: null,
  ShipCountry: 'Finland',
},

{
  OrderID: 10417,
  CustomerID: 'SIMOB',
  OrderDate: '1997-01-16T00:00:00.000Z',
  ShippedDate: '1997-01-28T00:00:00.000Z',
  Freight: 70.29,
  ShipName: 'Simons bistro',
  ShipAddress: 'Vinbæltet 34',
  ShipCity: 'Kobenhavn',
  ShipRegion: null,
  ShipCountry: 'Denmark',
},

{
  OrderID: 10418,
  CustomerID: 'QUICK',
  OrderDate: '1997-01-17T00:00:00.000Z',
  ShippedDate: '1997-01-24T00:00:00.000Z',
  Freight: 17.55,
  ShipName: 'QUICK-Stop',
  ShipAddress: 'Taucherstraße 10',
  ShipCity: 'Cunewalde',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10419,
  CustomerID: 'RICSU',
  OrderDate: '1997-01-20T00:00:00.000Z',
  ShippedDate: '1997-01-30T00:00:00.000Z',
```

```
Freight: 137.35,
ShipName: 'Richter Supermarkt',
ShipAddress: 'Starenweg 5',
ShipCity: 'Genève',
ShipRegion: null,
ShipCountry: 'Switzerland',
},

{
  OrderID: 10420,
  CustomerID: 'WELLI',
  OrderDate: '1997-01-21T00:00:00.000Z',
  ShippedDate: '1997-01-27T00:00:00.000Z',
  Freight: 44.12,
  ShipName: 'Wellington Importadora',
  ShipAddress: 'Rua do Mercado, 12',
  ShipCity: 'Resende',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10421,
  CustomerID: 'QUEDE',
  OrderDate: '1997-01-21T00:00:00.000Z',
  ShippedDate: '1997-01-27T00:00:00.000Z',
  Freight: 99.23,
  ShipName: 'Que Delícia',
  ShipAddress: 'Rua da Panificadora, 12',
  ShipCity: 'Rio de Janeiro',
  ShipRegion: 'RJ',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10422,
  CustomerID: 'FRANS',
  OrderDate: '1997-01-22T00:00:00.000Z',
  ShippedDate: '1997-01-31T00:00:00.000Z',
  Freight: 3.02,
  ShipName: 'Franchi S.p.A.',
  ShipAddress: 'Via Monte Bianco 34',
  ShipCity: 'Torino',
  ShipRegion: null,
  ShipCountry: 'Italy',
},

{
  OrderID: 10423,
  CustomerID: 'GOURL',
  OrderDate: '1997-01-23T00:00:00.000Z',
  ShippedDate: '1997-02-24T00:00:00.000Z',
  Freight: 24.5,
  ShipName: 'Gourmet Lanchonetes',
  ShipAddress: 'Av. Brasil, 442',
  ShipCity: 'Campinas',
  ShipRegion: 'SP',
```

```
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10424,
    CustomerID: 'MEREP',
    OrderDate: '1997-01-23T00:00:00.000Z',
    ShippedDate: '1997-01-27T00:00:00.000Z',
    Freight: 370.61,
    ShipName: 'Mère Paillarde',
    ShipAddress: '43 rue St. Laurent',
    ShipCity: 'Montréal',
    ShipRegion: 'Québec',
    ShipCountry: 'Canada',
  },

  {
    OrderID: 10425,
    CustomerID: 'LAMAI',
    OrderDate: '1997-01-24T00:00:00.000Z',
    ShippedDate: '1997-02-14T00:00:00.000Z',
    Freight: 7.93,
    ShipName: "La maison d'Asie",
    ShipAddress: '1 rue Alsace-Lorraine',
    ShipCity: 'Toulouse',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10426,
    CustomerID: 'GALED',
    OrderDate: '1997-01-27T00:00:00.000Z',
    ShippedDate: '1997-02-06T00:00:00.000Z',
    Freight: 18.69,
    ShipName: 'Galería del gastronómo',
    ShipAddress: 'Rambla de Cataluña, 23',
    ShipCity: 'Barcelona',
    ShipRegion: null,
    ShipCountry: 'Spain',
  },

  {
    OrderID: 10427,
    CustomerID: 'PICCO',
    OrderDate: '1997-01-27T00:00:00.000Z',
    ShippedDate: '1997-03-03T00:00:00.000Z',
    Freight: 31.29,
    ShipName: 'Piccolo und mehr',
    ShipAddress: 'Geislweg 14',
    ShipCity: 'Salzburg',
    ShipRegion: null,
    ShipCountry: 'Austria',
  },

  {
    OrderID: 10428,
```

```
CustomerID: 'REGGC',
OrderDate: '1997-01-28T00:00:00.000Z',
ShippedDate: '1997-02-04T00:00:00.000Z',
Freight: 11.09,
ShipName: 'Reggiani Caseifici',
ShipAddress: 'Strada Provinciale 124',
ShipCity: 'Reggio Emilia',
ShipRegion: null,
ShipCountry: 'Italy',
},

{
  OrderID: 10429,
  CustomerID: 'HUNGO',
  OrderDate: '1997-01-29T00:00:00.000Z',
  ShippedDate: '1997-02-07T00:00:00.000Z',
  Freight: 56.63,
  ShipName: 'Hungry Owl All-Night Grocers',
  ShipAddress: '8 Johnstown Road',
  ShipCity: 'Cork',
  ShipRegion: 'Co. Cork',
  ShipCountry: 'Ireland',
},

{
  OrderID: 10430,
  CustomerID: 'ERNSH',
  OrderDate: '1997-01-30T00:00:00.000Z',
  ShippedDate: '1997-02-03T00:00:00.000Z',
  Freight: 458.78,
  ShipName: 'Ernst Handel',
  ShipAddress: 'Kirchgasse 6',
  ShipCity: 'Graz',
  ShipRegion: null,
  ShipCountry: 'Austria',
},

{
  OrderID: 10431,
  CustomerID: 'BOTTM',
  OrderDate: '1997-01-30T00:00:00.000Z',
  ShippedDate: '1997-02-07T00:00:00.000Z',
  Freight: 44.17,
  ShipName: 'Bottom-Dollar Markets',
  ShipAddress: '23 Tsawassen Blvd.',
  ShipCity: 'Tsawassen',
  ShipRegion: 'BC',
  ShipCountry: 'Canada',
},

{
  OrderID: 10432,
  CustomerID: 'SPLIR',
  OrderDate: '1997-01-31T00:00:00.000Z',
  ShippedDate: '1997-02-07T00:00:00.000Z',
  Freight: 4.34,
  ShipName: 'Split Rail Beer & Ale',
```

```
    ShipAddress: 'P.O. Box 555',
    ShipCity: 'Lander',
    ShipRegion: 'WY',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10433,
    CustomerID: 'PRINI',
    OrderDate: '1997-02-03T00:00:00.000Z',
    ShippedDate: '1997-03-04T00:00:00.000Z',
    Freight: 73.83,
    ShipName: 'Princesa Isabel Vinhos',
    ShipAddress: 'Estrada da saúde n. 58',
    ShipCity: 'Lisboa',
    ShipRegion: null,
    ShipCountry: 'Portugal',
  },

  {
    OrderID: 10434,
    CustomerID: 'FOLKO',
    OrderDate: '1997-02-03T00:00:00.000Z',
    ShippedDate: '1997-02-13T00:00:00.000Z',
    Freight: 17.92,
    ShipName: 'Folk och fä HB',
    ShipAddress: 'Åkergatan 24',
    ShipCity: 'Bräcke',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },

  {
    OrderID: 10435,
    CustomerID: 'CONSH',
    OrderDate: '1997-02-04T00:00:00.000Z',
    ShippedDate: '1997-02-07T00:00:00.000Z',
    Freight: 9.21,
    ShipName: 'Consolidated Holdings',
    ShipAddress: 'Berkeley Gardens 12 Brewery',
    ShipCity: 'London',
    ShipRegion: null,
    ShipCountry: 'UK',
  },

  {
    OrderID: 10436,
    CustomerID: 'BLONP',
    OrderDate: '1997-02-05T00:00:00.000Z',
    ShippedDate: '1997-02-11T00:00:00.000Z',
    Freight: 156.66,
    ShipName: 'Blondel père et fils',
    ShipAddress: '24, place Kléber',
    ShipCity: 'Strasbourg',
    ShipRegion: null,
    ShipCountry: 'France',
  },
},
```

```
{
  OrderID: 10437,
  CustomerID: 'WARTH',
  OrderDate: '1997-02-05T00:00:00.000Z',
  ShippedDate: '1997-02-12T00:00:00.000Z',
  Freight: 19.97,
  ShipName: 'Wartian Herkku',
  ShipAddress: 'Torikatu 38',
  ShipCity: 'Oulu',
  ShipRegion: null,
  ShipCountry: 'Finland',
},

{
  OrderID: 10438,
  CustomerID: 'TOMSP',
  OrderDate: '1997-02-06T00:00:00.000Z',
  ShippedDate: '1997-02-14T00:00:00.000Z',
  Freight: 8.24,
  ShipName: 'Toms Spezialitäten',
  ShipAddress: 'Luisenstr. 48',
  ShipCity: 'Münster',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10439,
  CustomerID: 'MEREP',
  OrderDate: '1997-02-07T00:00:00.000Z',
  ShippedDate: '1997-02-10T00:00:00.000Z',
  Freight: 4.07,
  ShipName: 'Mère Paillarde',
  ShipAddress: '43 rue St. Laurent',
  ShipCity: 'Montréal',
  ShipRegion: 'Québec',
  ShipCountry: 'Canada',
},

{
  OrderID: 10440,
  CustomerID: 'SAVEA',
  OrderDate: '1997-02-10T00:00:00.000Z',
  ShippedDate: '1997-02-28T00:00:00.000Z',
  Freight: 86.53,
  ShipName: 'Save-a-lot Markets',
  ShipAddress: '187 Suffolk Ln.',
  ShipCity: 'Boise',
  ShipRegion: 'ID',
  ShipCountry: 'USA',
},

{
  OrderID: 10441,
  CustomerID: 'OLDWO',
  OrderDate: '1997-02-10T00:00:00.000Z',
```

```
ShippedDate: '1997-03-14T00:00:00.000Z',
Freight: 73.02,
ShipName: 'Old World Delicatessen',
ShipAddress: '2743 Bering St.',
ShipCity: 'Anchorage',
ShipRegion: 'AK',
ShipCountry: 'USA',
},

{
  OrderID: 10442,
  CustomerID: 'ERNSH',
  OrderDate: '1997-02-11T00:00:00.000Z',
  ShippedDate: '1997-02-18T00:00:00.000Z',
  Freight: 47.94,
  ShipName: 'Ernst Handel',
  ShipAddress: 'Kirchgasse 6',
  ShipCity: 'Graz',
  ShipRegion: null,
  ShipCountry: 'Austria',
},

{
  OrderID: 10443,
  CustomerID: 'REGGC',
  OrderDate: '1997-02-12T00:00:00.000Z',
  ShippedDate: '1997-02-14T00:00:00.000Z',
  Freight: 13.95,
  ShipName: 'Reggiani Caseifici',
  ShipAddress: 'Strada Provinciale 124',
  ShipCity: 'Reggio Emilia',
  ShipRegion: null,
  ShipCountry: 'Italy',
},

{
  OrderID: 10444,
  CustomerID: 'BERGS',
  OrderDate: '1997-02-12T00:00:00.000Z',
  ShippedDate: '1997-02-21T00:00:00.000Z',
  Freight: 3.5,
  ShipName: 'Berglunds snabbköp',
  ShipAddress: 'Berguvsvägen 8',
  ShipCity: 'Luleå',
  ShipRegion: null,
  ShipCountry: 'Sweden',
},

{
  OrderID: 10445,
  CustomerID: 'BERGS',
  OrderDate: '1997-02-13T00:00:00.000Z',
  ShippedDate: '1997-02-20T00:00:00.000Z',
  Freight: 9.3,
  ShipName: 'Berglunds snabbköp',
  ShipAddress: 'Berguvsvägen 8',
  ShipCity: 'Luleå',
```

```
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },

  {
    OrderID: 10446,
    CustomerID: 'TOMSP',
    OrderDate: '1997-02-14T00:00:00.000Z',
    ShippedDate: '1997-02-19T00:00:00.000Z',
    Freight: 14.68,
    ShipName: 'Toms Spezialitäten',
    ShipAddress: 'Luisenstr. 48',
    ShipCity: 'Münster',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10447,
    CustomerID: 'RICAR',
    OrderDate: '1997-02-14T00:00:00.000Z',
    ShippedDate: '1997-03-07T00:00:00.000Z',
    Freight: 68.66,
    ShipName: 'Ricardo Adocicados',
    ShipAddress: 'Av. Copacabana, 267',
    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10448,
    CustomerID: 'RANCH',
    OrderDate: '1997-02-17T00:00:00.000Z',
    ShippedDate: '1997-02-24T00:00:00.000Z',
    Freight: 38.82,
    ShipName: 'Rancho grande',
    ShipAddress: 'Av. del Libertador 900',
    ShipCity: 'Buenos Aires',
    ShipRegion: null,
    ShipCountry: 'Argentina',
  },

  {
    OrderID: 10449,
    CustomerID: 'BLONP',
    OrderDate: '1997-02-18T00:00:00.000Z',
    ShippedDate: '1997-02-27T00:00:00.000Z',
    Freight: 53.3,
    ShipName: 'Blondel père et fils',
    ShipAddress: '24, place Kléber',
    ShipCity: 'Strasbourg',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
```



```
OrderID: 10450,
CustomerID: 'VICTE',
OrderDate: '1997-02-19T00:00:00.000Z',
ShippedDate: '1997-03-11T00:00:00.000Z',
Freight: 7.23,
ShipName: 'Victuailles en stock',
ShipAddress: '2, rue du Commerce',
ShipCity: 'Lyon',
ShipRegion: null,
ShipCountry: 'France',
},

{
  OrderID: 10451,
  CustomerID: 'QUICK',
  OrderDate: '1997-02-19T00:00:00.000Z',
  ShippedDate: '1997-03-12T00:00:00.000Z',
  Freight: 189.09,
  ShipName: 'QUICK-Stop',
  ShipAddress: 'Taucherstraße 10',
  ShipCity: 'Cunewalde',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10452,
  CustomerID: 'SAVEA',
  OrderDate: '1997-02-20T00:00:00.000Z',
  ShippedDate: '1997-02-26T00:00:00.000Z',
  Freight: 140.26,
  ShipName: 'Save-a-lot Markets',
  ShipAddress: '187 Suffolk Ln.',
  ShipCity: 'Boise',
  ShipRegion: 'ID',
  ShipCountry: 'USA',
},

{
  OrderID: 10453,
  CustomerID: 'AROUT',
  OrderDate: '1997-02-21T00:00:00.000Z',
  ShippedDate: '1997-02-26T00:00:00.000Z',
  Freight: 25.36,
  ShipName: 'Around the Horn',
  ShipAddress: 'Brook Farm Stratford St. Mary',
  ShipCity: 'Colchester',
  ShipRegion: 'Essex',
  ShipCountry: 'UK',
},

{
  OrderID: 10454,
  CustomerID: 'LAMAI',
  OrderDate: '1997-02-21T00:00:00.000Z',
  ShippedDate: '1997-02-25T00:00:00.000Z',
  Freight: 2.74,
```

```
    ShipName: "La maison d'Asie",
    ShipAddress: '1 rue Alsace-Lorraine',
    ShipCity: 'Toulouse',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10455,
    CustomerID: 'WARTH',
    OrderDate: '1997-02-24T00:00:00.000Z',
    ShippedDate: '1997-03-03T00:00:00.000Z',
    Freight: 180.45,
    ShipName: 'Wartian Herkku',
    ShipAddress: 'Torikatu 38',
    ShipCity: 'Oulu',
    ShipRegion: null,
    ShipCountry: 'Finland',
  },

  {
    OrderID: 10456,
    CustomerID: 'KOENE',
    OrderDate: '1997-02-25T00:00:00.000Z',
    ShippedDate: '1997-02-28T00:00:00.000Z',
    Freight: 8.12,
    ShipName: 'Königlich Essen',
    ShipAddress: 'Maubelstr. 90',
    ShipCity: 'Brandenburg',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10457,
    CustomerID: 'KOENE',
    OrderDate: '1997-02-25T00:00:00.000Z',
    ShippedDate: '1997-03-03T00:00:00.000Z',
    Freight: 11.57,
    ShipName: 'Königlich Essen',
    ShipAddress: 'Maubelstr. 90',
    ShipCity: 'Brandenburg',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10458,
    CustomerID: 'SUPRD',
    OrderDate: '1997-02-26T00:00:00.000Z',
    ShippedDate: '1997-03-04T00:00:00.000Z',
    Freight: 147.06,
    ShipName: 'Suprêmes délices',
    ShipAddress: 'Boulevard Tirou, 255',
    ShipCity: 'Charleroi',
    ShipRegion: null,
    ShipCountry: 'Belgium',
```

```
},  
  
{  
  OrderID: 10459,  
  CustomerID: 'VICTE',  
  OrderDate: '1997-02-27T00:00:00.000Z',  
  ShippedDate: '1997-02-28T00:00:00.000Z',  
  Freight: 25.09,  
  ShipName: 'Victuailles en stock',  
  ShipAddress: '2, rue du Commerce',  
  ShipCity: 'Lyon',  
  ShipRegion: null,  
  ShipCountry: 'France',  
},  
  
{  
  OrderID: 10460,  
  CustomerID: 'FOLKO',  
  OrderDate: '1997-02-28T00:00:00.000Z',  
  ShippedDate: '1997-03-03T00:00:00.000Z',  
  Freight: 16.27,  
  ShipName: 'Folk och fä HB',  
  ShipAddress: 'Åkergatan 24',  
  ShipCity: 'Bräcke',  
  ShipRegion: null,  
  ShipCountry: 'Sweden',  
},  
  
{  
  OrderID: 10461,  
  CustomerID: 'LILAS',  
  OrderDate: '1997-02-28T00:00:00.000Z',  
  ShippedDate: '1997-03-05T00:00:00.000Z',  
  Freight: 148.61,  
  ShipName: 'LILA-Supermercado',  
  ShipAddress: 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',  
  ShipCity: 'Barquisimeto',  
  ShipRegion: 'Lara',  
  ShipCountry: 'Venezuela',  
},  
  
{  
  OrderID: 10462,  
  CustomerID: 'CONSH',  
  OrderDate: '1997-03-03T00:00:00.000Z',  
  ShippedDate: '1997-03-18T00:00:00.000Z',  
  Freight: 6.17,  
  ShipName: 'Consolidated Holdings',  
  ShipAddress: 'Berkeley Gardens 12 Brewery',  
  ShipCity: 'London',  
  ShipRegion: null,  
  ShipCountry: 'UK',  
},  
  
{  
  OrderID: 10463,  
  CustomerID: 'SUPRD',
```

```
OrderDate: '1997-03-04T00:00:00.000Z',
ShippedDate: '1997-03-06T00:00:00.000Z',
Freight: 14.78,
ShipName: 'Suprêmes délices',
ShipAddress: 'Boulevard Tirou, 255',
ShipCity: 'Charleroi',
ShipRegion: null,
ShipCountry: 'Belgium',
},

{
  OrderID: 10464,
  CustomerID: 'FURIB',
  OrderDate: '1997-03-04T00:00:00.000Z',
  ShippedDate: '1997-03-14T00:00:00.000Z',
  Freight: 89,
  ShipName: 'Furia Bacalhau e Frutos do Mar',
  ShipAddress: 'Jardim das rosas n. 32',
  ShipCity: 'Lisboa',
  ShipRegion: null,
  ShipCountry: 'Portugal',
},

{
  OrderID: 10465,
  CustomerID: 'VAFFE',
  OrderDate: '1997-03-05T00:00:00.000Z',
  ShippedDate: '1997-03-14T00:00:00.000Z',
  Freight: 145.04,
  ShipName: 'Vaffeljernet',
  ShipAddress: 'Smagsloget 45',
  ShipCity: 'Århus',
  ShipRegion: null,
  ShipCountry: 'Denmark',
},

{
  OrderID: 10466,
  CustomerID: 'COMMI',
  OrderDate: '1997-03-06T00:00:00.000Z',
  ShippedDate: '1997-03-13T00:00:00.000Z',
  Freight: 11.93,
  ShipName: 'Comércio Mineiro',
  ShipAddress: 'Av. dos Lusíadas, 23',
  ShipCity: 'Sao Paulo',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10467,
  CustomerID: 'MAGAA',
  OrderDate: '1997-03-06T00:00:00.000Z',
  ShippedDate: '1997-03-11T00:00:00.000Z',
  Freight: 4.93,
  ShipName: 'Magazzini Alimentari Riuniti',
  ShipAddress: 'Via Ludovico il Moro 22',
```

```
    ShipCity: 'Bergamo',
    ShipRegion: null,
    ShipCountry: 'Italy',
  },

  {
    OrderID: 10468,
    CustomerID: 'KOENE',
    OrderDate: '1997-03-07T00:00:00.000Z',
    ShippedDate: '1997-03-12T00:00:00.000Z',
    Freight: 44.12,
    ShipName: 'Königlich Essen',
    ShipAddress: 'Maubelstr. 90',
    ShipCity: 'Brandenburg',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10469,
    CustomerID: 'WHITC',
    OrderDate: '1997-03-10T00:00:00.000Z',
    ShippedDate: '1997-03-14T00:00:00.000Z',
    Freight: 60.18,
    ShipName: 'White Clover Markets',
    ShipAddress: '1029 - 12th Ave. S.',
    ShipCity: 'Seattle',
    ShipRegion: 'WA',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10470,
    CustomerID: 'BONAP',
    OrderDate: '1997-03-11T00:00:00.000Z',
    ShippedDate: '1997-03-14T00:00:00.000Z',
    Freight: 64.56,
    ShipName: 'Bon app',
    ShipAddress: '12, rue des Bouchers',
    ShipCity: 'Marseille',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10471,
    CustomerID: 'BSBEV',
    OrderDate: '1997-03-11T00:00:00.000Z',
    ShippedDate: '1997-03-18T00:00:00.000Z',
    Freight: 45.59,
    ShipName: "B' Beverages",
    ShipAddress: 'Fauntleroy Circus',
    ShipCity: 'London',
    ShipRegion: null,
    ShipCountry: 'UK',
  },
},
```

```
{
  OrderID: 10472,
  CustomerID: 'SEVES',
  OrderDate: '1997-03-12T00:00:00.000Z',
  ShippedDate: '1997-03-19T00:00:00.000Z',
  Freight: 4.2,
  ShipName: 'Seven Seas Imports',
  ShipAddress: '90 Wadhurst Rd.',
  ShipCity: 'London',
  ShipRegion: null,
  ShipCountry: 'UK',
},

{
  OrderID: 10473,
  CustomerID: 'ISLAT',
  OrderDate: '1997-03-13T00:00:00.000Z',
  ShippedDate: '1997-03-21T00:00:00.000Z',
  Freight: 16.37,
  ShipName: 'Island Trading',
  ShipAddress: 'Garden House Crowther Way',
  ShipCity: 'Cowes',
  ShipRegion: 'Isle of Wight',
  ShipCountry: 'UK',
},

{
  OrderID: 10474,
  CustomerID: 'PERIC',
  OrderDate: '1997-03-13T00:00:00.000Z',
  ShippedDate: '1997-03-21T00:00:00.000Z',
  Freight: 83.49,
  ShipName: 'Pericles Comidas clásicas',
  ShipAddress: 'Calle Dr. Jorge Cash 321',
  ShipCity: 'México D.F.',
  ShipRegion: null,
  ShipCountry: 'Mexico',
},

{
  OrderID: 10475,
  CustomerID: 'SUPRD',
  OrderDate: '1997-03-14T00:00:00.000Z',
  ShippedDate: '1997-04-04T00:00:00.000Z',
  Freight: 68.52,
  ShipName: 'Suprêmes délices',
  ShipAddress: 'Boulevard Tirou, 255',
  ShipCity: 'Charleroi',
  ShipRegion: null,
  ShipCountry: 'Belgium',
},

{
  OrderID: 10476,
  CustomerID: 'HILAA',
  OrderDate: '1997-03-17T00:00:00.000Z',
  ShippedDate: '1997-03-24T00:00:00.000Z',
```

```
Freight: 4.41,
ShipName: 'HILARION-Abastos',
ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
ShipCity: 'San Cristóbal',
ShipRegion: 'Táchira',
ShipCountry: 'Venezuela',
},

{
  OrderID: 10477,
  CustomerID: 'PRINI',
  OrderDate: '1997-03-17T00:00:00.000Z',
  ShippedDate: '1997-03-25T00:00:00.000Z',
  Freight: 13.02,
  ShipName: 'Princesa Isabel Vinhos',
  ShipAddress: 'Estrada da saúde n. 58',
  ShipCity: 'Lisboa',
  ShipRegion: null,
  ShipCountry: 'Portugal',
},

{
  OrderID: 10478,
  CustomerID: 'VICTE',
  OrderDate: '1997-03-18T00:00:00.000Z',
  ShippedDate: '1997-03-26T00:00:00.000Z',
  Freight: 4.81,
  ShipName: 'Victuailles en stock',
  ShipAddress: '2, rue du Commerce',
  ShipCity: 'Lyon',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10479,
  CustomerID: 'RATTC',
  OrderDate: '1997-03-19T00:00:00.000Z',
  ShippedDate: '1997-03-21T00:00:00.000Z',
  Freight: 708.95,
  ShipName: 'Rattlesnake Canyon Grocery',
  ShipAddress: '2817 Milton Dr.',
  ShipCity: 'Albuquerque',
  ShipRegion: 'NM',
  ShipCountry: 'USA',
},

{
  OrderID: 10480,
  CustomerID: 'FOLIG',
  OrderDate: '1997-03-20T00:00:00.000Z',
  ShippedDate: '1997-03-24T00:00:00.000Z',
  Freight: 1.35,
  ShipName: 'Folies gourmandes',
  ShipAddress: '184, chaussée de Tournai',
  ShipCity: 'Lille',
  ShipRegion: null,
```

```
    ShipCountry: 'France',
  },
  {
    OrderID: 10481,
    CustomerID: 'RICAR',
    OrderDate: '1997-03-20T00:00:00.000Z',
    ShippedDate: '1997-03-25T00:00:00.000Z',
    Freight: 64.33,
    ShipName: 'Ricardo Adocicados',
    ShipAddress: 'Av. Copacabana, 267',
    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    ShipCountry: 'Brazil',
  },
  {
    OrderID: 10482,
    CustomerID: 'LAZYK',
    OrderDate: '1997-03-21T00:00:00.000Z',
    ShippedDate: '1997-04-10T00:00:00.000Z',
    Freight: 7.48,
    ShipName: 'Lazy K Kountry Store',
    ShipAddress: '12 Orchestra Terrace',
    ShipCity: 'Walla Walla',
    ShipRegion: 'WA',
    ShipCountry: 'USA',
  },
  {
    OrderID: 10483,
    CustomerID: 'WHITC',
    OrderDate: '1997-03-24T00:00:00.000Z',
    ShippedDate: '1997-04-25T00:00:00.000Z',
    Freight: 15.28,
    ShipName: 'White Clover Markets',
    ShipAddress: '1029 - 12th Ave. S.',
    ShipCity: 'Seattle',
    ShipRegion: 'WA',
    ShipCountry: 'USA',
  },
  {
    OrderID: 10484,
    CustomerID: 'BSBEV',
    OrderDate: '1997-03-24T00:00:00.000Z',
    ShippedDate: '1997-04-01T00:00:00.000Z',
    Freight: 6.88,
    ShipName: "B' Beverages",
    ShipAddress: 'Fauntleroy Circus',
    ShipCity: 'London',
    ShipRegion: null,
    ShipCountry: 'UK',
  },
  {
    OrderID: 10485,
```



```
CustomerID: 'LINOD',
OrderDate: '1997-03-25T00:00:00.000Z',
ShippedDate: '1997-03-31T00:00:00.000Z',
Freight: 64.45,
ShipName: 'LINO-Delicateses',
ShipAddress: 'Ave. 5 de Mayo Porlamar',
ShipCity: 'I. de Margarita',
ShipRegion: 'Nueva Esparta',
ShipCountry: 'Venezuela',
},

{
  OrderID: 10486,
  CustomerID: 'HILAA',
  OrderDate: '1997-03-26T00:00:00.000Z',
  ShippedDate: '1997-04-02T00:00:00.000Z',
  Freight: 30.53,
  ShipName: 'HILARION-Abastos',
  ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
  ShipCity: 'San Cristóbal',
  ShipRegion: 'Táchira',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10487,
  CustomerID: 'QUEEN',
  OrderDate: '1997-03-26T00:00:00.000Z',
  ShippedDate: '1997-03-28T00:00:00.000Z',
  Freight: 71.07,
  ShipName: 'Queen Cozinha',
  ShipAddress: 'Alameda dos Canários, 891',
  ShipCity: 'Sao Paulo',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10488,
  CustomerID: 'FRANK',
  OrderDate: '1997-03-27T00:00:00.000Z',
  ShippedDate: '1997-04-02T00:00:00.000Z',
  Freight: 4.93,
  ShipName: 'Frankenversand',
  ShipAddress: 'Berliner Platz 43',
  ShipCity: 'München',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10489,
  CustomerID: 'PICCO',
  OrderDate: '1997-03-28T00:00:00.000Z',
  ShippedDate: '1997-04-09T00:00:00.000Z',
  Freight: 5.29,
  ShipName: 'Piccolo und mehr',
```

```
    ShipAddress: 'Geislweg 14',
    ShipCity: 'Salzburg',
    ShipRegion: null,
    ShipCountry: 'Austria',
  },

  {
    OrderID: 10490,
    CustomerID: 'HILAA',
    OrderDate: '1997-03-31T00:00:00.000Z',
    ShippedDate: '1997-04-03T00:00:00.000Z',
    Freight: 210.19,
    ShipName: 'HILARION-Abastos',
    ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipCity: 'San Cristóbal',
    ShipRegion: 'Táchira',
    ShipCountry: 'Venezuela',
  },

  {
    OrderID: 10491,
    CustomerID: 'FURIB',
    OrderDate: '1997-03-31T00:00:00.000Z',
    ShippedDate: '1997-04-08T00:00:00.000Z',
    Freight: 16.96,
    ShipName: 'Furia Bacalhau e Frutos do Mar',
    ShipAddress: 'Jardim das rosas n. 32',
    ShipCity: 'Lisboa',
    ShipRegion: null,
    ShipCountry: 'Portugal',
  },

  {
    OrderID: 10492,
    CustomerID: 'BOTTM',
    OrderDate: '1997-04-01T00:00:00.000Z',
    ShippedDate: '1997-04-11T00:00:00.000Z',
    Freight: 62.89,
    ShipName: 'Bottom-Dollar Markets',
    ShipAddress: '23 Tsawassen Blvd.',
    ShipCity: 'Tsawassen',
    ShipRegion: 'BC',
    ShipCountry: 'Canada',
  },

  {
    OrderID: 10493,
    CustomerID: 'LAMAI',
    OrderDate: '1997-04-02T00:00:00.000Z',
    ShippedDate: '1997-04-10T00:00:00.000Z',
    Freight: 10.64,
    ShipName: 'La maison d'Asie',
    ShipAddress: '1 rue Alsace-Lorraine',
    ShipCity: 'Toulouse',
    ShipRegion: null,
    ShipCountry: 'France',
  },
},
```

```
{
  OrderID: 10494,
  CustomerID: 'COMMI',
  OrderDate: '1997-04-02T00:00:00.000Z',
  ShippedDate: '1997-04-09T00:00:00.000Z',
  Freight: 65.99,
  ShipName: 'Comércio Mineiro',
  ShipAddress: 'Av. dos Lusíadas, 23',
  ShipCity: 'Sao Paulo',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10495,
  CustomerID: 'LAUGB',
  OrderDate: '1997-04-03T00:00:00.000Z',
  ShippedDate: '1997-04-11T00:00:00.000Z',
  Freight: 4.65,
  ShipName: 'Laughing Bacchus Wine Cellars',
  ShipAddress: '2319 Elm St.',
  ShipCity: 'Vancouver',
  ShipRegion: 'BC',
  ShipCountry: 'Canada',
},

{
  OrderID: 10496,
  CustomerID: 'TRADH',
  OrderDate: '1997-04-04T00:00:00.000Z',
  ShippedDate: '1997-04-07T00:00:00.000Z',
  Freight: 46.77,
  ShipName: 'Tradição Hipermercados',
  ShipAddress: 'Av. Inês de Castro, 414',
  ShipCity: 'Sao Paulo',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10497,
  CustomerID: 'LEHMS',
  OrderDate: '1997-04-04T00:00:00.000Z',
  ShippedDate: '1997-04-07T00:00:00.000Z',
  Freight: 36.21,
  ShipName: 'Lehmanns Marktstand',
  ShipAddress: 'Magazinweg 7',
  ShipCity: 'Frankfurt a.M.',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10498,
  CustomerID: 'HILAA',
  OrderDate: '1997-04-07T00:00:00.000Z',
```

```
ShippedDate: '1997-04-11T00:00:00.000Z',
Freight: 29.75,
ShipName: 'HILARION-Abastos',
ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
ShipCity: 'San Cristóbal',
ShipRegion: 'Táchira',
ShipCountry: 'Venezuela',
},

{
  OrderID: 10499,
  CustomerID: 'LILAS',
  OrderDate: '1997-04-08T00:00:00.000Z',
  ShippedDate: '1997-04-16T00:00:00.000Z',
  Freight: 102.02,
  ShipName: 'LILA-Supermercado',
  ShipAddress: 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
  ShipCity: 'Barquisimeto',
  ShipRegion: 'Lara',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10500,
  CustomerID: 'LAMAI',
  OrderDate: '1997-04-09T00:00:00.000Z',
  ShippedDate: '1997-04-17T00:00:00.000Z',
  Freight: 42.68,
  ShipName: "La maison d'Asie",
  ShipAddress: '1 rue Alsace-Lorraine',
  ShipCity: 'Toulouse',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10501,
  CustomerID: 'BLAUS',
  OrderDate: '1997-04-09T00:00:00.000Z',
  ShippedDate: '1997-04-16T00:00:00.000Z',
  Freight: 8.85,
  ShipName: 'Blauer See Delikatessen',
  ShipAddress: 'Forsterstr. 57',
  ShipCity: 'Mannheim',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10502,
  CustomerID: 'PERIC',
  OrderDate: '1997-04-10T00:00:00.000Z',
  ShippedDate: '1997-04-29T00:00:00.000Z',
  Freight: 69.32,
  ShipName: 'Pericles Comidas clásicas',
  ShipAddress: 'Calle Dr. Jorge Cash 321',
  ShipCity: 'México D.F.',
```

```
    ShipRegion: null,
    ShipCountry: 'Mexico',
  },

  {
    OrderID: 10503,
    CustomerID: 'HUNGO',
    OrderDate: '1997-04-11T00:00:00.000Z',
    ShippedDate: '1997-04-16T00:00:00.000Z',
    Freight: 16.74,
    ShipName: 'Hungry Owl All-Night Grocers',
    ShipAddress: '8 Johnstown Road',
    ShipCity: 'Cork',
    ShipRegion: 'Co. Cork',
    ShipCountry: 'Ireland',
  },

  {
    OrderID: 10504,
    CustomerID: 'WHITC',
    OrderDate: '1997-04-11T00:00:00.000Z',
    ShippedDate: '1997-04-18T00:00:00.000Z',
    Freight: 59.13,
    ShipName: 'White Clover Markets',
    ShipAddress: '1029 - 12th Ave. S.',
    ShipCity: 'Seattle',
    ShipRegion: 'WA',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10505,
    CustomerID: 'MEREP',
    OrderDate: '1997-04-14T00:00:00.000Z',
    ShippedDate: '1997-04-21T00:00:00.000Z',
    Freight: 7.13,
    ShipName: 'Mère Paillarde',
    ShipAddress: '43 rue St. Laurent',
    ShipCity: 'Montréal',
    ShipRegion: 'Québec',
    ShipCountry: 'Canada',
  },

  {
    OrderID: 10506,
    CustomerID: 'KOENE',
    OrderDate: '1997-04-15T00:00:00.000Z',
    ShippedDate: '1997-05-02T00:00:00.000Z',
    Freight: 21.19,
    ShipName: 'Königlich Essen',
    ShipAddress: 'Maubelstr. 90',
    ShipCity: 'Brandenburg',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
```

```
OrderID: 10507,
CustomerID: 'ANTON',
OrderDate: '1997-04-15T00:00:00.000Z',
ShippedDate: '1997-04-22T00:00:00.000Z',
Freight: 47.45,
ShipName: 'Antonio Moreno Taquería',
ShipAddress: 'Mataderos 2312',
ShipCity: 'México D.F.',
ShipRegion: null,
ShipCountry: 'Mexico',
},

{
  OrderID: 10508,
  CustomerID: 'OTTIK',
  OrderDate: '1997-04-16T00:00:00.000Z',
  ShippedDate: '1997-05-13T00:00:00.000Z',
  Freight: 4.99,
  ShipName: 'Ottilies Käseladen',
  ShipAddress: 'Mehrheimerstr. 369',
  ShipCity: 'Köln',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10509,
  CustomerID: 'BLAUS',
  OrderDate: '1997-04-17T00:00:00.000Z',
  ShippedDate: '1997-04-29T00:00:00.000Z',
  Freight: 0.15,
  ShipName: 'Blauer See Delikatessen',
  ShipAddress: 'Forsterstr. 57',
  ShipCity: 'Mannheim',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10510,
  CustomerID: 'SAVEA',
  OrderDate: '1997-04-18T00:00:00.000Z',
  ShippedDate: '1997-04-28T00:00:00.000Z',
  Freight: 367.63,
  ShipName: 'Save-a-lot Markets',
  ShipAddress: '187 Suffolk Ln.',
  ShipCity: 'Boise',
  ShipRegion: 'ID',
  ShipCountry: 'USA',
},

{
  OrderID: 10511,
  CustomerID: 'BONAP',
  OrderDate: '1997-04-18T00:00:00.000Z',
  ShippedDate: '1997-04-21T00:00:00.000Z',
  Freight: 350.64,
```

```
    ShipName: 'Bon app',
    ShipAddress: '12, rue des Bouchers',
    ShipCity: 'Marseille',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10512,
    CustomerID: 'FAMIA',
    OrderDate: '1997-04-21T00:00:00.000Z',
    ShippedDate: '1997-04-24T00:00:00.000Z',
    Freight: 3.53,
    ShipName: 'Familia Arquibaldo',
    ShipAddress: 'Rua Orós, 92',
    ShipCity: 'Sao Paulo',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10513,
    CustomerID: 'WANDK',
    OrderDate: '1997-04-22T00:00:00.000Z',
    ShippedDate: '1997-04-28T00:00:00.000Z',
    Freight: 105.65,
    ShipName: 'Die Wandernde Kuh',
    ShipAddress: 'Adenauerallee 900',
    ShipCity: 'Stuttgart',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10514,
    CustomerID: 'ERNSH',
    OrderDate: '1997-04-22T00:00:00.000Z',
    ShippedDate: '1997-05-16T00:00:00.000Z',
    Freight: 789.95,
    ShipName: 'Ernst Handel',
    ShipAddress: 'Kirchgasse 6',
    ShipCity: 'Graz',
    ShipRegion: null,
    ShipCountry: 'Austria',
  },

  {
    OrderID: 10515,
    CustomerID: 'QUICK',
    OrderDate: '1997-04-23T00:00:00.000Z',
    ShippedDate: '1997-05-23T00:00:00.000Z',
    Freight: 204.47,
    ShipName: 'QUICK-Stop',
    ShipAddress: 'Taucherstraße 10',
    ShipCity: 'Cunewalde',
    ShipRegion: null,
    ShipCountry: 'Germany',
  }
```

```
},  
  
{  
  OrderID: 10516,  
  CustomerID: 'HUNGO',  
  OrderDate: '1997-04-24T00:00:00.000Z',  
  ShippedDate: '1997-05-01T00:00:00.000Z',  
  Freight: 62.78,  
  ShipName: 'Hungry Owl All-Night Grocers',  
  ShipAddress: '8 Johnstown Road',  
  ShipCity: 'Cork',  
  ShipRegion: 'Co. Cork',  
  ShipCountry: 'Ireland',  
},  
  
{  
  OrderID: 10517,  
  CustomerID: 'NORTS',  
  OrderDate: '1997-04-24T00:00:00.000Z',  
  ShippedDate: '1997-04-29T00:00:00.000Z',  
  Freight: 32.07,  
  ShipName: 'North/South',  
  ShipAddress: 'South House 300 Queensbridge',  
  ShipCity: 'London',  
  ShipRegion: null,  
  ShipCountry: 'UK',  
},  
  
{  
  OrderID: 10518,  
  CustomerID: 'TORTU',  
  OrderDate: '1997-04-25T00:00:00.000Z',  
  ShippedDate: '1997-05-05T00:00:00.000Z',  
  Freight: 218.15,  
  ShipName: 'Tortuga Restaurante',  
  ShipAddress: 'Avda. Azteca 123',  
  ShipCity: 'México D.F.',  
  ShipRegion: null,  
  ShipCountry: 'Mexico',  
},  
  
{  
  OrderID: 10519,  
  CustomerID: 'CHOPS',  
  OrderDate: '1997-04-28T00:00:00.000Z',  
  ShippedDate: '1997-05-01T00:00:00.000Z',  
  Freight: 91.76,  
  ShipName: 'Chop-suey Chinese',  
  ShipAddress: 'Hauptstr. 31',  
  ShipCity: 'Bern',  
  ShipRegion: null,  
  ShipCountry: 'Switzerland',  
},  
  
{  
  OrderID: 10520,  
  CustomerID: 'SANTG',
```



```
OrderDate: '1997-04-29T00:00:00.000Z',
ShippedDate: '1997-05-01T00:00:00.000Z',
Freight: 13.37,
ShipName: 'Santé Gourmet',
ShipAddress: 'Erling Skakkes gate 78',
ShipCity: 'Stavern',
ShipRegion: null,
ShipCountry: 'Norway',
},

{
  OrderID: 10521,
  CustomerID: 'CACTU',
  OrderDate: '1997-04-29T00:00:00.000Z',
  ShippedDate: '1997-05-02T00:00:00.000Z',
  Freight: 17.22,
  ShipName: 'Cactus Comidas para llevar',
  ShipAddress: 'Cerrito 333',
  ShipCity: 'Buenos Aires',
  ShipRegion: null,
  ShipCountry: 'Argentina',
},

{
  OrderID: 10522,
  CustomerID: 'LEHMS',
  OrderDate: '1997-04-30T00:00:00.000Z',
  ShippedDate: '1997-05-06T00:00:00.000Z',
  Freight: 45.33,
  ShipName: 'Lehmanns Marktstand',
  ShipAddress: 'Magazinweg 7',
  ShipCity: 'Frankfurt a.M.',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10523,
  CustomerID: 'SEVES',
  OrderDate: '1997-05-01T00:00:00.000Z',
  ShippedDate: '1997-05-30T00:00:00.000Z',
  Freight: 77.63,
  ShipName: 'Seven Seas Imports',
  ShipAddress: '90 Wadhurst Rd.',
  ShipCity: 'London',
  ShipRegion: null,
  ShipCountry: 'UK',
},

{
  OrderID: 10524,
  CustomerID: 'BERGS',
  OrderDate: '1997-05-01T00:00:00.000Z',
  ShippedDate: '1997-05-07T00:00:00.000Z',
  Freight: 244.79,
  ShipName: 'Berglunds snabbköp',
  ShipAddress: 'Berguvsvägen 8',
```

```
    ShipCity: 'Luleå',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },

  {
    OrderID: 10525,
    CustomerID: 'BONAP',
    OrderDate: '1997-05-02T00:00:00.000Z',
    ShippedDate: '1997-05-23T00:00:00.000Z',
    Freight: 11.06,
    ShipName: 'Bon app',
    ShipAddress: '12, rue des Bouchers',
    ShipCity: 'Marseille',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10526,
    CustomerID: 'WARTH',
    OrderDate: '1997-05-05T00:00:00.000Z',
    ShippedDate: '1997-05-15T00:00:00.000Z',
    Freight: 58.59,
    ShipName: 'Wartian Herkku',
    ShipAddress: 'Torikatu 38',
    ShipCity: 'Oulu',
    ShipRegion: null,
    ShipCountry: 'Finland',
  },

  {
    OrderID: 10527,
    CustomerID: 'QUICK',
    OrderDate: '1997-05-05T00:00:00.000Z',
    ShippedDate: '1997-05-07T00:00:00.000Z',
    Freight: 41.9,
    ShipName: 'QUICK-Stop',
    ShipAddress: 'Taucherstraße 10',
    ShipCity: 'Cunewalde',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10528,
    CustomerID: 'GREAL',
    OrderDate: '1997-05-06T00:00:00.000Z',
    ShippedDate: '1997-05-09T00:00:00.000Z',
    Freight: 3.35,
    ShipName: 'Great Lakes Food Market',
    ShipAddress: '2732 Baker Blvd.',
    ShipCity: 'Eugene',
    ShipRegion: 'OR',
    ShipCountry: 'USA',
  },
},
```

```
{
  OrderID: 10529,
  CustomerID: 'MAISD',
  OrderDate: '1997-05-07T00:00:00.000Z',
  ShippedDate: '1997-05-09T00:00:00.000Z',
  Freight: 66.69,
  ShipName: 'Maison Dewey',
  ShipAddress: 'Rue Joseph-Bens 532',
  ShipCity: 'Bruxelles',
  ShipRegion: null,
  ShipCountry: 'Belgium',
},

{
  OrderID: 10530,
  CustomerID: 'PICCO',
  OrderDate: '1997-05-08T00:00:00.000Z',
  ShippedDate: '1997-05-12T00:00:00.000Z',
  Freight: 339.22,
  ShipName: 'Piccolo und mehr',
  ShipAddress: 'Geislweg 14',
  ShipCity: 'Salzburg',
  ShipRegion: null,
  ShipCountry: 'Austria',
},

{
  OrderID: 10531,
  CustomerID: 'OCEAN',
  OrderDate: '1997-05-08T00:00:00.000Z',
  ShippedDate: '1997-05-19T00:00:00.000Z',
  Freight: 8.12,
  ShipName: 'Océano Atlántico Ltda.',
  ShipAddress: 'Ing. Gustavo Moncada 8585 Piso 20-A',
  ShipCity: 'Buenos Aires',
  ShipRegion: null,
  ShipCountry: 'Argentina',
},

{
  OrderID: 10532,
  CustomerID: 'EASTC',
  OrderDate: '1997-05-09T00:00:00.000Z',
  ShippedDate: '1997-05-12T00:00:00.000Z',
  Freight: 74.46,
  ShipName: 'Eastern Connection',
  ShipAddress: '35 King George',
  ShipCity: 'London',
  ShipRegion: null,
  ShipCountry: 'UK',
},

{
  OrderID: 10533,
  CustomerID: 'FOLKO',
  OrderDate: '1997-05-12T00:00:00.000Z',
  ShippedDate: '1997-05-22T00:00:00.000Z',
```

```
Freight: 188.04,
ShipName: 'Folk och fä HB',
ShipAddress: 'Åkergatan 24',
ShipCity: 'Bräcke',
ShipRegion: null,
ShipCountry: 'Sweden',
},

{
  OrderID: 10534,
  CustomerID: 'LEHMS',
  OrderDate: '1997-05-12T00:00:00.000Z',
  ShippedDate: '1997-05-14T00:00:00.000Z',
  Freight: 27.94,
  ShipName: 'Lehmanns Marktstand',
  ShipAddress: 'Magazinweg 7',
  ShipCity: 'Frankfurt a.M.',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10535,
  CustomerID: 'ANTON',
  OrderDate: '1997-05-13T00:00:00.000Z',
  ShippedDate: '1997-05-21T00:00:00.000Z',
  Freight: 15.64,
  ShipName: 'Antonio Moreno Taquería',
  ShipAddress: 'Mataderos 2312',
  ShipCity: 'México D.F.',
  ShipRegion: null,
  ShipCountry: 'Mexico',
},

{
  OrderID: 10536,
  CustomerID: 'LEHMS',
  OrderDate: '1997-05-14T00:00:00.000Z',
  ShippedDate: '1997-06-06T00:00:00.000Z',
  Freight: 58.88,
  ShipName: 'Lehmanns Marktstand',
  ShipAddress: 'Magazinweg 7',
  ShipCity: 'Frankfurt a.M.',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10537,
  CustomerID: 'RICSU',
  OrderDate: '1997-05-14T00:00:00.000Z',
  ShippedDate: '1997-05-19T00:00:00.000Z',
  Freight: 78.85,
  ShipName: 'Richter Supermarkt',
  ShipAddress: 'Starenweg 5',
  ShipCity: 'Genève',
  ShipRegion: null,
```

```
    ShipCountry: 'Switzerland',
  },
  {
    OrderID: 10538,
    CustomerID: 'BSBEV',
    OrderDate: '1997-05-15T00:00:00.000Z',
    ShippedDate: '1997-05-16T00:00:00.000Z',
    Freight: 4.87,
    ShipName: "B' Beverages",
    ShipAddress: 'Fauntleroy Circus',
    ShipCity: 'London',
    ShipRegion: null,
    ShipCountry: 'UK',
  },
  {
    OrderID: 10539,
    CustomerID: 'BSBEV',
    OrderDate: '1997-05-16T00:00:00.000Z',
    ShippedDate: '1997-05-23T00:00:00.000Z',
    Freight: 12.36,
    ShipName: "B' Beverages",
    ShipAddress: 'Fauntleroy Circus',
    ShipCity: 'London',
    ShipRegion: null,
    ShipCountry: 'UK',
  },
  {
    OrderID: 10540,
    CustomerID: 'QUICK',
    OrderDate: '1997-05-19T00:00:00.000Z',
    ShippedDate: '1997-06-13T00:00:00.000Z',
    Freight: 1007.64,
    ShipName: 'QUICK-Stop',
    ShipAddress: 'Taucherstraße 10',
    ShipCity: 'Cunewalde',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },
  {
    OrderID: 10541,
    CustomerID: 'HANAR',
    OrderDate: '1997-05-19T00:00:00.000Z',
    ShippedDate: '1997-05-29T00:00:00.000Z',
    Freight: 68.65,
    ShipName: 'Hanari Carnes',
    ShipAddress: 'Rua do Paço, 67',
    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    ShipCountry: 'Brazil',
  },
  {
    OrderID: 10542,
```

```
CustomerID: 'KOENE',
OrderDate: '1997-05-20T00:00:00.000Z',
ShippedDate: '1997-05-26T00:00:00.000Z',
Freight: 10.95,
ShipName: 'Königlich Essen',
ShipAddress: 'Maubelstr. 90',
ShipCity: 'Brandenburg',
ShipRegion: null,
ShipCountry: 'Germany',
},

{
  OrderID: 10543,
  CustomerID: 'LILAS',
  OrderDate: '1997-05-21T00:00:00.000Z',
  ShippedDate: '1997-05-23T00:00:00.000Z',
  Freight: 48.17,
  ShipName: 'LILA-Supermercado',
  ShipAddress: 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
  ShipCity: 'Barquisimeto',
  ShipRegion: 'Lara',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10544,
  CustomerID: 'LONEP',
  OrderDate: '1997-05-21T00:00:00.000Z',
  ShippedDate: '1997-05-30T00:00:00.000Z',
  Freight: 24.91,
  ShipName: 'Lonesome Pine Restaurant',
  ShipAddress: '89 Chiaroscuro Rd.',
  ShipCity: 'Portland',
  ShipRegion: 'OR',
  ShipCountry: 'USA',
},

{
  OrderID: 10545,
  CustomerID: 'LAZYK',
  OrderDate: '1997-05-22T00:00:00.000Z',
  ShippedDate: '1997-06-26T00:00:00.000Z',
  Freight: 11.92,
  ShipName: 'Lazy K Kountry Store',
  ShipAddress: '12 Orchestra Terrace',
  ShipCity: 'Walla Walla',
  ShipRegion: 'WA',
  ShipCountry: 'USA',
},

{
  OrderID: 10546,
  CustomerID: 'VICTE',
  OrderDate: '1997-05-23T00:00:00.000Z',
  ShippedDate: '1997-05-27T00:00:00.000Z',
  Freight: 194.72,
  ShipName: 'Victuailles en stock',
```

```
    ShipAddress: '2, rue du Commerce',
    ShipCity: 'Lyon',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10547,
    CustomerID: 'SEVES',
    OrderDate: '1997-05-23T00:00:00.000Z',
    ShippedDate: '1997-06-02T00:00:00.000Z',
    Freight: 178.43,
    ShipName: 'Seven Seas Imports',
    ShipAddress: '90 Wadhurst Rd.',
    ShipCity: 'London',
    ShipRegion: null,
    ShipCountry: 'UK',
  },

  {
    OrderID: 10548,
    CustomerID: 'TOMSP',
    OrderDate: '1997-05-26T00:00:00.000Z',
    ShippedDate: '1997-06-02T00:00:00.000Z',
    Freight: 1.43,
    ShipName: 'Toms Spezialitäten',
    ShipAddress: 'Luisenstr. 48',
    ShipCity: 'Münster',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10549,
    CustomerID: 'QUICK',
    OrderDate: '1997-05-27T00:00:00.000Z',
    ShippedDate: '1997-05-30T00:00:00.000Z',
    Freight: 171.24,
    ShipName: 'QUICK-Stop',
    ShipAddress: 'Taucherstraße 10',
    ShipCity: 'Cunewalde',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10550,
    CustomerID: 'GODOS',
    OrderDate: '1997-05-28T00:00:00.000Z',
    ShippedDate: '1997-06-06T00:00:00.000Z',
    Freight: 4.32,
    ShipName: 'Godos Cocina Típica',
    ShipAddress: 'C/ Romero, 33',
    ShipCity: 'Sevilla',
    ShipRegion: null,
    ShipCountry: 'Spain',
  },
},
```

```
{
  OrderID: 10551,
  CustomerID: 'FURIB',
  OrderDate: '1997-05-28T00:00:00.000Z',
  ShippedDate: '1997-06-06T00:00:00.000Z',
  Freight: 72.95,
  ShipName: 'Furia Bacalhau e Frutos do Mar',
  ShipAddress: 'Jardim das rosas n. 32',
  ShipCity: 'Lisboa',
  ShipRegion: null,
  ShipCountry: 'Portugal',
},

{
  OrderID: 10552,
  CustomerID: 'HILAA',
  OrderDate: '1997-05-29T00:00:00.000Z',
  ShippedDate: '1997-06-05T00:00:00.000Z',
  Freight: 83.22,
  ShipName: 'HILARION-Abastos',
  ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
  ShipCity: 'San Cristóbal',
  ShipRegion: 'Táchira',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10553,
  CustomerID: 'WARTH',
  OrderDate: '1997-05-30T00:00:00.000Z',
  ShippedDate: '1997-06-03T00:00:00.000Z',
  Freight: 149.49,
  ShipName: 'Wartian Herkku',
  ShipAddress: 'Torikatu 38',
  ShipCity: 'Oulu',
  ShipRegion: null,
  ShipCountry: 'Finland',
},

{
  OrderID: 10554,
  CustomerID: 'OTTIK',
  OrderDate: '1997-05-30T00:00:00.000Z',
  ShippedDate: '1997-06-05T00:00:00.000Z',
  Freight: 120.97,
  ShipName: 'Ottilies Käseladen',
  ShipAddress: 'Mehrheimerstr. 369',
  ShipCity: 'Köln',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10555,
  CustomerID: 'SAVEA',
  OrderDate: '1997-06-02T00:00:00.000Z',
```



```
ShippedDate: '1997-06-04T00:00:00.000Z',
Freight: 252.49,
ShipName: 'Save-a-lot Markets',
ShipAddress: '187 Suffolk Ln.',
ShipCity: 'Boise',
ShipRegion: 'ID',
ShipCountry: 'USA',
},

{
  OrderID: 10556,
  CustomerID: 'SIMOB',
  OrderDate: '1997-06-03T00:00:00.000Z',
  ShippedDate: '1997-06-13T00:00:00.000Z',
  Freight: 9.8,
  ShipName: 'Simons bistro',
  ShipAddress: 'Vinbæltet 34',
  ShipCity: 'Kobenhavn',
  ShipRegion: null,
  ShipCountry: 'Denmark',
},

{
  OrderID: 10557,
  CustomerID: 'LEHMS',
  OrderDate: '1997-06-03T00:00:00.000Z',
  ShippedDate: '1997-06-06T00:00:00.000Z',
  Freight: 96.72,
  ShipName: 'Lehmanns Marktstand',
  ShipAddress: 'Magazinweg 7',
  ShipCity: 'Frankfurt a.M.',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10558,
  CustomerID: 'AROUT',
  OrderDate: '1997-06-04T00:00:00.000Z',
  ShippedDate: '1997-06-10T00:00:00.000Z',
  Freight: 72.97,
  ShipName: 'Around the Horn',
  ShipAddress: 'Brook Farm Stratford St. Mary',
  ShipCity: 'Colchester',
  ShipRegion: 'Essex',
  ShipCountry: 'UK',
},

{
  OrderID: 10559,
  CustomerID: 'BLONP',
  OrderDate: '1997-06-05T00:00:00.000Z',
  ShippedDate: '1997-06-13T00:00:00.000Z',
  Freight: 8.05,
  ShipName: 'Blondel père et fils',
  ShipAddress: '24, place Kléber',
  ShipCity: 'Strasbourg',
```

```
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10560,
    CustomerID: 'FRANK',
    OrderDate: '1997-06-06T00:00:00.000Z',
    ShippedDate: '1997-06-09T00:00:00.000Z',
    Freight: 36.65,
    ShipName: 'Frankenversand',
    ShipAddress: 'Berliner Platz 43',
    ShipCity: 'München',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10561,
    CustomerID: 'FOLKO',
    OrderDate: '1997-06-06T00:00:00.000Z',
    ShippedDate: '1997-06-09T00:00:00.000Z',
    Freight: 242.21,
    ShipName: 'Folk och få HB',
    ShipAddress: 'Åkergatan 24',
    ShipCity: 'Bräcke',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },

  {
    OrderID: 10562,
    CustomerID: 'REGGC',
    OrderDate: '1997-06-09T00:00:00.000Z',
    ShippedDate: '1997-06-12T00:00:00.000Z',
    Freight: 22.95,
    ShipName: 'Reggiani Caseifici',
    ShipAddress: 'Strada Provinciale 124',
    ShipCity: 'Reggio Emilia',
    ShipRegion: null,
    ShipCountry: 'Italy',
  },

  {
    OrderID: 10563,
    CustomerID: 'RICAR',
    OrderDate: '1997-06-10T00:00:00.000Z',
    ShippedDate: '1997-06-24T00:00:00.000Z',
    Freight: 60.43,
    ShipName: 'Ricardo Adocicados',
    ShipAddress: 'Av. Copacabana, 267',
    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    ShipCountry: 'Brazil',
  },

  {
```

```
OrderID: 10564,
CustomerID: 'RATTC',
OrderDate: '1997-06-10T00:00:00.000Z',
ShippedDate: '1997-06-16T00:00:00.000Z',
Freight: 13.75,
ShipName: 'Rattlesnake Canyon Grocery',
ShipAddress: '2817 Milton Dr.',
ShipCity: 'Albuquerque',
ShipRegion: 'NM',
ShipCountry: 'USA',
},

{
  OrderID: 10565,
  CustomerID: 'MEREP',
  OrderDate: '1997-06-11T00:00:00.000Z',
  ShippedDate: '1997-06-18T00:00:00.000Z',
  Freight: 7.15,
  ShipName: 'Mère Paillarde',
  ShipAddress: '43 rue St. Laurent',
  ShipCity: 'Montréal',
  ShipRegion: 'Québec',
  ShipCountry: 'Canada',
},

{
  OrderID: 10566,
  CustomerID: 'BLONP',
  OrderDate: '1997-06-12T00:00:00.000Z',
  ShippedDate: '1997-06-18T00:00:00.000Z',
  Freight: 88.4,
  ShipName: 'Blondel père et fils',
  ShipAddress: '24, place Kléber',
  ShipCity: 'Strasbourg',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10567,
  CustomerID: 'HUNGO',
  OrderDate: '1997-06-12T00:00:00.000Z',
  ShippedDate: '1997-06-17T00:00:00.000Z',
  Freight: 33.97,
  ShipName: 'Hungry Owl All-Night Grocers',
  ShipAddress: '8 Johnstown Road',
  ShipCity: 'Cork',
  ShipRegion: 'Co. Cork',
  ShipCountry: 'Ireland',
},

{
  OrderID: 10568,
  CustomerID: 'GALED',
  OrderDate: '1997-06-13T00:00:00.000Z',
  ShippedDate: '1997-07-09T00:00:00.000Z',
  Freight: 6.54,
```

```
    ShipName: 'Galería del gastronómo',
    ShipAddress: 'Rambla de Cataluña, 23',
    ShipCity: 'Barcelona',
    ShipRegion: null,
    ShipCountry: 'Spain',
  },

  {
    OrderID: 10569,
    CustomerID: 'RATTC',
    OrderDate: '1997-06-16T00:00:00.000Z',
    ShippedDate: '1997-07-11T00:00:00.000Z',
    Freight: 58.98,
    ShipName: 'Rattlesnake Canyon Grocery',
    ShipAddress: '2817 Milton Dr.',
    ShipCity: 'Albuquerque',
    ShipRegion: 'NM',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10570,
    CustomerID: 'MEREP',
    OrderDate: '1997-06-17T00:00:00.000Z',
    ShippedDate: '1997-06-19T00:00:00.000Z',
    Freight: 188.99,
    ShipName: 'Mère Paillarde',
    ShipAddress: '43 rue St. Laurent',
    ShipCity: 'Montréal',
    ShipRegion: 'Québec',
    ShipCountry: 'Canada',
  },

  {
    OrderID: 10571,
    CustomerID: 'ERNSH',
    OrderDate: '1997-06-17T00:00:00.000Z',
    ShippedDate: '1997-07-04T00:00:00.000Z',
    Freight: 26.06,
    ShipName: 'Ernst Handel',
    ShipAddress: 'Kirchgasse 6',
    ShipCity: 'Graz',
    ShipRegion: null,
    ShipCountry: 'Austria',
  },

  {
    OrderID: 10572,
    CustomerID: 'BERGS',
    OrderDate: '1997-06-18T00:00:00.000Z',
    ShippedDate: '1997-06-25T00:00:00.000Z',
    Freight: 116.43,
    ShipName: 'Berglunds snabbköp',
    ShipAddress: 'Berguvsvägen 8',
    ShipCity: 'Luleå',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  }
```

```
},
{
  OrderID: 10573,
  CustomerID: 'ANTON',
  OrderDate: '1997-06-19T00:00:00.000Z',
  ShippedDate: '1997-06-20T00:00:00.000Z',
  Freight: 84.84,
  ShipName: 'Antonio Moreno Taquería',
  ShipAddress: 'Mataderos 2312',
  ShipCity: 'México D.F.',
  ShipRegion: null,
  ShipCountry: 'Mexico',
},
{
  OrderID: 10574,
  CustomerID: 'TRAIH',
  OrderDate: '1997-06-19T00:00:00.000Z',
  ShippedDate: '1997-06-30T00:00:00.000Z',
  Freight: 37.6,
  ShipName: "Trail' Head Gourmet Provisioners",
  ShipAddress: '722 DaVinci Blvd.',
  ShipCity: 'Kirkland',
  ShipRegion: 'WA',
  ShipCountry: 'USA',
},
{
  OrderID: 10575,
  CustomerID: 'MORGK',
  OrderDate: '1997-06-20T00:00:00.000Z',
  ShippedDate: '1997-06-30T00:00:00.000Z',
  Freight: 127.34,
  ShipName: 'Morgenstern Gesundkost',
  ShipAddress: 'Heerstr. 22',
  ShipCity: 'Leipzig',
  ShipRegion: null,
  ShipCountry: 'Germany',
},
{
  OrderID: 10576,
  CustomerID: 'TORTU',
  OrderDate: '1997-06-23T00:00:00.000Z',
  ShippedDate: '1997-06-30T00:00:00.000Z',
  Freight: 18.56,
  ShipName: 'Tortuga Restaurante',
  ShipAddress: 'Avda. Azteca 123',
  ShipCity: 'México D.F.',
  ShipRegion: null,
  ShipCountry: 'Mexico',
},
{
  OrderID: 10577,
  CustomerID: 'TRAIH',
```

```
OrderDate: '1997-06-23T00:00:00.000Z',
ShippedDate: '1997-06-30T00:00:00.000Z',
Freight: 25.41,
ShipName: "Trail' Head Gourmet Provisioners",
ShipAddress: '722 DaVinci Blvd.',
ShipCity: 'Kirkland',
ShipRegion: 'WA',
ShipCountry: 'USA',
},

{
  OrderID: 10578,
  CustomerID: 'BSBEV',
  OrderDate: '1997-06-24T00:00:00.000Z',
  ShippedDate: '1997-07-25T00:00:00.000Z',
  Freight: 29.6,
  ShipName: "B' Beverages",
  ShipAddress: 'Fauntleroy Circus',
  ShipCity: 'London',
  ShipRegion: null,
  ShipCountry: 'UK',
},

{
  OrderID: 10579,
  CustomerID: 'LETSS',
  OrderDate: '1997-06-25T00:00:00.000Z',
  ShippedDate: '1997-07-04T00:00:00.000Z',
  Freight: 13.73,
  ShipName: "Let' Stop N Shop",
  ShipAddress: '87 Polk St. Suite 5',
  ShipCity: 'San Francisco',
  ShipRegion: 'CA',
  ShipCountry: 'USA',
},

{
  OrderID: 10580,
  CustomerID: 'OTTIK',
  OrderDate: '1997-06-26T00:00:00.000Z',
  ShippedDate: '1997-07-01T00:00:00.000Z',
  Freight: 75.89,
  ShipName: 'Ottilies Käseladen',
  ShipAddress: 'Mehrheimerstr. 369',
  ShipCity: 'Köln',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10581,
  CustomerID: 'FAMIA',
  OrderDate: '1997-06-26T00:00:00.000Z',
  ShippedDate: '1997-07-02T00:00:00.000Z',
  Freight: 3.01,
  ShipName: 'Familia Arquibaldo',
  ShipAddress: 'Rua Orós, 92',
```

```
    ShipCity: 'Sao Paulo',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10582,
    CustomerID: 'BLAUS',
    OrderDate: '1997-06-27T00:00:00.000Z',
    ShippedDate: '1997-07-14T00:00:00.000Z',
    Freight: 27.71,
    ShipName: 'Blauer See Delikatessen',
    ShipAddress: 'Forsterstr. 57',
    ShipCity: 'Mannheim',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10583,
    CustomerID: 'WARTH',
    OrderDate: '1997-06-30T00:00:00.000Z',
    ShippedDate: '1997-07-04T00:00:00.000Z',
    Freight: 7.28,
    ShipName: 'Wartian Herkku',
    ShipAddress: 'Torikatu 38',
    ShipCity: 'Oulu',
    ShipRegion: null,
    ShipCountry: 'Finland',
  },

  {
    OrderID: 10584,
    CustomerID: 'BLONP',
    OrderDate: '1997-06-30T00:00:00.000Z',
    ShippedDate: '1997-07-04T00:00:00.000Z',
    Freight: 59.14,
    ShipName: 'Blondel père et fils',
    ShipAddress: '24, place Kléber',
    ShipCity: 'Strasbourg',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10585,
    CustomerID: 'WELLI',
    OrderDate: '1997-07-01T00:00:00.000Z',
    ShippedDate: '1997-07-10T00:00:00.000Z',
    Freight: 13.41,
    ShipName: 'Wellington Importadora',
    ShipAddress: 'Rua do Mercado, 12',
    ShipCity: 'Resende',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },
```

```
{
  OrderID: 10586,
  CustomerID: 'REGGC',
  OrderDate: '1997-07-02T00:00:00.000Z',
  ShippedDate: '1997-07-09T00:00:00.000Z',
  Freight: 0.48,
  ShipName: 'Reggiani Caseifici',
  ShipAddress: 'Strada Provinciale 124',
  ShipCity: 'Reggio Emilia',
  ShipRegion: null,
  ShipCountry: 'Italy',
},

{
  OrderID: 10587,
  CustomerID: 'QUEDE',
  OrderDate: '1997-07-02T00:00:00.000Z',
  ShippedDate: '1997-07-09T00:00:00.000Z',
  Freight: 62.52,
  ShipName: 'Que Delícia',
  ShipAddress: 'Rua da Panificadora, 12',
  ShipCity: 'Rio de Janeiro',
  ShipRegion: 'RJ',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10588,
  CustomerID: 'QUICK',
  OrderDate: '1997-07-03T00:00:00.000Z',
  ShippedDate: '1997-07-10T00:00:00.000Z',
  Freight: 194.67,
  ShipName: 'QUICK-Stop',
  ShipAddress: 'Taucherstraße 10',
  ShipCity: 'Cunewalde',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10589,
  CustomerID: 'GREAL',
  OrderDate: '1997-07-04T00:00:00.000Z',
  ShippedDate: '1997-07-14T00:00:00.000Z',
  Freight: 4.42,
  ShipName: 'Great Lakes Food Market',
  ShipAddress: '2732 Baker Blvd.',
  ShipCity: 'Eugene',
  ShipRegion: 'OR',
  ShipCountry: 'USA',
},

{
  OrderID: 10590,
  CustomerID: 'MEREP',
  OrderDate: '1997-07-07T00:00:00.000Z',
  ShippedDate: '1997-07-14T00:00:00.000Z',
```



```
Freight: 44.77,
ShipName: 'Mère Paillarde',
ShipAddress: '43 rue St. Laurent',
ShipCity: 'Montréal',
ShipRegion: 'Québec',
ShipCountry: 'Canada',
},

{
  OrderID: 10591,
  CustomerID: 'VAFFE',
  OrderDate: '1997-07-07T00:00:00.000Z',
  ShippedDate: '1997-07-16T00:00:00.000Z',
  Freight: 55.92,
  ShipName: 'Vaffeljernet',
  ShipAddress: 'Smagsloget 45',
  ShipCity: 'Århus',
  ShipRegion: null,
  ShipCountry: 'Denmark',
},

{
  OrderID: 10592,
  CustomerID: 'LEHMS',
  OrderDate: '1997-07-08T00:00:00.000Z',
  ShippedDate: '1997-07-16T00:00:00.000Z',
  Freight: 32.1,
  ShipName: 'Lehmanns Marktstand',
  ShipAddress: 'Magazinweg 7',
  ShipCity: 'Frankfurt a.M.',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10593,
  CustomerID: 'LEHMS',
  OrderDate: '1997-07-09T00:00:00.000Z',
  ShippedDate: '1997-08-13T00:00:00.000Z',
  Freight: 174.2,
  ShipName: 'Lehmanns Marktstand',
  ShipAddress: 'Magazinweg 7',
  ShipCity: 'Frankfurt a.M.',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10594,
  CustomerID: 'OLDWO',
  OrderDate: '1997-07-09T00:00:00.000Z',
  ShippedDate: '1997-07-16T00:00:00.000Z',
  Freight: 5.24,
  ShipName: 'Old World Delicatessen',
  ShipAddress: '2743 Bering St.',
  ShipCity: 'Anchorage',
  ShipRegion: 'AK',
```

```
    ShipCountry: 'USA',
  },
  {
    OrderID: 10595,
    CustomerID: 'ERNSH',
    OrderDate: '1997-07-10T00:00:00.000Z',
    ShippedDate: '1997-07-14T00:00:00.000Z',
    Freight: 96.78,
    ShipName: 'Ernst Handel',
    ShipAddress: 'Kirchgasse 6',
    ShipCity: 'Graz',
    ShipRegion: null,
    ShipCountry: 'Austria',
  },
  {
    OrderID: 10596,
    CustomerID: 'WHITC',
    OrderDate: '1997-07-11T00:00:00.000Z',
    ShippedDate: '1997-08-12T00:00:00.000Z',
    Freight: 16.34,
    ShipName: 'White Clover Markets',
    ShipAddress: '1029 - 12th Ave. S.',
    ShipCity: 'Seattle',
    ShipRegion: 'WA',
    ShipCountry: 'USA',
  },
  {
    OrderID: 10597,
    CustomerID: 'PICCO',
    OrderDate: '1997-07-11T00:00:00.000Z',
    ShippedDate: '1997-07-18T00:00:00.000Z',
    Freight: 35.12,
    ShipName: 'Piccolo und mehr',
    ShipAddress: 'Geislweg 14',
    ShipCity: 'Salzburg',
    ShipRegion: null,
    ShipCountry: 'Austria',
  },
  {
    OrderID: 10598,
    CustomerID: 'RATTC',
    OrderDate: '1997-07-14T00:00:00.000Z',
    ShippedDate: '1997-07-18T00:00:00.000Z',
    Freight: 44.42,
    ShipName: 'Rattlesnake Canyon Grocery',
    ShipAddress: '2817 Milton Dr.',
    ShipCity: 'Albuquerque',
    ShipRegion: 'NM',
    ShipCountry: 'USA',
  },
  {
    OrderID: 10599,
```

```
CustomerID: 'BSBEV',
OrderDate: '1997-07-15T00:00:00.000Z',
ShippedDate: '1997-07-21T00:00:00.000Z',
Freight: 29.98,
ShipName: 'B Beverages',
ShipAddress: 'Fauntleroy Circus',
ShipCity: 'London',
ShipRegion: null,
ShipCountry: 'UK',
},

{
  OrderID: 10600,
  CustomerID: 'HUNGC',
  OrderDate: '1997-07-16T00:00:00.000Z',
  ShippedDate: '1997-07-21T00:00:00.000Z',
  Freight: 45.13,
  ShipName: 'Hungry Coyote Import Store',
  ShipAddress: 'City Center Plaza 516 Main St.',
  ShipCity: 'Elgin',
  ShipRegion: 'OR',
  ShipCountry: 'USA',
},

{
  OrderID: 10601,
  CustomerID: 'HILAA',
  OrderDate: '1997-07-16T00:00:00.000Z',
  ShippedDate: '1997-07-22T00:00:00.000Z',
  Freight: 58.3,
  ShipName: 'HILARION-Abastos',
  ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
  ShipCity: 'San Cristóbal',
  ShipRegion: 'Táchira',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10602,
  CustomerID: 'VAFFE',
  OrderDate: '1997-07-17T00:00:00.000Z',
  ShippedDate: '1997-07-22T00:00:00.000Z',
  Freight: 2.92,
  ShipName: 'Vaffeljernet',
  ShipAddress: 'Smagsloget 45',
  ShipCity: 'Århus',
  ShipRegion: null,
  ShipCountry: 'Denmark',
},

{
  OrderID: 10603,
  CustomerID: 'SAVEA',
  OrderDate: '1997-07-18T00:00:00.000Z',
  ShippedDate: '1997-08-08T00:00:00.000Z',
  Freight: 48.77,
  ShipName: 'Save-a-lot Markets',
```

```
    ShipAddress: '187 Suffolk Ln.',
    ShipCity: 'Boise',
    ShipRegion: 'ID',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10604,
    CustomerID: 'FURIB',
    OrderDate: '1997-07-18T00:00:00.000Z',
    ShippedDate: '1997-07-29T00:00:00.000Z',
    Freight: 7.46,
    ShipName: 'Furia Bacalhau e Frutos do Mar',
    ShipAddress: 'Jardim das rosas n. 32',
    ShipCity: 'Lisboa',
    ShipRegion: null,
    ShipCountry: 'Portugal',
  },

  {
    OrderID: 10605,
    CustomerID: 'MEREP',
    OrderDate: '1997-07-21T00:00:00.000Z',
    ShippedDate: '1997-07-29T00:00:00.000Z',
    Freight: 379.13,
    ShipName: 'Mère Paillarde',
    ShipAddress: '43 rue St. Laurent',
    ShipCity: 'Montréal',
    ShipRegion: 'Québec',
    ShipCountry: 'Canada',
  },

  {
    OrderID: 10606,
    CustomerID: 'TRADH',
    OrderDate: '1997-07-22T00:00:00.000Z',
    ShippedDate: '1997-07-31T00:00:00.000Z',
    Freight: 79.4,
    ShipName: 'Tradição Hipermercados',
    ShipAddress: 'Av. Inês de Castro, 414',
    ShipCity: 'Sao Paulo',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10607,
    CustomerID: 'SAVEA',
    OrderDate: '1997-07-22T00:00:00.000Z',
    ShippedDate: '1997-07-25T00:00:00.000Z',
    Freight: 200.24,
    ShipName: 'Save-a-lot Markets',
    ShipAddress: '187 Suffolk Ln.',
    ShipCity: 'Boise',
    ShipRegion: 'ID',
    ShipCountry: 'USA',
  },
},
```

```
{
  OrderID: 10608,
  CustomerID: 'TOMSP',
  OrderDate: '1997-07-23T00:00:00.000Z',
  ShippedDate: '1997-08-01T00:00:00.000Z',
  Freight: 27.79,
  ShipName: 'Toms Spezialitäten',
  ShipAddress: 'Luisenstr. 48',
  ShipCity: 'Münster',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10609,
  CustomerID: 'DUMON',
  OrderDate: '1997-07-24T00:00:00.000Z',
  ShippedDate: '1997-07-30T00:00:00.000Z',
  Freight: 1.85,
  ShipName: 'Du monde entier',
  ShipAddress: '67, rue des Cinquante Otages',
  ShipCity: 'Nantes',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10610,
  CustomerID: 'LAMAI',
  OrderDate: '1997-07-25T00:00:00.000Z',
  ShippedDate: '1997-08-06T00:00:00.000Z',
  Freight: 26.78,
  ShipName: 'La maison d\'Asie',
  ShipAddress: '1 rue Alsace-Lorraine',
  ShipCity: 'Toulouse',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10611,
  CustomerID: 'WOLZA',
  OrderDate: '1997-07-25T00:00:00.000Z',
  ShippedDate: '1997-08-01T00:00:00.000Z',
  Freight: 80.65,
  ShipName: 'Wolski Zajazd',
  ShipAddress: 'ul. Filtrowa 68',
  ShipCity: 'Warszawa',
  ShipRegion: null,
  ShipCountry: 'Poland',
},

{
  OrderID: 10612,
  CustomerID: 'SAVEA',
  OrderDate: '1997-07-28T00:00:00.000Z',
```

```
ShippedDate: '1997-08-01T00:00:00.000Z',
Freight: 544.08,
ShipName: 'Save-a-lot Markets',
ShipAddress: '187 Suffolk Ln.',
ShipCity: 'Boise',
ShipRegion: 'ID',
ShipCountry: 'USA',
},

{
  OrderID: 10613,
  CustomerID: 'HILAA',
  OrderDate: '1997-07-29T00:00:00.000Z',
  ShippedDate: '1997-08-01T00:00:00.000Z',
  Freight: 8.11,
  ShipName: 'HILARION-Abastos',
  ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
  ShipCity: 'San Cristóbal',
  ShipRegion: 'Táchira',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10614,
  CustomerID: 'BLAUS',
  OrderDate: '1997-07-29T00:00:00.000Z',
  ShippedDate: '1997-08-01T00:00:00.000Z',
  Freight: 1.93,
  ShipName: 'Blauer See Delikatessen',
  ShipAddress: 'Forsterstr. 57',
  ShipCity: 'Mannheim',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10615,
  CustomerID: 'WILMK',
  OrderDate: '1997-07-30T00:00:00.000Z',
  ShippedDate: '1997-08-06T00:00:00.000Z',
  Freight: 0.75,
  ShipName: 'Wilman Kala',
  ShipAddress: 'Keskuskatu 45',
  ShipCity: 'Helsinki',
  ShipRegion: null,
  ShipCountry: 'Finland',
},

{
  OrderID: 10616,
  CustomerID: 'GREAL',
  OrderDate: '1997-07-31T00:00:00.000Z',
  ShippedDate: '1997-08-05T00:00:00.000Z',
  Freight: 116.53,
  ShipName: 'Great Lakes Food Market',
  ShipAddress: '2732 Baker Blvd.',
  ShipCity: 'Eugene',
```

```
    ShipRegion: 'OR',
    ShipCountry: 'USA',
  },
  {
    OrderID: 10617,
    CustomerID: 'GREAL',
    OrderDate: '1997-07-31T00:00:00.000Z',
    ShippedDate: '1997-08-04T00:00:00.000Z',
    Freight: 18.53,
    ShipName: 'Great Lakes Food Market',
    ShipAddress: '2732 Baker Blvd.',
    ShipCity: 'Eugene',
    ShipRegion: 'OR',
    ShipCountry: 'USA',
  },
  {
    OrderID: 10618,
    CustomerID: 'MEREP',
    OrderDate: '1997-08-01T00:00:00.000Z',
    ShippedDate: '1997-08-08T00:00:00.000Z',
    Freight: 154.68,
    ShipName: 'Mère Paillarde',
    ShipAddress: '43 rue St. Laurent',
    ShipCity: 'Montréal',
    ShipRegion: 'Québec',
    ShipCountry: 'Canada',
  },
  {
    OrderID: 10619,
    CustomerID: 'MEREP',
    OrderDate: '1997-08-04T00:00:00.000Z',
    ShippedDate: '1997-08-07T00:00:00.000Z',
    Freight: 91.05,
    ShipName: 'Mère Paillarde',
    ShipAddress: '43 rue St. Laurent',
    ShipCity: 'Montréal',
    ShipRegion: 'Québec',
    ShipCountry: 'Canada',
  },
  {
    OrderID: 10620,
    CustomerID: 'LAUGB',
    OrderDate: '1997-08-05T00:00:00.000Z',
    ShippedDate: '1997-08-14T00:00:00.000Z',
    Freight: 0.94,
    ShipName: 'Laughing Bacchus Wine Cellars',
    ShipAddress: '2319 Elm St.',
    ShipCity: 'Vancouver',
    ShipRegion: 'BC',
    ShipCountry: 'Canada',
  },
  {
```

```
OrderID: 10621,
CustomerID: 'ISLAT',
OrderDate: '1997-08-05T00:00:00.000Z',
ShippedDate: '1997-08-11T00:00:00.000Z',
Freight: 23.73,
ShipName: 'Island Trading',
ShipAddress: 'Garden House Crowther Way',
ShipCity: 'Cowes',
ShipRegion: 'Isle of Wight',
ShipCountry: 'UK',
},

{
  OrderID: 10622,
  CustomerID: 'RICAR',
  OrderDate: '1997-08-06T00:00:00.000Z',
  ShippedDate: '1997-08-11T00:00:00.000Z',
  Freight: 50.97,
  ShipName: 'Ricardo Adocicados',
  ShipAddress: 'Av. Copacabana, 267',
  ShipCity: 'Rio de Janeiro',
  ShipRegion: 'RJ',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10623,
  CustomerID: 'FRANK',
  OrderDate: '1997-08-07T00:00:00.000Z',
  ShippedDate: '1997-08-12T00:00:00.000Z',
  Freight: 97.18,
  ShipName: 'Frankenversand',
  ShipAddress: 'Berliner Platz 43',
  ShipCity: 'München',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10624,
  CustomerID: 'THECR',
  OrderDate: '1997-08-07T00:00:00.000Z',
  ShippedDate: '1997-08-19T00:00:00.000Z',
  Freight: 94.8,
  ShipName: 'The Cracker Box',
  ShipAddress: '55 Grizzly Peak Rd.',
  ShipCity: 'Butte',
  ShipRegion: 'MT',
  ShipCountry: 'USA',
},

{
  OrderID: 10625,
  CustomerID: 'ANATR',
  OrderDate: '1997-08-08T00:00:00.000Z',
  ShippedDate: '1997-08-14T00:00:00.000Z',
  Freight: 43.9,
```



```
    ShipName: 'Ana Trujillo Emparedados y helados',
    ShipAddress: 'Avda. de la Constitución 2222',
    ShipCity: 'México D.F.',
    ShipRegion: null,
    ShipCountry: 'Mexico',
  },

  {
    OrderID: 10626,
    CustomerID: 'BERGS',
    OrderDate: '1997-08-11T00:00:00.000Z',
    ShippedDate: '1997-08-20T00:00:00.000Z',
    Freight: 138.69,
    ShipName: 'Berglunds snabbköp',
    ShipAddress: 'Berguvsvägen 8',
    ShipCity: 'Luleå',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },

  {
    OrderID: 10627,
    CustomerID: 'SAVEA',
    OrderDate: '1997-08-11T00:00:00.000Z',
    ShippedDate: '1997-08-21T00:00:00.000Z',
    Freight: 107.46,
    ShipName: 'Save-a-lot Markets',
    ShipAddress: '187 Suffolk Ln.',
    ShipCity: 'Boise',
    ShipRegion: 'ID',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10628,
    CustomerID: 'BLONP',
    OrderDate: '1997-08-12T00:00:00.000Z',
    ShippedDate: '1997-08-20T00:00:00.000Z',
    Freight: 30.36,
    ShipName: 'Blondel père et fils',
    ShipAddress: '24, place Kléber',
    ShipCity: 'Strasbourg',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10629,
    CustomerID: 'GODOS',
    OrderDate: '1997-08-12T00:00:00.000Z',
    ShippedDate: '1997-08-20T00:00:00.000Z',
    Freight: 85.46,
    ShipName: 'Godos Cocina Típica',
    ShipAddress: 'C/ Romero, 33',
    ShipCity: 'Sevilla',
    ShipRegion: null,
    ShipCountry: 'Spain',
```

```
},  
  
{  
  OrderID: 10630,  
  CustomerID: 'KOENE',  
  OrderDate: '1997-08-13T00:00:00.000Z',  
  ShippedDate: '1997-08-19T00:00:00.000Z',  
  Freight: 32.35,  
  ShipName: 'Königlich Essen',  
  ShipAddress: 'Maubelstr. 90',  
  ShipCity: 'Brandenburg',  
  ShipRegion: null,  
  ShipCountry: 'Germany',  
},  
  
{  
  OrderID: 10631,  
  CustomerID: 'LAMAI',  
  OrderDate: '1997-08-14T00:00:00.000Z',  
  ShippedDate: '1997-08-15T00:00:00.000Z',  
  Freight: 0.87,  
  ShipName: "La maison d'Asie",  
  ShipAddress: '1 rue Alsace-Lorraine',  
  ShipCity: 'Toulouse',  
  ShipRegion: null,  
  ShipCountry: 'France',  
},  
  
{  
  OrderID: 10632,  
  CustomerID: 'WANDK',  
  OrderDate: '1997-08-14T00:00:00.000Z',  
  ShippedDate: '1997-08-19T00:00:00.000Z',  
  Freight: 41.38,  
  ShipName: 'Die Wandernde Kuh',  
  ShipAddress: 'Adenauerallee 900',  
  ShipCity: 'Stuttgart',  
  ShipRegion: null,  
  ShipCountry: 'Germany',  
},  
  
{  
  OrderID: 10633,  
  CustomerID: 'ERNSH',  
  OrderDate: '1997-08-15T00:00:00.000Z',  
  ShippedDate: '1997-08-18T00:00:00.000Z',  
  Freight: 477.9,  
  ShipName: 'Ernst Handel',  
  ShipAddress: 'Kirchgasse 6',  
  ShipCity: 'Graz',  
  ShipRegion: null,  
  ShipCountry: 'Austria',  
},  
  
{  
  OrderID: 10634,  
  CustomerID: 'FOLIG',
```

```
OrderDate: '1997-08-15T00:00:00.000Z',
ShippedDate: '1997-08-21T00:00:00.000Z',
Freight: 487.38,
ShipName: 'Folies gourmandes',
ShipAddress: '184, chaussée de Tournai',
ShipCity: 'Lille',
ShipRegion: null,
ShipCountry: 'France',
},

{
  OrderID: 10635,
  CustomerID: 'MAGAA',
  OrderDate: '1997-08-18T00:00:00.000Z',
  ShippedDate: '1997-08-21T00:00:00.000Z',
  Freight: 47.46,
  ShipName: 'Magazzini Alimentari Riuniti',
  ShipAddress: 'Via Ludovico il Moro 22',
  ShipCity: 'Bergamo',
  ShipRegion: null,
  ShipCountry: 'Italy',
},

{
  OrderID: 10636,
  CustomerID: 'WARTH',
  OrderDate: '1997-08-19T00:00:00.000Z',
  ShippedDate: '1997-08-26T00:00:00.000Z',
  Freight: 1.15,
  ShipName: 'Wartian Herkku',
  ShipAddress: 'Torikatu 38',
  ShipCity: 'Oulu',
  ShipRegion: null,
  ShipCountry: 'Finland',
},

{
  OrderID: 10637,
  CustomerID: 'QUEEN',
  OrderDate: '1997-08-19T00:00:00.000Z',
  ShippedDate: '1997-08-26T00:00:00.000Z',
  Freight: 201.29,
  ShipName: 'Queen Cozinha',
  ShipAddress: 'Alameda dos Canários, 891',
  ShipCity: 'Sao Paulo',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10638,
  CustomerID: 'LINOD',
  OrderDate: '1997-08-20T00:00:00.000Z',
  ShippedDate: '1997-09-01T00:00:00.000Z',
  Freight: 158.44,
  ShipName: 'LINO-Delicateses',
  ShipAddress: 'Ave. 5 de Mayo Porlamar',
```

```
    ShipCity: 'I. de Margarita',
    ShipRegion: 'Nueva Esparta',
    ShipCountry: 'Venezuela',
  },

  {
    OrderID: 10639,
    CustomerID: 'SANTG',
    OrderDate: '1997-08-20T00:00:00.000Z',
    ShippedDate: '1997-08-27T00:00:00.000Z',
    Freight: 38.64,
    ShipName: 'Santé Gourmet',
    ShipAddress: 'Erling Skakkes gate 78',
    ShipCity: 'Stavern',
    ShipRegion: null,
    ShipCountry: 'Norway',
  },

  {
    OrderID: 10640,
    CustomerID: 'WANDK',
    OrderDate: '1997-08-21T00:00:00.000Z',
    ShippedDate: '1997-08-28T00:00:00.000Z',
    Freight: 23.55,
    ShipName: 'Die Wandernde Kuh',
    ShipAddress: 'Adenauerallee 900',
    ShipCity: 'Stuttgart',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10641,
    CustomerID: 'HILAA',
    OrderDate: '1997-08-22T00:00:00.000Z',
    ShippedDate: '1997-08-26T00:00:00.000Z',
    Freight: 179.61,
    ShipName: 'HILARION-Abastos',
    ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipCity: 'San Cristóbal',
    ShipRegion: 'Táchira',
    ShipCountry: 'Venezuela',
  },

  {
    OrderID: 10642,
    CustomerID: 'SIMOB',
    OrderDate: '1997-08-22T00:00:00.000Z',
    ShippedDate: '1997-09-05T00:00:00.000Z',
    Freight: 41.89,
    ShipName: 'Simons bistro',
    ShipAddress: 'Vinbæltet 34',
    ShipCity: 'Kobenhavn',
    ShipRegion: null,
    ShipCountry: 'Denmark',
  },
```

```
{
  OrderID: 10643,
  CustomerID: 'ALFKI',
  OrderDate: '1997-08-25T00:00:00.000Z',
  ShippedDate: '1997-09-02T00:00:00.000Z',
  Freight: 29.46,
  ShipName: 'Alfreds Futterkiste',
  ShipAddress: 'Obere Str. 57',
  ShipCity: 'Berlin',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10644,
  CustomerID: 'WELLI',
  OrderDate: '1997-08-25T00:00:00.000Z',
  ShippedDate: '1997-09-01T00:00:00.000Z',
  Freight: 0.14,
  ShipName: 'Wellington Importadora',
  ShipAddress: 'Rua do Mercado, 12',
  ShipCity: 'Resende',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10645,
  CustomerID: 'HANAR',
  OrderDate: '1997-08-26T00:00:00.000Z',
  ShippedDate: '1997-09-02T00:00:00.000Z',
  Freight: 12.41,
  ShipName: 'Hanari Carnes',
  ShipAddress: 'Rua do Paço, 67',
  ShipCity: 'Rio de Janeiro',
  ShipRegion: 'RJ',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10646,
  CustomerID: 'HUNGO',
  OrderDate: '1997-08-27T00:00:00.000Z',
  ShippedDate: '1997-09-03T00:00:00.000Z',
  Freight: 142.33,
  ShipName: 'Hungry Owl All-Night Grocers',
  ShipAddress: '8 Johnstown Road',
  ShipCity: 'Cork',
  ShipRegion: 'Co. Cork',
  ShipCountry: 'Ireland',
},

{
  OrderID: 10647,
  CustomerID: 'QUEDE',
  OrderDate: '1997-08-27T00:00:00.000Z',
  ShippedDate: '1997-09-03T00:00:00.000Z',
```

```
Freight: 45.54,
ShipName: 'Que Delícia',
ShipAddress: 'Rua da Panificadora, 12',
ShipCity: 'Rio de Janeiro',
ShipRegion: 'RJ',
ShipCountry: 'Brazil',
},

{
  OrderID: 10648,
  CustomerID: 'RICAR',
  OrderDate: '1997-08-28T00:00:00.000Z',
  ShippedDate: '1997-09-09T00:00:00.000Z',
  Freight: 14.25,
  ShipName: 'Ricardo Adocicados',
  ShipAddress: 'Av. Copacabana, 267',
  ShipCity: 'Rio de Janeiro',
  ShipRegion: 'RJ',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10649,
  CustomerID: 'MAISD',
  OrderDate: '1997-08-28T00:00:00.000Z',
  ShippedDate: '1997-08-29T00:00:00.000Z',
  Freight: 6.2,
  ShipName: 'Maison Dewey',
  ShipAddress: 'Rue Joseph-Bens 532',
  ShipCity: 'Bruxelles',
  ShipRegion: null,
  ShipCountry: 'Belgium',
},

{
  OrderID: 10650,
  CustomerID: 'FAMIA',
  OrderDate: '1997-08-29T00:00:00.000Z',
  ShippedDate: '1997-09-03T00:00:00.000Z',
  Freight: 176.81,
  ShipName: 'Familia Arquibaldo',
  ShipAddress: 'Rua Orós, 92',
  ShipCity: 'Sao Paulo',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10651,
  CustomerID: 'WANDK',
  OrderDate: '1997-09-01T00:00:00.000Z',
  ShippedDate: '1997-09-11T00:00:00.000Z',
  Freight: 20.6,
  ShipName: 'Die Wandernde Kuh',
  ShipAddress: 'Adenauerallee 900',
  ShipCity: 'Stuttgart',
  ShipRegion: null,
```

```
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10652,
    CustomerID: 'GOURL',
    OrderDate: '1997-09-01T00:00:00.000Z',
    ShippedDate: '1997-09-08T00:00:00.000Z',
    Freight: 7.14,
    ShipName: 'Gourmet Lanchonetes',
    ShipAddress: 'Av. Brasil, 442',
    ShipCity: 'Campinas',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10653,
    CustomerID: 'FRANK',
    OrderDate: '1997-09-02T00:00:00.000Z',
    ShippedDate: '1997-09-19T00:00:00.000Z',
    Freight: 93.25,
    ShipName: 'Frankenversand',
    ShipAddress: 'Berliner Platz 43',
    ShipCity: 'München',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10654,
    CustomerID: 'BERGS',
    OrderDate: '1997-09-02T00:00:00.000Z',
    ShippedDate: '1997-09-11T00:00:00.000Z',
    Freight: 55.26,
    ShipName: 'Berglunds snabbköp',
    ShipAddress: 'Berguvsvägen 8',
    ShipCity: 'Luleå',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },

  {
    OrderID: 10655,
    CustomerID: 'REGGC',
    OrderDate: '1997-09-03T00:00:00.000Z',
    ShippedDate: '1997-09-11T00:00:00.000Z',
    Freight: 4.41,
    ShipName: 'Reggiani Caseifici',
    ShipAddress: 'Strada Provinciale 124',
    ShipCity: 'Reggio Emilia',
    ShipRegion: null,
    ShipCountry: 'Italy',
  },

  {
    OrderID: 10656,
```

```
CustomerID: 'GREAL',
OrderDate: '1997-09-04T00:00:00.000Z',
ShippedDate: '1997-09-10T00:00:00.000Z',
Freight: 57.15,
ShipName: 'Great Lakes Food Market',
ShipAddress: '2732 Baker Blvd.',
ShipCity: 'Eugene',
ShipRegion: 'OR',
ShipCountry: 'USA',
},

{
  OrderID: 10657,
  CustomerID: 'SAVEA',
  OrderDate: '1997-09-04T00:00:00.000Z',
  ShippedDate: '1997-09-15T00:00:00.000Z',
  Freight: 352.69,
  ShipName: 'Save-a-lot Markets',
  ShipAddress: '187 Suffolk Ln.',
  ShipCity: 'Boise',
  ShipRegion: 'ID',
  ShipCountry: 'USA',
},

{
  OrderID: 10658,
  CustomerID: 'QUICK',
  OrderDate: '1997-09-05T00:00:00.000Z',
  ShippedDate: '1997-09-08T00:00:00.000Z',
  Freight: 364.15,
  ShipName: 'QUICK-Stop',
  ShipAddress: 'Taucherstraße 10',
  ShipCity: 'Cunewalde',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10659,
  CustomerID: 'QUEEN',
  OrderDate: '1997-09-05T00:00:00.000Z',
  ShippedDate: '1997-09-10T00:00:00.000Z',
  Freight: 105.81,
  ShipName: 'Queen Cozinha',
  ShipAddress: 'Alameda dos Canários, 891',
  ShipCity: 'Sao Paulo',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10660,
  CustomerID: 'HUNGC',
  OrderDate: '1997-09-08T00:00:00.000Z',
  ShippedDate: '1997-10-15T00:00:00.000Z',
  Freight: 111.29,
  ShipName: 'Hungry Coyote Import Store',
```



```
    ShipAddress: 'City Center Plaza 516 Main St.',
    ShipCity: 'Elgin',
    ShipRegion: 'OR',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10661,
    CustomerID: 'HUNGO',
    OrderDate: '1997-09-09T00:00:00.000Z',
    ShippedDate: '1997-09-15T00:00:00.000Z',
    Freight: 17.55,
    ShipName: 'Hungry Owl All-Night Grocers',
    ShipAddress: '8 Johnstown Road',
    ShipCity: 'Cork',
    ShipRegion: 'Co. Cork',
    ShipCountry: 'Ireland',
  },

  {
    OrderID: 10662,
    CustomerID: 'LONEP',
    OrderDate: '1997-09-09T00:00:00.000Z',
    ShippedDate: '1997-09-18T00:00:00.000Z',
    Freight: 1.28,
    ShipName: 'Lonesome Pine Restaurant',
    ShipAddress: '89 Chiaroscuro Rd.',
    ShipCity: 'Portland',
    ShipRegion: 'OR',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10663,
    CustomerID: 'BONAP',
    OrderDate: '1997-09-10T00:00:00.000Z',
    ShippedDate: '1997-10-03T00:00:00.000Z',
    Freight: 113.15,
    ShipName: 'Bon app',
    ShipAddress: '12, rue des Bouchers',
    ShipCity: 'Marseille',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10664,
    CustomerID: 'FURIB',
    OrderDate: '1997-09-10T00:00:00.000Z',
    ShippedDate: '1997-09-19T00:00:00.000Z',
    Freight: 1.27,
    ShipName: 'Furia Bacalhau e Frutos do Mar',
    ShipAddress: 'Jardim das rosas n. 32',
    ShipCity: 'Lisboa',
    ShipRegion: null,
    ShipCountry: 'Portugal',
  },
},
```

```
{
  OrderID: 10665,
  CustomerID: 'LONEP',
  OrderDate: '1997-09-11T00:00:00.000Z',
  ShippedDate: '1997-09-17T00:00:00.000Z',
  Freight: 26.31,
  ShipName: 'Lonesome Pine Restaurant',
  ShipAddress: '89 Chiaroscuro Rd.',
  ShipCity: 'Portland',
  ShipRegion: 'OR',
  ShipCountry: 'USA',
},

{
  OrderID: 10666,
  CustomerID: 'RICSU',
  OrderDate: '1997-09-12T00:00:00.000Z',
  ShippedDate: '1997-09-22T00:00:00.000Z',
  Freight: 232.42,
  ShipName: 'Richter Supermarkt',
  ShipAddress: 'Starenweg 5',
  ShipCity: 'Genève',
  ShipRegion: null,
  ShipCountry: 'Switzerland',
},

{
  OrderID: 10667,
  CustomerID: 'ERNSH',
  OrderDate: '1997-09-12T00:00:00.000Z',
  ShippedDate: '1997-09-19T00:00:00.000Z',
  Freight: 78.09,
  ShipName: 'Ernst Handel',
  ShipAddress: 'Kirchgasse 6',
  ShipCity: 'Graz',
  ShipRegion: null,
  ShipCountry: 'Austria',
},

{
  OrderID: 10668,
  CustomerID: 'WANDK',
  OrderDate: '1997-09-15T00:00:00.000Z',
  ShippedDate: '1997-09-23T00:00:00.000Z',
  Freight: 47.22,
  ShipName: 'Die Wandernde Kuh',
  ShipAddress: 'Adenauerallee 900',
  ShipCity: 'Stuttgart',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10669,
  CustomerID: 'SIMOB',
  OrderDate: '1997-09-15T00:00:00.000Z',
```

```
ShippedDate: '1997-09-22T00:00:00.000Z',
Freight: 24.39,
ShipName: 'Simons bistro',
ShipAddress: 'Vinbæltet 34',
ShipCity: 'Kobenhavn',
ShipRegion: null,
ShipCountry: 'Denmark',
},

{
  OrderID: 10670,
  CustomerID: 'FRANK',
  OrderDate: '1997-09-16T00:00:00.000Z',
  ShippedDate: '1997-09-18T00:00:00.000Z',
  Freight: 203.48,
  ShipName: 'Frankenversand',
  ShipAddress: 'Berliner Platz 43',
  ShipCity: 'München',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10671,
  CustomerID: 'FRANR',
  OrderDate: '1997-09-17T00:00:00.000Z',
  ShippedDate: '1997-09-24T00:00:00.000Z',
  Freight: 30.34,
  ShipName: 'France restauration',
  ShipAddress: '54, rue Royale',
  ShipCity: 'Nantes',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10672,
  CustomerID: 'BERGS',
  OrderDate: '1997-09-17T00:00:00.000Z',
  ShippedDate: '1997-09-26T00:00:00.000Z',
  Freight: 95.75,
  ShipName: 'Berglunds snabbköp',
  ShipAddress: 'Berguvsvägen 8',
  ShipCity: 'Luleå',
  ShipRegion: null,
  ShipCountry: 'Sweden',
},

{
  OrderID: 10673,
  CustomerID: 'WILMK',
  OrderDate: '1997-09-18T00:00:00.000Z',
  ShippedDate: '1997-09-19T00:00:00.000Z',
  Freight: 22.76,
  ShipName: 'Wilman Kala',
  ShipAddress: 'Keskuskatu 45',
  ShipCity: 'Helsinki',
```

```
    ShipRegion: null,
    ShipCountry: 'Finland',
  },

  {
    OrderID: 10674,
    CustomerID: 'ISLAT',
    OrderDate: '1997-09-18T00:00:00.000Z',
    ShippedDate: '1997-09-30T00:00:00.000Z',
    Freight: 0.9,
    ShipName: 'Island Trading',
    ShipAddress: 'Garden House Crowther Way',
    ShipCity: 'Cowes',
    ShipRegion: 'Isle of Wight',
    ShipCountry: 'UK',
  },

  {
    OrderID: 10675,
    CustomerID: 'FRANK',
    OrderDate: '1997-09-19T00:00:00.000Z',
    ShippedDate: '1997-09-23T00:00:00.000Z',
    Freight: 31.85,
    ShipName: 'Frankenversand',
    ShipAddress: 'Berliner Platz 43',
    ShipCity: 'München',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10676,
    CustomerID: 'TORTU',
    OrderDate: '1997-09-22T00:00:00.000Z',
    ShippedDate: '1997-09-29T00:00:00.000Z',
    Freight: 2.01,
    ShipName: 'Tortuga Restaurante',
    ShipAddress: 'Avda. Azteca 123',
    ShipCity: 'México D.F.',
    ShipRegion: null,
    ShipCountry: 'Mexico',
  },

  {
    OrderID: 10677,
    CustomerID: 'ANTON',
    OrderDate: '1997-09-22T00:00:00.000Z',
    ShippedDate: '1997-09-26T00:00:00.000Z',
    Freight: 4.03,
    ShipName: 'Antonio Moreno Taquería',
    ShipAddress: 'Mataderos 2312',
    ShipCity: 'México D.F.',
    ShipRegion: null,
    ShipCountry: 'Mexico',
  },

  {
```

```
OrderID: 10678,
CustomerID: 'SAVEA',
OrderDate: '1997-09-23T00:00:00.000Z',
ShippedDate: '1997-10-16T00:00:00.000Z',
Freight: 388.98,
ShipName: 'Save-a-lot Markets',
ShipAddress: '187 Suffolk Ln.',
ShipCity: 'Boise',
ShipRegion: 'ID',
ShipCountry: 'USA',
},

{
  OrderID: 10679,
  CustomerID: 'BLONP',
  OrderDate: '1997-09-23T00:00:00.000Z',
  ShippedDate: '1997-09-30T00:00:00.000Z',
  Freight: 27.94,
  ShipName: 'Blondel père et fils',
  ShipAddress: '24, place Kléber',
  ShipCity: 'Strasbourg',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10680,
  CustomerID: 'OLDWO',
  OrderDate: '1997-09-24T00:00:00.000Z',
  ShippedDate: '1997-09-26T00:00:00.000Z',
  Freight: 26.61,
  ShipName: 'Old World Delicatessen',
  ShipAddress: '2743 Bering St.',
  ShipCity: 'Anchorage',
  ShipRegion: 'AK',
  ShipCountry: 'USA',
},

{
  OrderID: 10681,
  CustomerID: 'GREAL',
  OrderDate: '1997-09-25T00:00:00.000Z',
  ShippedDate: '1997-09-30T00:00:00.000Z',
  Freight: 76.13,
  ShipName: 'Great Lakes Food Market',
  ShipAddress: '2732 Baker Blvd.',
  ShipCity: 'Eugene',
  ShipRegion: 'OR',
  ShipCountry: 'USA',
},

{
  OrderID: 10682,
  CustomerID: 'ANTON',
  OrderDate: '1997-09-25T00:00:00.000Z',
  ShippedDate: '1997-10-01T00:00:00.000Z',
  Freight: 36.13,
```

```
    ShipName: 'Antonio Moreno Taquería',
    ShipAddress: 'Mataderos 2312',
    ShipCity: 'México D.F.',
    ShipRegion: null,
    ShipCountry: 'Mexico',
  },

  {
    OrderID: 10683,
    CustomerID: 'DUMON',
    OrderDate: '1997-09-26T00:00:00.000Z',
    ShippedDate: '1997-10-01T00:00:00.000Z',
    Freight: 4.4,
    ShipName: 'Du monde entier',
    ShipAddress: '67, rue des Cinquante Otages',
    ShipCity: 'Nantes',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10684,
    CustomerID: 'OTTIK',
    OrderDate: '1997-09-26T00:00:00.000Z',
    ShippedDate: '1997-09-30T00:00:00.000Z',
    Freight: 145.63,
    ShipName: 'Ottilies Käseladen',
    ShipAddress: 'Mehrheimerstr. 369',
    ShipCity: 'Köln',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10685,
    CustomerID: 'GOURL',
    OrderDate: '1997-09-29T00:00:00.000Z',
    ShippedDate: '1997-10-03T00:00:00.000Z',
    Freight: 33.75,
    ShipName: 'Gourmet Lanchonetes',
    ShipAddress: 'Av. Brasil, 442',
    ShipCity: 'Campinas',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10686,
    CustomerID: 'PICCO',
    OrderDate: '1997-09-30T00:00:00.000Z',
    ShippedDate: '1997-10-08T00:00:00.000Z',
    Freight: 96.5,
    ShipName: 'Piccolo und mehr',
    ShipAddress: 'Geislweg 14',
    ShipCity: 'Salzburg',
    ShipRegion: null,
    ShipCountry: 'Austria',
  },
```

```
},  
  
{  
  OrderID: 10687,  
  CustomerID: 'HUNGO',  
  OrderDate: '1997-09-30T00:00:00.000Z',  
  ShippedDate: '1997-10-30T00:00:00.000Z',  
  Freight: 296.43,  
  ShipName: 'Hungry Owl All-Night Grocers',  
  ShipAddress: '8 Johnstown Road',  
  ShipCity: 'Cork',  
  ShipRegion: 'Co. Cork',  
  ShipCountry: 'Ireland',  
},  
  
{  
  OrderID: 10688,  
  CustomerID: 'VAFFE',  
  OrderDate: '1997-10-01T00:00:00.000Z',  
  ShippedDate: '1997-10-07T00:00:00.000Z',  
  Freight: 299.09,  
  ShipName: 'Vaffeljernet',  
  ShipAddress: 'Smagsloget 45',  
  ShipCity: 'Århus',  
  ShipRegion: null,  
  ShipCountry: 'Denmark',  
},  
  
{  
  OrderID: 10689,  
  CustomerID: 'BERGS',  
  OrderDate: '1997-10-01T00:00:00.000Z',  
  ShippedDate: '1997-10-07T00:00:00.000Z',  
  Freight: 13.42,  
  ShipName: 'Berglunds snabbköp',  
  ShipAddress: 'Berguvsvägen 8',  
  ShipCity: 'Luleå',  
  ShipRegion: null,  
  ShipCountry: 'Sweden',  
},  
  
{  
  OrderID: 10690,  
  CustomerID: 'HANAR',  
  OrderDate: '1997-10-02T00:00:00.000Z',  
  ShippedDate: '1997-10-03T00:00:00.000Z',  
  Freight: 15.8,  
  ShipName: 'Hanari Carnes',  
  ShipAddress: 'Rua do Paço, 67',  
  ShipCity: 'Rio de Janeiro',  
  ShipRegion: 'RJ',  
  ShipCountry: 'Brazil',  
},  
  
{  
  OrderID: 10691,  
  CustomerID: 'QUICK',
```

```
OrderDate: '1997-10-03T00:00:00.000Z',
ShippedDate: '1997-10-22T00:00:00.000Z',
Freight: 810.05,
ShipName: 'QUICK-Stop',
ShipAddress: 'Taucherstraße 10',
ShipCity: 'Cunewalde',
ShipRegion: null,
ShipCountry: 'Germany',
},

{
  OrderID: 10692,
  CustomerID: 'ALFKI',
  OrderDate: '1997-10-03T00:00:00.000Z',
  ShippedDate: '1997-10-13T00:00:00.000Z',
  Freight: 61.02,
  ShipName: 'Alfred Futterkiste',
  ShipAddress: 'Obere Str. 57',
  ShipCity: 'Berlin',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10693,
  CustomerID: 'WHITC',
  OrderDate: '1997-10-06T00:00:00.000Z',
  ShippedDate: '1997-10-10T00:00:00.000Z',
  Freight: 139.34,
  ShipName: 'White Clover Markets',
  ShipAddress: '1029 - 12th Ave. S.',
  ShipCity: 'Seattle',
  ShipRegion: 'WA',
  ShipCountry: 'USA',
},

{
  OrderID: 10694,
  CustomerID: 'QUICK',
  OrderDate: '1997-10-06T00:00:00.000Z',
  ShippedDate: '1997-10-09T00:00:00.000Z',
  Freight: 398.36,
  ShipName: 'QUICK-Stop',
  ShipAddress: 'Taucherstraße 10',
  ShipCity: 'Cunewalde',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10695,
  CustomerID: 'WILMK',
  OrderDate: '1997-10-07T00:00:00.000Z',
  ShippedDate: '1997-10-14T00:00:00.000Z',
  Freight: 16.72,
  ShipName: 'Wilman Kala',
  ShipAddress: 'Keskuskatu 45',
```



```
    ShipCity: 'Helsinki',
    ShipRegion: null,
    ShipCountry: 'Finland',
  },

  {
    OrderID: 10696,
    CustomerID: 'WHITC',
    OrderDate: '1997-10-08T00:00:00.000Z',
    ShippedDate: '1997-10-14T00:00:00.000Z',
    Freight: 102.55,
    ShipName: 'White Clover Markets',
    ShipAddress: '1029 - 12th Ave. S.',
    ShipCity: 'Seattle',
    ShipRegion: 'WA',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10697,
    CustomerID: 'LINOD',
    OrderDate: '1997-10-08T00:00:00.000Z',
    ShippedDate: '1997-10-14T00:00:00.000Z',
    Freight: 45.52,
    ShipName: 'LINO-Delicatesses',
    ShipAddress: 'Ave. 5 de Mayo Porlamar',
    ShipCity: 'I. de Margarita',
    ShipRegion: 'Nueva Esparta',
    ShipCountry: 'Venezuela',
  },

  {
    OrderID: 10698,
    CustomerID: 'ERNSH',
    OrderDate: '1997-10-09T00:00:00.000Z',
    ShippedDate: '1997-10-17T00:00:00.000Z',
    Freight: 272.47,
    ShipName: 'Ernst Handel',
    ShipAddress: 'Kirchgasse 6',
    ShipCity: 'Graz',
    ShipRegion: null,
    ShipCountry: 'Austria',
  },

  {
    OrderID: 10699,
    CustomerID: 'MORGK',
    OrderDate: '1997-10-09T00:00:00.000Z',
    ShippedDate: '1997-10-13T00:00:00.000Z',
    Freight: 0.58,
    ShipName: 'Morgenstern Gesundkost',
    ShipAddress: 'Heerstr. 22',
    ShipCity: 'Leipzig',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },
},
```

```
{
  OrderID: 10700,
  CustomerID: 'SAVEA',
  OrderDate: '1997-10-10T00:00:00.000Z',
  ShippedDate: '1997-10-16T00:00:00.000Z',
  Freight: 65.1,
  ShipName: 'Save-a-lot Markets',
  ShipAddress: '187 Suffolk Ln.',
  ShipCity: 'Boise',
  ShipRegion: 'ID',
  ShipCountry: 'USA',
},

{
  OrderID: 10701,
  CustomerID: 'HUNGO',
  OrderDate: '1997-10-13T00:00:00.000Z',
  ShippedDate: '1997-10-15T00:00:00.000Z',
  Freight: 220.31,
  ShipName: 'Hungry Owl All-Night Grocers',
  ShipAddress: '8 Johnstown Road',
  ShipCity: 'Cork',
  ShipRegion: 'Co. Cork',
  ShipCountry: 'Ireland',
},

{
  OrderID: 10702,
  CustomerID: 'ALFKI',
  OrderDate: '1997-10-13T00:00:00.000Z',
  ShippedDate: '1997-10-21T00:00:00.000Z',
  Freight: 23.94,
  ShipName: "Alfred Fütterkiste",
  ShipAddress: 'Obere Str. 57',
  ShipCity: 'Berlin',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10703,
  CustomerID: 'FOLKO',
  OrderDate: '1997-10-14T00:00:00.000Z',
  ShippedDate: '1997-10-20T00:00:00.000Z',
  Freight: 152.3,
  ShipName: 'Folk och fä HB',
  ShipAddress: 'Åkergatan 24',
  ShipCity: 'Bräcke',
  ShipRegion: null,
  ShipCountry: 'Sweden',
},

{
  OrderID: 10704,
  CustomerID: 'QUEEN',
  OrderDate: '1997-10-14T00:00:00.000Z',
  ShippedDate: '1997-11-07T00:00:00.000Z',
```

```
Freight: 4.78,
ShipName: 'Queen Cozinha',
ShipAddress: 'Alameda dos Canários, 891',
ShipCity: 'Sao Paulo',
ShipRegion: 'SP',
ShipCountry: 'Brazil',
},

{
  OrderID: 10705,
  CustomerID: 'HILAA',
  OrderDate: '1997-10-15T00:00:00.000Z',
  ShippedDate: '1997-11-18T00:00:00.000Z',
  Freight: 3.52,
  ShipName: 'HILARION-Abastos',
  ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
  ShipCity: 'San Cristóbal',
  ShipRegion: 'Táchira',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10706,
  CustomerID: 'OLDWO',
  OrderDate: '1997-10-16T00:00:00.000Z',
  ShippedDate: '1997-10-21T00:00:00.000Z',
  Freight: 135.63,
  ShipName: 'Old World Delicatessen',
  ShipAddress: '2743 Bering St.',
  ShipCity: 'Anchorage',
  ShipRegion: 'AK',
  ShipCountry: 'USA',
},

{
  OrderID: 10707,
  CustomerID: 'AROUT',
  OrderDate: '1997-10-16T00:00:00.000Z',
  ShippedDate: '1997-10-23T00:00:00.000Z',
  Freight: 21.74,
  ShipName: 'Around the Horn',
  ShipAddress: 'Brook Farm Stratford St. Mary',
  ShipCity: 'Colchester',
  ShipRegion: 'Essex',
  ShipCountry: 'UK',
},

{
  OrderID: 10708,
  CustomerID: 'THEBI',
  OrderDate: '1997-10-17T00:00:00.000Z',
  ShippedDate: '1997-11-05T00:00:00.000Z',
  Freight: 2.96,
  ShipName: 'The Big Cheese',
  ShipAddress: '89 Jefferson Way Suite 2',
  ShipCity: 'Portland',
  ShipRegion: 'OR',
```

```
    ShipCountry: 'USA',
  },

  {
    OrderID: 10709,
    CustomerID: 'GOURL',
    OrderDate: '1997-10-17T00:00:00.000Z',
    ShippedDate: '1997-11-20T00:00:00.000Z',
    Freight: 210.8,
    ShipName: 'Gourmet Lanchonetes',
    ShipAddress: 'Av. Brasil, 442',
    ShipCity: 'Campinas',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10710,
    CustomerID: 'FRANS',
    OrderDate: '1997-10-20T00:00:00.000Z',
    ShippedDate: '1997-10-23T00:00:00.000Z',
    Freight: 4.98,
    ShipName: 'Franchi S.p.A.',
    ShipAddress: 'Via Monte Bianco 34',
    ShipCity: 'Torino',
    ShipRegion: null,
    ShipCountry: 'Italy',
  },

  {
    OrderID: 10711,
    CustomerID: 'SAVEA',
    OrderDate: '1997-10-21T00:00:00.000Z',
    ShippedDate: '1997-10-29T00:00:00.000Z',
    Freight: 52.41,
    ShipName: 'Save-a-lot Markets',
    ShipAddress: '187 Suffolk Ln.',
    ShipCity: 'Boise',
    ShipRegion: 'ID',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10712,
    CustomerID: 'HUNGO',
    OrderDate: '1997-10-21T00:00:00.000Z',
    ShippedDate: '1997-10-31T00:00:00.000Z',
    Freight: 89.93,
    ShipName: 'Hungry Owl All-Night Grocers',
    ShipAddress: '8 Johnstown Road',
    ShipCity: 'Cork',
    ShipRegion: 'Co. Cork',
    ShipCountry: 'Ireland',
  },

  {
    OrderID: 10713,
```

```
CustomerID: 'SAVEA',
OrderDate: '1997-10-22T00:00:00.000Z',
ShippedDate: '1997-10-24T00:00:00.000Z',
Freight: 167.05,
ShipName: 'Save-a-lot Markets',
ShipAddress: '187 Suffolk Ln.',
ShipCity: 'Boise',
ShipRegion: 'ID',
ShipCountry: 'USA',
},

{
  OrderID: 10714,
  CustomerID: 'SAVEA',
  OrderDate: '1997-10-22T00:00:00.000Z',
  ShippedDate: '1997-10-27T00:00:00.000Z',
  Freight: 24.49,
  ShipName: 'Save-a-lot Markets',
  ShipAddress: '187 Suffolk Ln.',
  ShipCity: 'Boise',
  ShipRegion: 'ID',
  ShipCountry: 'USA',
},

{
  OrderID: 10715,
  CustomerID: 'BONAP',
  OrderDate: '1997-10-23T00:00:00.000Z',
  ShippedDate: '1997-10-29T00:00:00.000Z',
  Freight: 63.2,
  ShipName: 'Bon app',
  ShipAddress: '12, rue des Bouchers',
  ShipCity: 'Marseille',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10716,
  CustomerID: 'RANCH',
  OrderDate: '1997-10-24T00:00:00.000Z',
  ShippedDate: '1997-10-27T00:00:00.000Z',
  Freight: 22.57,
  ShipName: 'Rancho grande',
  ShipAddress: 'Av. del Libertador 900',
  ShipCity: 'Buenos Aires',
  ShipRegion: null,
  ShipCountry: 'Argentina',
},

{
  OrderID: 10717,
  CustomerID: 'FRANK',
  OrderDate: '1997-10-24T00:00:00.000Z',
  ShippedDate: '1997-10-29T00:00:00.000Z',
  Freight: 59.25,
  ShipName: 'Frankenversand',
```

```
    ShipAddress: 'Berliner Platz 43',
    ShipCity: 'München',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10718,
    CustomerID: 'KOENE',
    OrderDate: '1997-10-27T00:00:00.000Z',
    ShippedDate: '1997-10-29T00:00:00.000Z',
    Freight: 170.88,
    ShipName: 'Königlich Essen',
    ShipAddress: 'Maubelstr. 90',
    ShipCity: 'Brandenburg',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10719,
    CustomerID: 'LETSS',
    OrderDate: '1997-10-27T00:00:00.000Z',
    ShippedDate: '1997-11-05T00:00:00.000Z',
    Freight: 51.44,
    ShipName: "Let's Stop N Shop",
    ShipAddress: '87 Polk St. Suite 5',
    ShipCity: 'San Francisco',
    ShipRegion: 'CA',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10720,
    CustomerID: 'QUEDE',
    OrderDate: '1997-10-28T00:00:00.000Z',
    ShippedDate: '1997-11-05T00:00:00.000Z',
    Freight: 9.53,
    ShipName: 'Que Delícia',
    ShipAddress: 'Rua da Panificadora, 12',
    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10721,
    CustomerID: 'QUICK',
    OrderDate: '1997-10-29T00:00:00.000Z',
    ShippedDate: '1997-10-31T00:00:00.000Z',
    Freight: 48.92,
    ShipName: 'QUICK-Stop',
    ShipAddress: 'Taucherstraße 10',
    ShipCity: 'Cunewalde',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },
},
```

```
{
  OrderID: 10722,
  CustomerID: 'SAVEA',
  OrderDate: '1997-10-29T00:00:00.000Z',
  ShippedDate: '1997-11-04T00:00:00.000Z',
  Freight: 74.58,
  ShipName: 'Save-a-lot Markets',
  ShipAddress: '187 Suffolk Ln.',
  ShipCity: 'Boise',
  ShipRegion: 'ID',
  ShipCountry: 'USA',
},

{
  OrderID: 10723,
  CustomerID: 'WHITC',
  OrderDate: '1997-10-30T00:00:00.000Z',
  ShippedDate: '1997-11-25T00:00:00.000Z',
  Freight: 21.72,
  ShipName: 'White Clover Markets',
  ShipAddress: '1029 - 12th Ave. S.',
  ShipCity: 'Seattle',
  ShipRegion: 'WA',
  ShipCountry: 'USA',
},

{
  OrderID: 10724,
  CustomerID: 'MEREP',
  OrderDate: '1997-10-30T00:00:00.000Z',
  ShippedDate: '1997-11-05T00:00:00.000Z',
  Freight: 57.75,
  ShipName: 'Mère Paillarde',
  ShipAddress: '43 rue St. Laurent',
  ShipCity: 'Montréal',
  ShipRegion: 'Québec',
  ShipCountry: 'Canada',
},

{
  OrderID: 10725,
  CustomerID: 'FAMIA',
  OrderDate: '1997-10-31T00:00:00.000Z',
  ShippedDate: '1997-11-05T00:00:00.000Z',
  Freight: 10.83,
  ShipName: 'Familia Arquibaldo',
  ShipAddress: 'Rua Orós, 92',
  ShipCity: 'Sao Paulo',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10726,
  CustomerID: 'EASTC',
  OrderDate: '1997-11-03T00:00:00.000Z',
```

```
ShippedDate: '1997-12-05T00:00:00.000Z',
Freight: 16.56,
ShipName: 'Eastern Connection',
ShipAddress: '35 King George',
ShipCity: 'London',
ShipRegion: null,
ShipCountry: 'UK',
},

{
  OrderID: 10727,
  CustomerID: 'REGGC',
  OrderDate: '1997-11-03T00:00:00.000Z',
  ShippedDate: '1997-12-05T00:00:00.000Z',
  Freight: 89.9,
  ShipName: 'Reggiani Caseifici',
  ShipAddress: 'Strada Provinciale 124',
  ShipCity: 'Reggio Emilia',
  ShipRegion: null,
  ShipCountry: 'Italy',
},

{
  OrderID: 10728,
  CustomerID: 'QUEEN',
  OrderDate: '1997-11-04T00:00:00.000Z',
  ShippedDate: '1997-11-11T00:00:00.000Z',
  Freight: 58.33,
  ShipName: 'Queen Cozinha',
  ShipAddress: 'Alameda dos Canários, 891',
  ShipCity: 'Sao Paulo',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10729,
  CustomerID: 'LINOD',
  OrderDate: '1997-11-04T00:00:00.000Z',
  ShippedDate: '1997-11-14T00:00:00.000Z',
  Freight: 141.06,
  ShipName: 'LINO-Delicateses',
  ShipAddress: 'Ave. 5 de Mayo Porlamar',
  ShipCity: 'I. de Margarita',
  ShipRegion: 'Nueva Esparta',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10730,
  CustomerID: 'BONAP',
  OrderDate: '1997-11-05T00:00:00.000Z',
  ShippedDate: '1997-11-14T00:00:00.000Z',
  Freight: 20.12,
  ShipName: 'Bon app',
  ShipAddress: '12, rue des Bouchers',
  ShipCity: 'Marseille',
```



```
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10731,
    CustomerID: 'CHOPS',
    OrderDate: '1997-11-06T00:00:00.000Z',
    ShippedDate: '1997-11-14T00:00:00.000Z',
    Freight: 96.65,
    ShipName: 'Chop-suey Chinese',
    ShipAddress: 'Hauptstr. 31',
    ShipCity: 'Bern',
    ShipRegion: null,
    ShipCountry: 'Switzerland',
  },

  {
    OrderID: 10732,
    CustomerID: 'BONAP',
    OrderDate: '1997-11-06T00:00:00.000Z',
    ShippedDate: '1997-11-07T00:00:00.000Z',
    Freight: 16.97,
    ShipName: 'Bon app',
    ShipAddress: '12, rue des Bouchers',
    ShipCity: 'Marseille',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10733,
    CustomerID: 'BERGS',
    OrderDate: '1997-11-07T00:00:00.000Z',
    ShippedDate: '1997-11-10T00:00:00.000Z',
    Freight: 110.11,
    ShipName: 'Berglunds snabbköp',
    ShipAddress: 'Berguvsvägen 8',
    ShipCity: 'Luleå',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },

  {
    OrderID: 10734,
    CustomerID: 'GOURL',
    OrderDate: '1997-11-07T00:00:00.000Z',
    ShippedDate: '1997-11-12T00:00:00.000Z',
    Freight: 1.63,
    ShipName: 'Gourmet Lanchonetes',
    ShipAddress: 'Av. Brasil, 442',
    ShipCity: 'Campinas',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },

  {
```

```
OrderID: 10735,
CustomerID: 'LETSS',
OrderDate: '1997-11-10T00:00:00.000Z',
ShippedDate: '1997-11-21T00:00:00.000Z',
Freight: 45.97,
ShipName: "Let' Stop N Shop",
ShipAddress: '87 Polk St. Suite 5',
ShipCity: 'San Francisco',
ShipRegion: 'CA',
ShipCountry: 'USA',
},

{
  OrderID: 10736,
  CustomerID: 'HUNGO',
  OrderDate: '1997-11-11T00:00:00.000Z',
  ShippedDate: '1997-11-21T00:00:00.000Z',
  Freight: 44.1,
  ShipName: 'Hungry Owl All-Night Grocers',
  ShipAddress: '8 Johnstown Road',
  ShipCity: 'Cork',
  ShipRegion: 'Co. Cork',
  ShipCountry: 'Ireland',
},

{
  OrderID: 10737,
  CustomerID: 'VINET',
  OrderDate: '1997-11-11T00:00:00.000Z',
  ShippedDate: '1997-11-18T00:00:00.000Z',
  Freight: 7.79,
  ShipName: 'Vins et alcools Chevalier',
  ShipAddress: "59 rue de l'Abbaye",
  ShipCity: 'Reims',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10738,
  CustomerID: 'SPECB',
  OrderDate: '1997-11-12T00:00:00.000Z',
  ShippedDate: '1997-11-18T00:00:00.000Z',
  Freight: 2.91,
  ShipName: 'Spécialités du monde',
  ShipAddress: '25, rue Lauriston',
  ShipCity: 'Paris',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10739,
  CustomerID: 'VINET',
  OrderDate: '1997-11-12T00:00:00.000Z',
  ShippedDate: '1997-11-17T00:00:00.000Z',
  Freight: 11.08,
```

```
    ShipName: 'Vins et alcools Chevalier',
    ShipAddress: '59 rue de l'Abbaye',
    ShipCity: 'Reims',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10740,
    CustomerID: 'WHITC',
    OrderDate: '1997-11-13T00:00:00.000Z',
    ShippedDate: '1997-11-25T00:00:00.000Z',
    Freight: 81.88,
    ShipName: 'White Clover Markets',
    ShipAddress: '1029 - 12th Ave. S.',
    ShipCity: 'Seattle',
    ShipRegion: 'WA',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10741,
    CustomerID: 'AROUT',
    OrderDate: '1997-11-14T00:00:00.000Z',
    ShippedDate: '1997-11-18T00:00:00.000Z',
    Freight: 10.96,
    ShipName: 'Around the Horn',
    ShipAddress: 'Brook Farm Stratford St. Mary',
    ShipCity: 'Colchester',
    ShipRegion: 'Essex',
    ShipCountry: 'UK',
  },

  {
    OrderID: 10742,
    CustomerID: 'BOTTM',
    OrderDate: '1997-11-14T00:00:00.000Z',
    ShippedDate: '1997-11-18T00:00:00.000Z',
    Freight: 243.73,
    ShipName: 'Bottom-Dollar Markets',
    ShipAddress: '23 Tsawassen Blvd.',
    ShipCity: 'Tsawassen',
    ShipRegion: 'BC',
    ShipCountry: 'Canada',
  },

  {
    OrderID: 10743,
    CustomerID: 'AROUT',
    OrderDate: '1997-11-17T00:00:00.000Z',
    ShippedDate: '1997-11-21T00:00:00.000Z',
    Freight: 23.72,
    ShipName: 'Around the Horn',
    ShipAddress: 'Brook Farm Stratford St. Mary',
    ShipCity: 'Colchester',
    ShipRegion: 'Essex',
    ShipCountry: 'UK',
```

```
},  
  
{  
  OrderID: 10744,  
  CustomerID: 'VAFFE',  
  OrderDate: '1997-11-17T00:00:00.000Z',  
  ShippedDate: '1997-11-24T00:00:00.000Z',  
  Freight: 69.19,  
  ShipName: 'Vaffeljernet',  
  ShipAddress: 'Smagsloget 45',  
  ShipCity: 'Århus',  
  ShipRegion: null,  
  ShipCountry: 'Denmark',  
},  
  
{  
  OrderID: 10745,  
  CustomerID: 'QUICK',  
  OrderDate: '1997-11-18T00:00:00.000Z',  
  ShippedDate: '1997-11-27T00:00:00.000Z',  
  Freight: 3.52,  
  ShipName: 'QUICK-Stop',  
  ShipAddress: 'Taucherstraße 10',  
  ShipCity: 'Cunewalde',  
  ShipRegion: null,  
  ShipCountry: 'Germany',  
},  
  
{  
  OrderID: 10746,  
  CustomerID: 'CHOPS',  
  OrderDate: '1997-11-19T00:00:00.000Z',  
  ShippedDate: '1997-11-21T00:00:00.000Z',  
  Freight: 31.43,  
  ShipName: 'Chop-suey Chinese',  
  ShipAddress: 'Hauptstr. 31',  
  ShipCity: 'Bern',  
  ShipRegion: null,  
  ShipCountry: 'Switzerland',  
},  
  
{  
  OrderID: 10747,  
  CustomerID: 'PICCO',  
  OrderDate: '1997-11-19T00:00:00.000Z',  
  ShippedDate: '1997-11-26T00:00:00.000Z',  
  Freight: 117.33,  
  ShipName: 'Piccolo und mehr',  
  ShipAddress: 'Geislweg 14',  
  ShipCity: 'Salzburg',  
  ShipRegion: null,  
  ShipCountry: 'Austria',  
},  
  
{  
  OrderID: 10748,  
  CustomerID: 'SAVEA',
```

```
OrderDate: '1997-11-20T00:00:00.000Z',
ShippedDate: '1997-11-28T00:00:00.000Z',
Freight: 232.55,
ShipName: 'Save-a-lot Markets',
ShipAddress: '187 Suffolk Ln.',
ShipCity: 'Boise',
ShipRegion: 'ID',
ShipCountry: 'USA',
},

{
  OrderID: 10749,
  CustomerID: 'ISLAT',
  OrderDate: '1997-11-20T00:00:00.000Z',
  ShippedDate: '1997-12-19T00:00:00.000Z',
  Freight: 61.53,
  ShipName: 'Island Trading',
  ShipAddress: 'Garden House Crowther Way',
  ShipCity: 'Cowes',
  ShipRegion: 'Isle of Wight',
  ShipCountry: 'UK',
},

{
  OrderID: 10750,
  CustomerID: 'WARTH',
  OrderDate: '1997-11-21T00:00:00.000Z',
  ShippedDate: '1997-11-24T00:00:00.000Z',
  Freight: 79.3,
  ShipName: 'Wartian Herkku',
  ShipAddress: 'Torikatu 38',
  ShipCity: 'Oulu',
  ShipRegion: null,
  ShipCountry: 'Finland',
},

{
  OrderID: 10751,
  CustomerID: 'RICSU',
  OrderDate: '1997-11-24T00:00:00.000Z',
  ShippedDate: '1997-12-03T00:00:00.000Z',
  Freight: 130.79,
  ShipName: 'Richter Supermarkt',
  ShipAddress: 'Starenweg 5',
  ShipCity: 'Genève',
  ShipRegion: null,
  ShipCountry: 'Switzerland',
},

{
  OrderID: 10752,
  CustomerID: 'NORTS',
  OrderDate: '1997-11-24T00:00:00.000Z',
  ShippedDate: '1997-11-28T00:00:00.000Z',
  Freight: 1.39,
  ShipName: 'North/South',
  ShipAddress: 'South House 300 Queensbridge',
```

```
    ShipCity: 'London',
    ShipRegion: null,
    ShipCountry: 'UK',
  },

  {
    OrderID: 10753,
    CustomerID: 'FRANS',
    OrderDate: '1997-11-25T00:00:00.000Z',
    ShippedDate: '1997-11-27T00:00:00.000Z',
    Freight: 7.7,
    ShipName: 'Franchi S.p.A.',
    ShipAddress: 'Via Monte Bianco 34',
    ShipCity: 'Torino',
    ShipRegion: null,
    ShipCountry: 'Italy',
  },

  {
    OrderID: 10754,
    CustomerID: 'MAGAA',
    OrderDate: '1997-11-25T00:00:00.000Z',
    ShippedDate: '1997-11-27T00:00:00.000Z',
    Freight: 2.38,
    ShipName: 'Magazzini Alimentari Riuniti',
    ShipAddress: 'Via Ludovico il Moro 22',
    ShipCity: 'Bergamo',
    ShipRegion: null,
    ShipCountry: 'Italy',
  },

  {
    OrderID: 10755,
    CustomerID: 'BONAP',
    OrderDate: '1997-11-26T00:00:00.000Z',
    ShippedDate: '1997-11-28T00:00:00.000Z',
    Freight: 16.71,
    ShipName: 'Bon app',
    ShipAddress: '12, rue des Bouchers',
    ShipCity: 'Marseille',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10756,
    CustomerID: 'SPLIR',
    OrderDate: '1997-11-27T00:00:00.000Z',
    ShippedDate: '1997-12-02T00:00:00.000Z',
    Freight: 73.21,
    ShipName: 'Split Rail Beer & Ale',
    ShipAddress: 'P.O. Box 555',
    ShipCity: 'Lander',
    ShipRegion: 'WY',
    ShipCountry: 'USA',
  },
},
```

```
{
  OrderID: 10757,
  CustomerID: 'SAVEA',
  OrderDate: '1997-11-27T00:00:00.000Z',
  ShippedDate: '1997-12-15T00:00:00.000Z',
  Freight: 8.19,
  ShipName: 'Save-a-lot Markets',
  ShipAddress: '187 Suffolk Ln.',
  ShipCity: 'Boise',
  ShipRegion: 'ID',
  ShipCountry: 'USA',
},

{
  OrderID: 10758,
  CustomerID: 'RICSU',
  OrderDate: '1997-11-28T00:00:00.000Z',
  ShippedDate: '1997-12-04T00:00:00.000Z',
  Freight: 138.17,
  ShipName: 'Richter Supermarkt',
  ShipAddress: 'Starenweg 5',
  ShipCity: 'Genève',
  ShipRegion: null,
  ShipCountry: 'Switzerland',
},

{
  OrderID: 10759,
  CustomerID: 'ANATR',
  OrderDate: '1997-11-28T00:00:00.000Z',
  ShippedDate: '1997-12-12T00:00:00.000Z',
  Freight: 11.99,
  ShipName: 'Ana Trujillo Emparedados y helados',
  ShipAddress: 'Avda. de la Constitución 2222',
  ShipCity: 'México D.F.',
  ShipRegion: null,
  ShipCountry: 'Mexico',
},

{
  OrderID: 10760,
  CustomerID: 'MAISD',
  OrderDate: '1997-12-01T00:00:00.000Z',
  ShippedDate: '1997-12-10T00:00:00.000Z',
  Freight: 155.64,
  ShipName: 'Maison Dewey',
  ShipAddress: 'Rue Joseph-Bens 532',
  ShipCity: 'Bruxelles',
  ShipRegion: null,
  ShipCountry: 'Belgium',
},

{
  OrderID: 10761,
  CustomerID: 'RATTC',
  OrderDate: '1997-12-02T00:00:00.000Z',
  ShippedDate: '1997-12-08T00:00:00.000Z',
```

```
Freight: 18.66,  
ShipName: 'Rattlesnake Canyon Grocery',  
ShipAddress: '2817 Milton Dr.',  
ShipCity: 'Albuquerque',  
ShipRegion: 'NM',  
ShipCountry: 'USA',  
},  
  
{  
  OrderID: 10762,  
  CustomerID: 'FOLKO',  
  OrderDate: '1997-12-02T00:00:00.000Z',  
  ShippedDate: '1997-12-09T00:00:00.000Z',  
  Freight: 328.74,  
  ShipName: 'Folk och fä HB',  
  ShipAddress: 'Åkergatan 24',  
  ShipCity: 'Bräcke',  
  ShipRegion: null,  
  ShipCountry: 'Sweden',  
},  
  
{  
  OrderID: 10763,  
  CustomerID: 'FOLIG',  
  OrderDate: '1997-12-03T00:00:00.000Z',  
  ShippedDate: '1997-12-08T00:00:00.000Z',  
  Freight: 37.35,  
  ShipName: 'Folies gourmandes',  
  ShipAddress: '184, chaussée de Tournai',  
  ShipCity: 'Lille',  
  ShipRegion: null,  
  ShipCountry: 'France',  
},  
  
{  
  OrderID: 10764,  
  CustomerID: 'ERNSH',  
  OrderDate: '1997-12-03T00:00:00.000Z',  
  ShippedDate: '1997-12-08T00:00:00.000Z',  
  Freight: 145.45,  
  ShipName: 'Ernst Handel',  
  ShipAddress: 'Kirchgasse 6',  
  ShipCity: 'Graz',  
  ShipRegion: null,  
  ShipCountry: 'Austria',  
},  
  
{  
  OrderID: 10765,  
  CustomerID: 'QUICK',  
  OrderDate: '1997-12-04T00:00:00.000Z',  
  ShippedDate: '1997-12-09T00:00:00.000Z',  
  Freight: 42.74,  
  ShipName: 'QUICK-Stop',  
  ShipAddress: 'Taucherstraße 10',  
  ShipCity: 'Cunewalde',  
  ShipRegion: null,
```



```
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10766,
    CustomerID: 'OTTIK',
    OrderDate: '1997-12-05T00:00:00.000Z',
    ShippedDate: '1997-12-09T00:00:00.000Z',
    Freight: 157.55,
    ShipName: 'Ottilies Käseladen',
    ShipAddress: 'Mehrheimerstr. 369',
    ShipCity: 'Köln',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10767,
    CustomerID: 'SUPRD',
    OrderDate: '1997-12-05T00:00:00.000Z',
    ShippedDate: '1997-12-15T00:00:00.000Z',
    Freight: 1.59,
    ShipName: 'Suprêmes délices',
    ShipAddress: 'Boulevard Tirou, 255',
    ShipCity: 'Charleroi',
    ShipRegion: null,
    ShipCountry: 'Belgium',
  },

  {
    OrderID: 10768,
    CustomerID: 'AROUT',
    OrderDate: '1997-12-08T00:00:00.000Z',
    ShippedDate: '1997-12-15T00:00:00.000Z',
    Freight: 146.32,
    ShipName: 'Around the Horn',
    ShipAddress: 'Brook Farm Stratford St. Mary',
    ShipCity: 'Colchester',
    ShipRegion: 'Essex',
    ShipCountry: 'UK',
  },

  {
    OrderID: 10769,
    CustomerID: 'VAFFE',
    OrderDate: '1997-12-08T00:00:00.000Z',
    ShippedDate: '1997-12-12T00:00:00.000Z',
    Freight: 65.06,
    ShipName: 'Vaffeljernet',
    ShipAddress: 'Smagsloget 45',
    ShipCity: 'Århus',
    ShipRegion: null,
    ShipCountry: 'Denmark',
  },

  {
    OrderID: 10770,
```

```
CustomerID: 'HANAR',
OrderDate: '1997-12-09T00:00:00.000Z',
ShippedDate: '1997-12-17T00:00:00.000Z',
Freight: 5.32,
ShipName: 'Hanari Carnes',
ShipAddress: 'Rua do Paço, 67',
ShipCity: 'Rio de Janeiro',
ShipRegion: 'RJ',
ShipCountry: 'Brazil',
},

{
  OrderID: 10771,
  CustomerID: 'ERNSH',
  OrderDate: '1997-12-10T00:00:00.000Z',
  ShippedDate: '1998-01-02T00:00:00.000Z',
  Freight: 11.19,
  ShipName: 'Ernst Handel',
  ShipAddress: 'Kirchgasse 6',
  ShipCity: 'Graz',
  ShipRegion: null,
  ShipCountry: 'Austria',
},

{
  OrderID: 10772,
  CustomerID: 'LEHMS',
  OrderDate: '1997-12-10T00:00:00.000Z',
  ShippedDate: '1997-12-19T00:00:00.000Z',
  Freight: 91.28,
  ShipName: 'Lehmanns Marktstand',
  ShipAddress: 'Magazinweg 7',
  ShipCity: 'Frankfurt a.M.',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10773,
  CustomerID: 'ERNSH',
  OrderDate: '1997-12-11T00:00:00.000Z',
  ShippedDate: '1997-12-16T00:00:00.000Z',
  Freight: 96.43,
  ShipName: 'Ernst Handel',
  ShipAddress: 'Kirchgasse 6',
  ShipCity: 'Graz',
  ShipRegion: null,
  ShipCountry: 'Austria',
},

{
  OrderID: 10774,
  CustomerID: 'FOLKO',
  OrderDate: '1997-12-11T00:00:00.000Z',
  ShippedDate: '1997-12-12T00:00:00.000Z',
  Freight: 48.2,
  ShipName: 'Folk och fä HB',
```

```
    ShipAddress: 'Åkergatan 24',
    ShipCity: 'Bräcke',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },

  {
    OrderID: 10775,
    CustomerID: 'THECR',
    OrderDate: '1997-12-12T00:00:00.000Z',
    ShippedDate: '1997-12-26T00:00:00.000Z',
    Freight: 20.25,
    ShipName: 'The Cracker Box',
    ShipAddress: '55 Grizzly Peak Rd.',
    ShipCity: 'Butte',
    ShipRegion: 'MT',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10776,
    CustomerID: 'ERNSH',
    OrderDate: '1997-12-15T00:00:00.000Z',
    ShippedDate: '1997-12-18T00:00:00.000Z',
    Freight: 351.53,
    ShipName: 'Ernst Handel',
    ShipAddress: 'Kirchgasse 6',
    ShipCity: 'Graz',
    ShipRegion: null,
    ShipCountry: 'Austria',
  },

  {
    OrderID: 10777,
    CustomerID: 'GOURL',
    OrderDate: '1997-12-15T00:00:00.000Z',
    ShippedDate: '1998-01-21T00:00:00.000Z',
    Freight: 3.01,
    ShipName: 'Gourmet Lanchonetes',
    ShipAddress: 'Av. Brasil, 442',
    ShipCity: 'Campinas',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10778,
    CustomerID: 'BERGS',
    OrderDate: '1997-12-16T00:00:00.000Z',
    ShippedDate: '1997-12-24T00:00:00.000Z',
    Freight: 6.79,
    ShipName: 'Berglunds snabbköp',
    ShipAddress: 'Berguvsvägen 8',
    ShipCity: 'Luleå',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },
},
```

```
{
  OrderID: 10779,
  CustomerID: 'MORGK',
  OrderDate: '1997-12-16T00:00:00.000Z',
  ShippedDate: '1998-01-14T00:00:00.000Z',
  Freight: 58.13,
  ShipName: 'Morgenstern Gesundkost',
  ShipAddress: 'Heerstr. 22',
  ShipCity: 'Leipzig',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10780,
  CustomerID: 'LILAS',
  OrderDate: '1997-12-16T00:00:00.000Z',
  ShippedDate: '1997-12-25T00:00:00.000Z',
  Freight: 42.13,
  ShipName: 'LILA-Supermercado',
  ShipAddress: 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
  ShipCity: 'Barquisimeto',
  ShipRegion: 'Lara',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10781,
  CustomerID: 'WARTH',
  OrderDate: '1997-12-17T00:00:00.000Z',
  ShippedDate: '1997-12-19T00:00:00.000Z',
  Freight: 73.16,
  ShipName: 'Wartian Herkku',
  ShipAddress: 'Torikatu 38',
  ShipCity: 'Oulu',
  ShipRegion: null,
  ShipCountry: 'Finland',
},

{
  OrderID: 10782,
  CustomerID: 'CACTU',
  OrderDate: '1997-12-17T00:00:00.000Z',
  ShippedDate: '1997-12-22T00:00:00.000Z',
  Freight: 1.1,
  ShipName: 'Cactus Comidas para llevar',
  ShipAddress: 'Cerrito 333',
  ShipCity: 'Buenos Aires',
  ShipRegion: null,
  ShipCountry: 'Argentina',
},

{
  OrderID: 10783,
  CustomerID: 'HANAR',
  OrderDate: '1997-12-18T00:00:00.000Z',
```

```
ShippedDate: '1997-12-19T00:00:00.000Z',
Freight: 124.98,
ShipName: 'Hanari Carnes',
ShipAddress: 'Rua do Paço, 67',
ShipCity: 'Rio de Janeiro',
ShipRegion: 'RJ',
ShipCountry: 'Brazil',
},

{
  OrderID: 10784,
  CustomerID: 'MAGAA',
  OrderDate: '1997-12-18T00:00:00.000Z',
  ShippedDate: '1997-12-22T00:00:00.000Z',
  Freight: 70.09,
  ShipName: 'Magazzini Alimentari Riuniti',
  ShipAddress: 'Via Ludovico il Moro 22',
  ShipCity: 'Bergamo',
  ShipRegion: null,
  ShipCountry: 'Italy',
},

{
  OrderID: 10785,
  CustomerID: 'GROSR',
  OrderDate: '1997-12-18T00:00:00.000Z',
  ShippedDate: '1997-12-24T00:00:00.000Z',
  Freight: 1.51,
  ShipName: 'GROSELLA-Restaurante',
  ShipAddress: '5ª Ave. Los Palos Grandes',
  ShipCity: 'Caracas',
  ShipRegion: 'DF',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10786,
  CustomerID: 'QUEEN',
  OrderDate: '1997-12-19T00:00:00.000Z',
  ShippedDate: '1997-12-23T00:00:00.000Z',
  Freight: 110.87,
  ShipName: 'Queen Cozinha',
  ShipAddress: 'Alameda dos Canários, 891',
  ShipCity: 'Sao Paulo',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10787,
  CustomerID: 'LAMAI',
  OrderDate: '1997-12-19T00:00:00.000Z',
  ShippedDate: '1997-12-26T00:00:00.000Z',
  Freight: 249.93,
  ShipName: "La maison d'Asie",
  ShipAddress: '1 rue Alsace-Lorraine',
  ShipCity: 'Toulouse',
```

```
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10788,
    CustomerID: 'QUICK',
    OrderDate: '1997-12-22T00:00:00.000Z',
    ShippedDate: '1998-01-19T00:00:00.000Z',
    Freight: 42.7,
    ShipName: 'QUICK-Stop',
    ShipAddress: 'Taucherstraße 10',
    ShipCity: 'Cunewalde',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10789,
    CustomerID: 'FOLIG',
    OrderDate: '1997-12-22T00:00:00.000Z',
    ShippedDate: '1997-12-31T00:00:00.000Z',
    Freight: 100.6,
    ShipName: 'Folies gourmandes',
    ShipAddress: '184, chaussée de Tournai',
    ShipCity: 'Lille',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10790,
    CustomerID: 'GOURL',
    OrderDate: '1997-12-22T00:00:00.000Z',
    ShippedDate: '1997-12-26T00:00:00.000Z',
    Freight: 28.23,
    ShipName: 'Gourmet Lanchonetes',
    ShipAddress: 'Av. Brasil, 442',
    ShipCity: 'Campinas',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10791,
    CustomerID: 'FRANK',
    OrderDate: '1997-12-23T00:00:00.000Z',
    ShippedDate: '1998-01-01T00:00:00.000Z',
    Freight: 16.85,
    ShipName: 'Frankenversand',
    ShipAddress: 'Berliner Platz 43',
    ShipCity: 'München',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
```

```
OrderID: 10792,
CustomerID: 'WOLZA',
OrderDate: '1997-12-23T00:00:00.000Z',
ShippedDate: '1997-12-31T00:00:00.000Z',
Freight: 23.79,
ShipName: 'Wolski Zajazd',
ShipAddress: 'ul. Filtrowa 68',
ShipCity: 'Warszawa',
ShipRegion: null,
ShipCountry: 'Poland',
},

{
  OrderID: 10793,
  CustomerID: 'AROUT',
  OrderDate: '1997-12-24T00:00:00.000Z',
  ShippedDate: '1998-01-08T00:00:00.000Z',
  Freight: 4.52,
  ShipName: 'Around the Horn',
  ShipAddress: 'Brook Farm Stratford St. Mary',
  ShipCity: 'Colchester',
  ShipRegion: 'Essex',
  ShipCountry: 'UK',
},

{
  OrderID: 10794,
  CustomerID: 'QUEDE',
  OrderDate: '1997-12-24T00:00:00.000Z',
  ShippedDate: '1998-01-02T00:00:00.000Z',
  Freight: 21.49,
  ShipName: 'Que Delícia',
  ShipAddress: 'Rua da Panificadora, 12',
  ShipCity: 'Rio de Janeiro',
  ShipRegion: 'RJ',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10795,
  CustomerID: 'ERNSH',
  OrderDate: '1997-12-24T00:00:00.000Z',
  ShippedDate: '1998-01-20T00:00:00.000Z',
  Freight: 126.66,
  ShipName: 'Ernst Handel',
  ShipAddress: 'Kirchgasse 6',
  ShipCity: 'Graz',
  ShipRegion: null,
  ShipCountry: 'Austria',
},

{
  OrderID: 10796,
  CustomerID: 'HILAA',
  OrderDate: '1997-12-25T00:00:00.000Z',
  ShippedDate: '1998-01-14T00:00:00.000Z',
  Freight: 26.52,
```

```
    ShipName: 'HILARION-Abastos',
    ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipCity: 'San Cristóbal',
    ShipRegion: 'Táchira',
    ShipCountry: 'Venezuela',
  },

  {
    OrderID: 10797,
    CustomerID: 'DRACD',
    OrderDate: '1997-12-25T00:00:00.000Z',
    ShippedDate: '1998-01-05T00:00:00.000Z',
    Freight: 33.35,
    ShipName: 'Drachenblut Delikatessen',
    ShipAddress: 'Walserweg 21',
    ShipCity: 'Aachen',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10798,
    CustomerID: 'ISLAT',
    OrderDate: '1997-12-26T00:00:00.000Z',
    ShippedDate: '1998-01-05T00:00:00.000Z',
    Freight: 2.33,
    ShipName: 'Island Trading',
    ShipAddress: 'Garden House Crowther Way',
    ShipCity: 'Cowes',
    ShipRegion: 'Isle of Wight',
    ShipCountry: 'UK',
  },

  {
    OrderID: 10799,
    CustomerID: 'KOENE',
    OrderDate: '1997-12-26T00:00:00.000Z',
    ShippedDate: '1998-01-05T00:00:00.000Z',
    Freight: 30.76,
    ShipName: 'Königlich Essen',
    ShipAddress: 'Maubelstr. 90',
    ShipCity: 'Brandenburg',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10800,
    CustomerID: 'SEVES',
    OrderDate: '1997-12-26T00:00:00.000Z',
    ShippedDate: '1998-01-05T00:00:00.000Z',
    Freight: 137.44,
    ShipName: 'Seven Seas Imports',
    ShipAddress: '90 Wadhurst Rd.',
    ShipCity: 'London',
    ShipRegion: null,
    ShipCountry: 'UK',
```



```
},  
  
{  
  OrderID: 10801,  
  CustomerID: 'BOLID',  
  OrderDate: '1997-12-29T00:00:00.000Z',  
  ShippedDate: '1997-12-31T00:00:00.000Z',  
  Freight: 97.09,  
  ShipName: 'Bólido Comidas preparadas',  
  ShipAddress: 'C/ Araquil, 67',  
  ShipCity: 'Madrid',  
  ShipRegion: null,  
  ShipCountry: 'Spain',  
},  
  
{  
  OrderID: 10802,  
  CustomerID: 'SIMOB',  
  OrderDate: '1997-12-29T00:00:00.000Z',  
  ShippedDate: '1998-01-02T00:00:00.000Z',  
  Freight: 257.26,  
  ShipName: 'Simons bistro',  
  ShipAddress: 'Vinbæltet 34',  
  ShipCity: 'Kobenhavn',  
  ShipRegion: null,  
  ShipCountry: 'Denmark',  
},  
  
{  
  OrderID: 10803,  
  CustomerID: 'WELLI',  
  OrderDate: '1997-12-30T00:00:00.000Z',  
  ShippedDate: '1998-01-06T00:00:00.000Z',  
  Freight: 55.23,  
  ShipName: 'Wellington Importadora',  
  ShipAddress: 'Rua do Mercado, 12',  
  ShipCity: 'Resende',  
  ShipRegion: 'SP',  
  ShipCountry: 'Brazil',  
},  
  
{  
  OrderID: 10804,  
  CustomerID: 'SEVES',  
  OrderDate: '1997-12-30T00:00:00.000Z',  
  ShippedDate: '1998-01-07T00:00:00.000Z',  
  Freight: 27.33,  
  ShipName: 'Seven Seas Imports',  
  ShipAddress: '90 Wadhurst Rd.',  
  ShipCity: 'London',  
  ShipRegion: null,  
  ShipCountry: 'UK',  
},  
  
{  
  OrderID: 10805,  
  CustomerID: 'THEBI',
```

```
OrderDate: '1997-12-30T00:00:00.000Z',
ShippedDate: '1998-01-09T00:00:00.000Z',
Freight: 237.34,
ShipName: 'The Big Cheese',
ShipAddress: '89 Jefferson Way Suite 2',
ShipCity: 'Portland',
ShipRegion: 'OR',
ShipCountry: 'USA',
},

{
  OrderID: 10806,
  CustomerID: 'VICTE',
  OrderDate: '1997-12-31T00:00:00.000Z',
  ShippedDate: '1998-01-05T00:00:00.000Z',
  Freight: 22.11,
  ShipName: 'Victuailles en stock',
  ShipAddress: '2, rue du Commerce',
  ShipCity: 'Lyon',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10807,
  CustomerID: 'FRANS',
  OrderDate: '1997-12-31T00:00:00.000Z',
  ShippedDate: '1998-01-30T00:00:00.000Z',
  Freight: 1.36,
  ShipName: 'Franchi S.p.A.',
  ShipAddress: 'Via Monte Bianco 34',
  ShipCity: 'Torino',
  ShipRegion: null,
  ShipCountry: 'Italy',
},

{
  OrderID: 10808,
  CustomerID: 'OLDWO',
  OrderDate: '1998-01-01T00:00:00.000Z',
  ShippedDate: '1998-01-09T00:00:00.000Z',
  Freight: 45.53,
  ShipName: 'Old World Delicatessen',
  ShipAddress: '2743 Bering St.',
  ShipCity: 'Anchorage',
  ShipRegion: 'AK',
  ShipCountry: 'USA',
},

{
  OrderID: 10809,
  CustomerID: 'WELLI',
  OrderDate: '1998-01-01T00:00:00.000Z',
  ShippedDate: '1998-01-07T00:00:00.000Z',
  Freight: 4.87,
  ShipName: 'Wellington Importadora',
  ShipAddress: 'Rua do Mercado, 12',
```

```
    ShipCity: 'Resende',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10810,
    CustomerID: 'LAUGB',
    OrderDate: '1998-01-01T00:00:00.000Z',
    ShippedDate: '1998-01-07T00:00:00.000Z',
    Freight: 4.33,
    ShipName: 'Laughing Bacchus Wine Cellars',
    ShipAddress: '2319 Elm St.',
    ShipCity: 'Vancouver',
    ShipRegion: 'BC',
    ShipCountry: 'Canada',
  },

  {
    OrderID: 10811,
    CustomerID: 'LINOD',
    OrderDate: '1998-01-02T00:00:00.000Z',
    ShippedDate: '1998-01-08T00:00:00.000Z',
    Freight: 31.22,
    ShipName: 'LINO-Delicateses',
    ShipAddress: 'Ave. 5 de Mayo Porlamar',
    ShipCity: 'I. de Margarita',
    ShipRegion: 'Nueva Esparta',
    ShipCountry: 'Venezuela',
  },

  {
    OrderID: 10812,
    CustomerID: 'REGGC',
    OrderDate: '1998-01-02T00:00:00.000Z',
    ShippedDate: '1998-01-12T00:00:00.000Z',
    Freight: 59.78,
    ShipName: 'Reggiani Caseifici',
    ShipAddress: 'Strada Provinciale 124',
    ShipCity: 'Reggio Emilia',
    ShipRegion: null,
    ShipCountry: 'Italy',
  },

  {
    OrderID: 10813,
    CustomerID: 'RICAR',
    OrderDate: '1998-01-05T00:00:00.000Z',
    ShippedDate: '1998-01-09T00:00:00.000Z',
    Freight: 47.38,
    ShipName: 'Ricardo Adocicados',
    ShipAddress: 'Av. Copacabana, 267',
    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    ShipCountry: 'Brazil',
  },
```

```
{
  OrderID: 10814,
  CustomerID: 'VICTE',
  OrderDate: '1998-01-05T00:00:00.000Z',
  ShippedDate: '1998-01-14T00:00:00.000Z',
  Freight: 130.94,
  ShipName: 'Victuailles en stock',
  ShipAddress: '2, rue du Commerce',
  ShipCity: 'Lyon',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10815,
  CustomerID: 'SAVEA',
  OrderDate: '1998-01-05T00:00:00.000Z',
  ShippedDate: '1998-01-14T00:00:00.000Z',
  Freight: 14.62,
  ShipName: 'Save-a-lot Markets',
  ShipAddress: '187 Suffolk Ln.',
  ShipCity: 'Boise',
  ShipRegion: 'ID',
  ShipCountry: 'USA',
},

{
  OrderID: 10816,
  CustomerID: 'GREAL',
  OrderDate: '1998-01-06T00:00:00.000Z',
  ShippedDate: '1998-02-04T00:00:00.000Z',
  Freight: 719.78,
  ShipName: 'Great Lakes Food Market',
  ShipAddress: '2732 Baker Blvd.',
  ShipCity: 'Eugene',
  ShipRegion: 'OR',
  ShipCountry: 'USA',
},

{
  OrderID: 10817,
  CustomerID: 'KOENE',
  OrderDate: '1998-01-06T00:00:00.000Z',
  ShippedDate: '1998-01-13T00:00:00.000Z',
  Freight: 306.07,
  ShipName: 'Königlich Essen',
  ShipAddress: 'Maubelstr. 90',
  ShipCity: 'Brandenburg',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10818,
  CustomerID: 'MAGAA',
  OrderDate: '1998-01-07T00:00:00.000Z',
  ShippedDate: '1998-01-12T00:00:00.000Z',
```

```
Freight: 65.48,
ShipName: 'Magazzini Alimentari Riuniti',
ShipAddress: 'Via Ludovico il Moro 22',
ShipCity: 'Bergamo',
ShipRegion: null,
ShipCountry: 'Italy',
},

{
  OrderID: 10819,
  CustomerID: 'CACTU',
  OrderDate: '1998-01-07T00:00:00.000Z',
  ShippedDate: '1998-01-16T00:00:00.000Z',
  Freight: 19.76,
  ShipName: 'Cactus Comidas para llevar',
  ShipAddress: 'Cerrito 333',
  ShipCity: 'Buenos Aires',
  ShipRegion: null,
  ShipCountry: 'Argentina',
},

{
  OrderID: 10820,
  CustomerID: 'RATTC',
  OrderDate: '1998-01-07T00:00:00.000Z',
  ShippedDate: '1998-01-13T00:00:00.000Z',
  Freight: 37.52,
  ShipName: 'Rattlesnake Canyon Grocery',
  ShipAddress: '2817 Milton Dr.',
  ShipCity: 'Albuquerque',
  ShipRegion: 'NM',
  ShipCountry: 'USA',
},

{
  OrderID: 10821,
  CustomerID: 'SPLIR',
  OrderDate: '1998-01-08T00:00:00.000Z',
  ShippedDate: '1998-01-15T00:00:00.000Z',
  Freight: 36.68,
  ShipName: 'Split Rail Beer & Ale',
  ShipAddress: 'P.O. Box 555',
  ShipCity: 'Lander',
  ShipRegion: 'WY',
  ShipCountry: 'USA',
},

{
  OrderID: 10822,
  CustomerID: 'TRAIH',
  OrderDate: '1998-01-08T00:00:00.000Z',
  ShippedDate: '1998-01-16T00:00:00.000Z',
  Freight: 7,
  ShipName: "Trail' Head Gourmet Provisioners",
  ShipAddress: '722 DaVinci Blvd.',
  ShipCity: 'Kirkland',
  ShipRegion: 'WA',
```

```
    ShipCountry: 'USA',
  },

  {
    OrderID: 10823,
    CustomerID: 'LILAS',
    OrderDate: '1998-01-09T00:00:00.000Z',
    ShippedDate: '1998-01-13T00:00:00.000Z',
    Freight: 163.97,
    ShipName: 'LILA-Supermercado',
    ShipAddress: 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    ShipCity: 'Barquisimeto',
    ShipRegion: 'Lara',
    ShipCountry: 'Venezuela',
  },

  {
    OrderID: 10824,
    CustomerID: 'FOLKO',
    OrderDate: '1998-01-09T00:00:00.000Z',
    ShippedDate: '1998-01-30T00:00:00.000Z',
    Freight: 1.23,
    ShipName: 'Folk och fä HB',
    ShipAddress: 'Åkergatan 24',
    ShipCity: 'Bräcke',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },

  {
    OrderID: 10825,
    CustomerID: 'DRACD',
    OrderDate: '1998-01-09T00:00:00.000Z',
    ShippedDate: '1998-01-14T00:00:00.000Z',
    Freight: 79.25,
    ShipName: 'Drachenblut Delikatessen',
    ShipAddress: 'Walserweg 21',
    ShipCity: 'Aachen',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10826,
    CustomerID: 'BLONP',
    OrderDate: '1998-01-12T00:00:00.000Z',
    ShippedDate: '1998-02-06T00:00:00.000Z',
    Freight: 7.09,
    ShipName: 'Blondel père et fils',
    ShipAddress: '24, place Kléber',
    ShipCity: 'Strasbourg',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10827,
```

```
CustomerID: 'BONAP',
OrderDate: '1998-01-12T00:00:00.000Z',
ShippedDate: '1998-02-06T00:00:00.000Z',
Freight: 63.54,
ShipName: 'Bon app',
ShipAddress: '12, rue des Bouchers',
ShipCity: 'Marseille',
ShipRegion: null,
ShipCountry: 'France',
},

{
  OrderID: 10828,
  CustomerID: 'RANCH',
  OrderDate: '1998-01-13T00:00:00.000Z',
  ShippedDate: '1998-02-04T00:00:00.000Z',
  Freight: 90.85,
  ShipName: 'Rancho grande',
  ShipAddress: 'Av. del Libertador 900',
  ShipCity: 'Buenos Aires',
  ShipRegion: null,
  ShipCountry: 'Argentina',
},

{
  OrderID: 10829,
  CustomerID: 'ISLAT',
  OrderDate: '1998-01-13T00:00:00.000Z',
  ShippedDate: '1998-01-23T00:00:00.000Z',
  Freight: 154.72,
  ShipName: 'Island Trading',
  ShipAddress: 'Garden House Crowther Way',
  ShipCity: 'Cowes',
  ShipRegion: 'Isle of Wight',
  ShipCountry: 'UK',
},

{
  OrderID: 10830,
  CustomerID: 'TRADH',
  OrderDate: '1998-01-13T00:00:00.000Z',
  ShippedDate: '1998-01-21T00:00:00.000Z',
  Freight: 81.83,
  ShipName: 'Tradiçao Hipermercados',
  ShipAddress: 'Av. Inês de Castro, 414',
  ShipCity: 'Sao Paulo',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10831,
  CustomerID: 'SANTG',
  OrderDate: '1998-01-14T00:00:00.000Z',
  ShippedDate: '1998-01-23T00:00:00.000Z',
  Freight: 72.19,
  ShipName: 'Santé Gourmet',
```

```
    ShipAddress: 'Erling Skakkes gate 78',
    ShipCity: 'Stavern',
    ShipRegion: null,
    ShipCountry: 'Norway',
  },

  {
    OrderID: 10832,
    CustomerID: 'LAMAI',
    OrderDate: '1998-01-14T00:00:00.000Z',
    ShippedDate: '1998-01-19T00:00:00.000Z',
    Freight: 43.26,
    ShipName: "La maison d'Asie",
    ShipAddress: '1 rue Alsace-Lorraine',
    ShipCity: 'Toulouse',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10833,
    CustomerID: 'OTTIK',
    OrderDate: '1998-01-15T00:00:00.000Z',
    ShippedDate: '1998-01-23T00:00:00.000Z',
    Freight: 71.49,
    ShipName: 'Ottilies Käseladen',
    ShipAddress: 'Mehrheimerstr. 369',
    ShipCity: 'Köln',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10834,
    CustomerID: 'TRADH',
    OrderDate: '1998-01-15T00:00:00.000Z',
    ShippedDate: '1998-01-19T00:00:00.000Z',
    Freight: 29.78,
    ShipName: 'Tradiçao Hipermercados',
    ShipAddress: 'Av. Inês de Castro, 414',
    ShipCity: 'Sao Paulo',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10835,
    CustomerID: 'ALFKI',
    OrderDate: '1998-01-15T00:00:00.000Z',
    ShippedDate: '1998-01-21T00:00:00.000Z',
    Freight: 69.53,
    ShipName: "Alfred Futterkiste",
    ShipAddress: 'Obere Str. 57',
    ShipCity: 'Berlin',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },
},
```



```
{
  OrderID: 10836,
  CustomerID: 'ERNSH',
  OrderDate: '1998-01-16T00:00:00.000Z',
  ShippedDate: '1998-01-21T00:00:00.000Z',
  Freight: 411.88,
  ShipName: 'Ernst Handel',
  ShipAddress: 'Kirchgasse 6',
  ShipCity: 'Graz',
  ShipRegion: null,
  ShipCountry: 'Austria',
},

{
  OrderID: 10837,
  CustomerID: 'BERGS',
  OrderDate: '1998-01-16T00:00:00.000Z',
  ShippedDate: '1998-01-23T00:00:00.000Z',
  Freight: 13.32,
  ShipName: 'Berglunds snabbköp',
  ShipAddress: 'Berguvsvägen 8',
  ShipCity: 'Luleå',
  ShipRegion: null,
  ShipCountry: 'Sweden',
},

{
  OrderID: 10838,
  CustomerID: 'LINOD',
  OrderDate: '1998-01-19T00:00:00.000Z',
  ShippedDate: '1998-01-23T00:00:00.000Z',
  Freight: 59.28,
  ShipName: 'LINO-Delicateses',
  ShipAddress: 'Ave. 5 de Mayo Porlamar',
  ShipCity: 'I. de Margarita',
  ShipRegion: 'Nueva Esparta',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10839,
  CustomerID: 'TRADH',
  OrderDate: '1998-01-19T00:00:00.000Z',
  ShippedDate: '1998-01-22T00:00:00.000Z',
  Freight: 35.43,
  ShipName: 'Tradição Hipermercados',
  ShipAddress: 'Av. Inês de Castro, 414',
  ShipCity: 'Sao Paulo',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10840,
  CustomerID: 'LINOD',
  OrderDate: '1998-01-19T00:00:00.000Z',
```

```
ShippedDate: '1998-02-16T00:00:00.000Z',
Freight: 2.71,
ShipName: 'LINO-Delicateses',
ShipAddress: 'Ave. 5 de Mayo Porlamar',
ShipCity: 'I. de Margarita',
ShipRegion: 'Nueva Esparta',
ShipCountry: 'Venezuela',
},

{
  OrderID: 10841,
  CustomerID: 'SUPRD',
  OrderDate: '1998-01-20T00:00:00.000Z',
  ShippedDate: '1998-01-29T00:00:00.000Z',
  Freight: 424.3,
  ShipName: 'Suprêmes délices',
  ShipAddress: 'Boulevard Tirou, 255',
  ShipCity: 'Charleroi',
  ShipRegion: null,
  ShipCountry: 'Belgium',
},

{
  OrderID: 10842,
  CustomerID: 'TORTU',
  OrderDate: '1998-01-20T00:00:00.000Z',
  ShippedDate: '1998-01-29T00:00:00.000Z',
  Freight: 54.42,
  ShipName: 'Tortuga Restaurante',
  ShipAddress: 'Avda. Azteca 123',
  ShipCity: 'México D.F.',
  ShipRegion: null,
  ShipCountry: 'Mexico',
},

{
  OrderID: 10843,
  CustomerID: 'VICTE',
  OrderDate: '1998-01-21T00:00:00.000Z',
  ShippedDate: '1998-01-26T00:00:00.000Z',
  Freight: 9.26,
  ShipName: 'Victuailles en stock',
  ShipAddress: '2, rue du Commerce',
  ShipCity: 'Lyon',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10844,
  CustomerID: 'PICCO',
  OrderDate: '1998-01-21T00:00:00.000Z',
  ShippedDate: '1998-01-26T00:00:00.000Z',
  Freight: 25.22,
  ShipName: 'Piccolo und mehr',
  ShipAddress: 'Geislweg 14',
  ShipCity: 'Salzburg',
```

```
    ShipRegion: null,
    ShipCountry: 'Austria',
  },

  {
    OrderID: 10845,
    CustomerID: 'QUICK',
    OrderDate: '1998-01-21T00:00:00.000Z',
    ShippedDate: '1998-01-30T00:00:00.000Z',
    Freight: 212.98,
    ShipName: 'QUICK-Stop',
    ShipAddress: 'Taucherstraße 10',
    ShipCity: 'Cunewalde',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10846,
    CustomerID: 'SUPRD',
    OrderDate: '1998-01-22T00:00:00.000Z',
    ShippedDate: '1998-01-23T00:00:00.000Z',
    Freight: 56.46,
    ShipName: 'Suprêmes délices',
    ShipAddress: 'Boulevard Tirou, 255',
    ShipCity: 'Charleroi',
    ShipRegion: null,
    ShipCountry: 'Belgium',
  },

  {
    OrderID: 10847,
    CustomerID: 'SAVEA',
    OrderDate: '1998-01-22T00:00:00.000Z',
    ShippedDate: '1998-02-10T00:00:00.000Z',
    Freight: 487.57,
    ShipName: 'Save-a-lot Markets',
    ShipAddress: '187 Suffolk Ln.',
    ShipCity: 'Boise',
    ShipRegion: 'ID',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10848,
    CustomerID: 'CONSH',
    OrderDate: '1998-01-23T00:00:00.000Z',
    ShippedDate: '1998-01-29T00:00:00.000Z',
    Freight: 38.24,
    ShipName: 'Consolidated Holdings',
    ShipAddress: 'Berkeley Gardens 12 Brewery',
    ShipCity: 'London',
    ShipRegion: null,
    ShipCountry: 'UK',
  },

  {
```

```
OrderID: 10849,
CustomerID: 'KOENE',
OrderDate: '1998-01-23T00:00:00.000Z',
ShippedDate: '1998-01-30T00:00:00.000Z',
Freight: 0.56,
ShipName: 'Königlich Essen',
ShipAddress: 'Maubelstr. 90',
ShipCity: 'Brandenburg',
ShipRegion: null,
ShipCountry: 'Germany',
},

{
  OrderID: 10850,
  CustomerID: 'VICTE',
  OrderDate: '1998-01-23T00:00:00.000Z',
  ShippedDate: '1998-01-30T00:00:00.000Z',
  Freight: 49.19,
  ShipName: 'Victuailles en stock',
  ShipAddress: '2, rue du Commerce',
  ShipCity: 'Lyon',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10851,
  CustomerID: 'RICAR',
  OrderDate: '1998-01-26T00:00:00.000Z',
  ShippedDate: '1998-02-02T00:00:00.000Z',
  Freight: 160.55,
  ShipName: 'Ricardo Adocicados',
  ShipAddress: 'Av. Copacabana, 267',
  ShipCity: 'Rio de Janeiro',
  ShipRegion: 'RJ',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10852,
  CustomerID: 'RATTC',
  OrderDate: '1998-01-26T00:00:00.000Z',
  ShippedDate: '1998-01-30T00:00:00.000Z',
  Freight: 174.05,
  ShipName: 'Rattlesnake Canyon Grocery',
  ShipAddress: '2817 Milton Dr.',
  ShipCity: 'Albuquerque',
  ShipRegion: 'NM',
  ShipCountry: 'USA',
},

{
  OrderID: 10853,
  CustomerID: 'BLAUS',
  OrderDate: '1998-01-27T00:00:00.000Z',
  ShippedDate: '1998-02-03T00:00:00.000Z',
  Freight: 53.83,
```

```
    ShipName: 'Blauer See Delikatessen',
    ShipAddress: 'Forsterstr. 57',
    ShipCity: 'Mannheim',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10854,
    CustomerID: 'ERNSH',
    OrderDate: '1998-01-27T00:00:00.000Z',
    ShippedDate: '1998-02-05T00:00:00.000Z',
    Freight: 100.22,
    ShipName: 'Ernst Handel',
    ShipAddress: 'Kirchgasse 6',
    ShipCity: 'Graz',
    ShipRegion: null,
    ShipCountry: 'Austria',
  },

  {
    OrderID: 10855,
    CustomerID: 'OLDWO',
    OrderDate: '1998-01-27T00:00:00.000Z',
    ShippedDate: '1998-02-04T00:00:00.000Z',
    Freight: 170.97,
    ShipName: 'Old World Delicatessen',
    ShipAddress: '2743 Bering St.',
    ShipCity: 'Anchorage',
    ShipRegion: 'AK',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10856,
    CustomerID: 'ANTON',
    OrderDate: '1998-01-28T00:00:00.000Z',
    ShippedDate: '1998-02-10T00:00:00.000Z',
    Freight: 58.43,
    ShipName: 'Antonio Moreno Taquería',
    ShipAddress: 'Mataderos 2312',
    ShipCity: 'México D.F.',
    ShipRegion: null,
    ShipCountry: 'Mexico',
  },

  {
    OrderID: 10857,
    CustomerID: 'BERGS',
    OrderDate: '1998-01-28T00:00:00.000Z',
    ShippedDate: '1998-02-06T00:00:00.000Z',
    Freight: 188.85,
    ShipName: 'Berglunds snabbköp',
    ShipAddress: 'Berguvsvägen 8',
    ShipCity: 'Luleå',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },
```

```
},  
  
{  
  OrderID: 10858,  
  CustomerID: 'LACOR',  
  OrderDate: '1998-01-29T00:00:00.000Z',  
  ShippedDate: '1998-02-03T00:00:00.000Z',  
  Freight: 52.51,  
  ShipName: "La corne d'abondance",  
  ShipAddress: "67, avenue de l'Europe",  
  ShipCity: 'Versailles',  
  ShipRegion: null,  
  ShipCountry: 'France',  
},  
  
{  
  OrderID: 10859,  
  CustomerID: 'FRANK',  
  OrderDate: '1998-01-29T00:00:00.000Z',  
  ShippedDate: '1998-02-02T00:00:00.000Z',  
  Freight: 76.1,  
  ShipName: 'Frankenversand',  
  ShipAddress: 'Berliner Platz 43',  
  ShipCity: 'München',  
  ShipRegion: null,  
  ShipCountry: 'Germany',  
},  
  
{  
  OrderID: 10860,  
  CustomerID: 'FRANR',  
  OrderDate: '1998-01-29T00:00:00.000Z',  
  ShippedDate: '1998-02-04T00:00:00.000Z',  
  Freight: 19.26,  
  ShipName: 'France restauration',  
  ShipAddress: '54, rue Royale',  
  ShipCity: 'Nantes',  
  ShipRegion: null,  
  ShipCountry: 'France',  
},  
  
{  
  OrderID: 10861,  
  CustomerID: 'WHITC',  
  OrderDate: '1998-01-30T00:00:00.000Z',  
  ShippedDate: '1998-02-17T00:00:00.000Z',  
  Freight: 14.93,  
  ShipName: 'White Clover Markets',  
  ShipAddress: '1029 - 12th Ave. S.',  
  ShipCity: 'Seattle',  
  ShipRegion: 'WA',  
  ShipCountry: 'USA',  
},  
  
{  
  OrderID: 10862,  
  CustomerID: 'LEHMS',
```

```
OrderDate: '1998-01-30T00:00:00.000Z',
ShippedDate: '1998-02-02T00:00:00.000Z',
Freight: 53.23,
ShipName: 'Lehmanns Marktstand',
ShipAddress: 'Magazinweg 7',
ShipCity: 'Frankfurt a.M.',
ShipRegion: null,
ShipCountry: 'Germany',
},

{
  OrderID: 10863,
  CustomerID: 'HILAA',
  OrderDate: '1998-02-02T00:00:00.000Z',
  ShippedDate: '1998-02-17T00:00:00.000Z',
  Freight: 30.26,
  ShipName: 'HILARION-Abastos',
  ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
  ShipCity: 'San Cristóbal',
  ShipRegion: 'Táchira',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10864,
  CustomerID: 'AROUT',
  OrderDate: '1998-02-02T00:00:00.000Z',
  ShippedDate: '1998-02-09T00:00:00.000Z',
  Freight: 3.04,
  ShipName: 'Around the Horn',
  ShipAddress: 'Brook Farm Stratford St. Mary',
  ShipCity: 'Colchester',
  ShipRegion: 'Essex',
  ShipCountry: 'UK',
},

{
  OrderID: 10865,
  CustomerID: 'QUICK',
  OrderDate: '1998-02-02T00:00:00.000Z',
  ShippedDate: '1998-02-12T00:00:00.000Z',
  Freight: 348.14,
  ShipName: 'QUICK-Stop',
  ShipAddress: 'Taucherstraße 10',
  ShipCity: 'Cunewalde',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10866,
  CustomerID: 'BERGS',
  OrderDate: '1998-02-03T00:00:00.000Z',
  ShippedDate: '1998-02-12T00:00:00.000Z',
  Freight: 109.11,
  ShipName: 'Berglunds snabbköp',
  ShipAddress: 'Berguvsvägen 8',
```

```
    ShipCity: 'Luleå',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },

  {
    OrderID: 10867,
    CustomerID: 'LONEP',
    OrderDate: '1998-02-03T00:00:00.000Z',
    ShippedDate: '1998-02-11T00:00:00.000Z',
    Freight: 1.93,
    ShipName: 'Lonesome Pine Restaurant',
    ShipAddress: '89 Chiaroscuro Rd.',
    ShipCity: 'Portland',
    ShipRegion: 'OR',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10868,
    CustomerID: 'QUEEN',
    OrderDate: '1998-02-04T00:00:00.000Z',
    ShippedDate: '1998-02-23T00:00:00.000Z',
    Freight: 191.27,
    ShipName: 'Queen Cozinha',
    ShipAddress: 'Alameda dos Canários, 891',
    ShipCity: 'Sao Paulo',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10869,
    CustomerID: 'SEVES',
    OrderDate: '1998-02-04T00:00:00.000Z',
    ShippedDate: '1998-02-09T00:00:00.000Z',
    Freight: 143.28,
    ShipName: 'Seven Seas Imports',
    ShipAddress: '90 Wadhurst Rd.',
    ShipCity: 'London',
    ShipRegion: null,
    ShipCountry: 'UK',
  },

  {
    OrderID: 10870,
    CustomerID: 'WOLZA',
    OrderDate: '1998-02-04T00:00:00.000Z',
    ShippedDate: '1998-02-13T00:00:00.000Z',
    Freight: 12.04,
    ShipName: 'Wolski Zajazd',
    ShipAddress: 'ul. Filtrowa 68',
    ShipCity: 'Warszawa',
    ShipRegion: null,
    ShipCountry: 'Poland',
  },
}
```



```
{
  OrderID: 10871,
  CustomerID: 'BONAP',
  OrderDate: '1998-02-05T00:00:00.000Z',
  ShippedDate: '1998-02-10T00:00:00.000Z',
  Freight: 112.27,
  ShipName: 'Bon app',
  ShipAddress: '12, rue des Bouchers',
  ShipCity: 'Marseille',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10872,
  CustomerID: 'GODOS',
  OrderDate: '1998-02-05T00:00:00.000Z',
  ShippedDate: '1998-02-09T00:00:00.000Z',
  Freight: 175.32,
  ShipName: 'Godos Cocina Típica',
  ShipAddress: 'C/ Romero, 33',
  ShipCity: 'Sevilla',
  ShipRegion: null,
  ShipCountry: 'Spain',
},

{
  OrderID: 10873,
  CustomerID: 'WILMK',
  OrderDate: '1998-02-06T00:00:00.000Z',
  ShippedDate: '1998-02-09T00:00:00.000Z',
  Freight: 0.82,
  ShipName: 'Wilman Kala',
  ShipAddress: 'Keskuskatu 45',
  ShipCity: 'Helsinki',
  ShipRegion: null,
  ShipCountry: 'Finland',
},

{
  OrderID: 10874,
  CustomerID: 'GODOS',
  OrderDate: '1998-02-06T00:00:00.000Z',
  ShippedDate: '1998-02-11T00:00:00.000Z',
  Freight: 19.58,
  ShipName: 'Godos Cocina Típica',
  ShipAddress: 'C/ Romero, 33',
  ShipCity: 'Sevilla',
  ShipRegion: null,
  ShipCountry: 'Spain',
},

{
  OrderID: 10875,
  CustomerID: 'BERGS',
  OrderDate: '1998-02-06T00:00:00.000Z',
  ShippedDate: '1998-03-03T00:00:00.000Z',
```

```
Freight: 32.37,  
ShipName: 'Berglunds snabbköp',  
ShipAddress: 'Berguvsvägen 8',  
ShipCity: 'Luleå',  
ShipRegion: null,  
ShipCountry: 'Sweden',  
},  
  
{  
  OrderID: 10876,  
  CustomerID: 'BONAP',  
  OrderDate: '1998-02-09T00:00:00.000Z',  
  ShippedDate: '1998-02-12T00:00:00.000Z',  
  Freight: 60.42,  
  ShipName: 'Bon app',  
  ShipAddress: '12, rue des Bouchers',  
  ShipCity: 'Marseille',  
  ShipRegion: null,  
  ShipCountry: 'France',  
},  
  
{  
  OrderID: 10877,  
  CustomerID: 'RICAR',  
  OrderDate: '1998-02-09T00:00:00.000Z',  
  ShippedDate: '1998-02-19T00:00:00.000Z',  
  Freight: 38.06,  
  ShipName: 'Ricardo Adocicados',  
  ShipAddress: 'Av. Copacabana, 267',  
  ShipCity: 'Rio de Janeiro',  
  ShipRegion: 'RJ',  
  ShipCountry: 'Brazil',  
},  
  
{  
  OrderID: 10878,  
  CustomerID: 'QUICK',  
  OrderDate: '1998-02-10T00:00:00.000Z',  
  ShippedDate: '1998-02-12T00:00:00.000Z',  
  Freight: 46.69,  
  ShipName: 'QUICK-Stop',  
  ShipAddress: 'Taucherstraße 10',  
  ShipCity: 'Cunewalde',  
  ShipRegion: null,  
  ShipCountry: 'Germany',  
},  
  
{  
  OrderID: 10879,  
  CustomerID: 'WILMK',  
  OrderDate: '1998-02-10T00:00:00.000Z',  
  ShippedDate: '1998-02-12T00:00:00.000Z',  
  Freight: 8.5,  
  ShipName: 'Wilman Kala',  
  ShipAddress: 'Keskuskatu 45',  
  ShipCity: 'Helsinki',  
  ShipRegion: null,
```

```
    ShipCountry: 'Finland',
  },

  {
    OrderID: 10880,
    CustomerID: 'FOLKO',
    OrderDate: '1998-02-10T00:00:00.000Z',
    ShippedDate: '1998-02-18T00:00:00.000Z',
    Freight: 88.01,
    ShipName: 'Folk och fä HB',
    ShipAddress: 'Åkergatan 24',
    ShipCity: 'Bräcke',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },

  {
    OrderID: 10881,
    CustomerID: 'CACTU',
    OrderDate: '1998-02-11T00:00:00.000Z',
    ShippedDate: '1998-02-18T00:00:00.000Z',
    Freight: 2.84,
    ShipName: 'Cactus Comidas para llevar',
    ShipAddress: 'Cerrito 333',
    ShipCity: 'Buenos Aires',
    ShipRegion: null,
    ShipCountry: 'Argentina',
  },

  {
    OrderID: 10882,
    CustomerID: 'SAVEA',
    OrderDate: '1998-02-11T00:00:00.000Z',
    ShippedDate: '1998-02-20T00:00:00.000Z',
    Freight: 23.1,
    ShipName: 'Save-a-lot Markets',
    ShipAddress: '187 Suffolk Ln.',
    ShipCity: 'Boise',
    ShipRegion: 'ID',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10883,
    CustomerID: 'LONEP',
    OrderDate: '1998-02-12T00:00:00.000Z',
    ShippedDate: '1998-02-20T00:00:00.000Z',
    Freight: 0.53,
    ShipName: 'Lonesome Pine Restaurant',
    ShipAddress: '89 Chiaroscuro Rd.',
    ShipCity: 'Portland',
    ShipRegion: 'OR',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10884,
```

```
CustomerID: 'LETSS',
OrderDate: '1998-02-12T00:00:00.000Z',
ShippedDate: '1998-02-13T00:00:00.000Z',
Freight: 90.97,
ShipName: "Let' Stop N Shop",
ShipAddress: '87 Polk St. Suite 5',
ShipCity: 'San Francisco',
ShipRegion: 'CA',
ShipCountry: 'USA',
},

{
  OrderID: 10885,
  CustomerID: 'SUPRD',
  OrderDate: '1998-02-12T00:00:00.000Z',
  ShippedDate: '1998-02-18T00:00:00.000Z',
  Freight: 5.64,
  ShipName: 'Suprêmes délices',
  ShipAddress: 'Boulevard Tirou, 255',
  ShipCity: 'Charleroi',
  ShipRegion: null,
  ShipCountry: 'Belgium',
},

{
  OrderID: 10886,
  CustomerID: 'HANAR',
  OrderDate: '1998-02-13T00:00:00.000Z',
  ShippedDate: '1998-03-02T00:00:00.000Z',
  Freight: 4.99,
  ShipName: 'Hanari Carnes',
  ShipAddress: 'Rua do Paço, 67',
  ShipCity: 'Rio de Janeiro',
  ShipRegion: 'RJ',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10887,
  CustomerID: 'GALED',
  OrderDate: '1998-02-13T00:00:00.000Z',
  ShippedDate: '1998-02-16T00:00:00.000Z',
  Freight: 1.25,
  ShipName: 'Galería del gastronómo',
  ShipAddress: 'Rambla de Cataluña, 23',
  ShipCity: 'Barcelona',
  ShipRegion: null,
  ShipCountry: 'Spain',
},

{
  OrderID: 10888,
  CustomerID: 'GODOS',
  OrderDate: '1998-02-16T00:00:00.000Z',
  ShippedDate: '1998-02-23T00:00:00.000Z',
  Freight: 51.87,
  ShipName: 'Godos Cocina Típica',
```

```
    ShipAddress: 'C/ Romero, 33',
    ShipCity: 'Sevilla',
    ShipRegion: null,
    ShipCountry: 'Spain',
  },

  {
    OrderID: 10889,
    CustomerID: 'RATTC',
    OrderDate: '1998-02-16T00:00:00.000Z',
    ShippedDate: '1998-02-23T00:00:00.000Z',
    Freight: 280.61,
    ShipName: 'Rattlesnake Canyon Grocery',
    ShipAddress: '2817 Milton Dr.',
    ShipCity: 'Albuquerque',
    ShipRegion: 'NM',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10890,
    CustomerID: 'DUMON',
    OrderDate: '1998-02-16T00:00:00.000Z',
    ShippedDate: '1998-02-18T00:00:00.000Z',
    Freight: 32.76,
    ShipName: 'Du monde entier',
    ShipAddress: '67, rue des Cinquante Otages',
    ShipCity: 'Nantes',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10891,
    CustomerID: 'LEHMS',
    OrderDate: '1998-02-17T00:00:00.000Z',
    ShippedDate: '1998-02-19T00:00:00.000Z',
    Freight: 20.37,
    ShipName: 'Lehmanns Marktstand',
    ShipAddress: 'Magazinweg 7',
    ShipCity: 'Frankfurt a.M.',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10892,
    CustomerID: 'MAISD',
    OrderDate: '1998-02-17T00:00:00.000Z',
    ShippedDate: '1998-02-19T00:00:00.000Z',
    Freight: 120.27,
    ShipName: 'Maison Dewey',
    ShipAddress: 'Rue Joseph-Bens 532',
    ShipCity: 'Bruxelles',
    ShipRegion: null,
    ShipCountry: 'Belgium',
  },
},
```

```
{
  OrderID: 10893,
  CustomerID: 'KOENE',
  OrderDate: '1998-02-18T00:00:00.000Z',
  ShippedDate: '1998-02-20T00:00:00.000Z',
  Freight: 77.78,
  ShipName: 'Königlich Essen',
  ShipAddress: 'Maubelstr. 90',
  ShipCity: 'Brandenburg',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10894,
  CustomerID: 'SAVEA',
  OrderDate: '1998-02-18T00:00:00.000Z',
  ShippedDate: '1998-02-20T00:00:00.000Z',
  Freight: 116.13,
  ShipName: 'Save-a-lot Markets',
  ShipAddress: '187 Suffolk Ln.',
  ShipCity: 'Boise',
  ShipRegion: 'ID',
  ShipCountry: 'USA',
},

{
  OrderID: 10895,
  CustomerID: 'ERNSH',
  OrderDate: '1998-02-18T00:00:00.000Z',
  ShippedDate: '1998-02-23T00:00:00.000Z',
  Freight: 162.75,
  ShipName: 'Ernst Handel',
  ShipAddress: 'Kirchgasse 6',
  ShipCity: 'Graz',
  ShipRegion: null,
  ShipCountry: 'Austria',
},

{
  OrderID: 10896,
  CustomerID: 'MAISD',
  OrderDate: '1998-02-19T00:00:00.000Z',
  ShippedDate: '1998-02-27T00:00:00.000Z',
  Freight: 32.45,
  ShipName: 'Maison Dewey',
  ShipAddress: 'Rue Joseph-Bens 532',
  ShipCity: 'Bruxelles',
  ShipRegion: null,
  ShipCountry: 'Belgium',
},

{
  OrderID: 10897,
  CustomerID: 'HUNGO',
  OrderDate: '1998-02-19T00:00:00.000Z',
```

```
ShippedDate: '1998-02-25T00:00:00.000Z',
Freight: 603.54,
ShipName: 'Hungry Owl All-Night Grocers',
ShipAddress: '8 Johnstown Road',
ShipCity: 'Cork',
ShipRegion: 'Co. Cork',
ShipCountry: 'Ireland',
},

{
  OrderID: 10898,
  CustomerID: 'OCEAN',
  OrderDate: '1998-02-20T00:00:00.000Z',
  ShippedDate: '1998-03-06T00:00:00.000Z',
  Freight: 1.27,
  ShipName: 'Océano Atlántico Ltda.',
  ShipAddress: 'Ing. Gustavo Moncada 8585 Piso 20-A',
  ShipCity: 'Buenos Aires',
  ShipRegion: null,
  ShipCountry: 'Argentina',
},

{
  OrderID: 10899,
  CustomerID: 'LILAS',
  OrderDate: '1998-02-20T00:00:00.000Z',
  ShippedDate: '1998-02-26T00:00:00.000Z',
  Freight: 1.21,
  ShipName: 'LILA-Supermercado',
  ShipAddress: 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
  ShipCity: 'Barquisimeto',
  ShipRegion: 'Lara',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10900,
  CustomerID: 'WELLI',
  OrderDate: '1998-02-20T00:00:00.000Z',
  ShippedDate: '1998-03-04T00:00:00.000Z',
  Freight: 1.66,
  ShipName: 'Wellington Importadora',
  ShipAddress: 'Rua do Mercado, 12',
  ShipCity: 'Resende',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10901,
  CustomerID: 'HILAA',
  OrderDate: '1998-02-23T00:00:00.000Z',
  ShippedDate: '1998-02-26T00:00:00.000Z',
  Freight: 62.09,
  ShipName: 'HILARION-Abastos',
  ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
  ShipCity: 'San Cristóbal',
```

```
    ShipRegion: 'Táchira',
    ShipCountry: 'Venezuela',
  },

  {
    OrderID: 10902,
    CustomerID: 'FOLKO',
    OrderDate: '1998-02-23T00:00:00.000Z',
    ShippedDate: '1998-03-03T00:00:00.000Z',
    Freight: 44.15,
    ShipName: 'Folk och fä HB',
    ShipAddress: 'Åkergatan 24',
    ShipCity: 'Bräcke',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },

  {
    OrderID: 10903,
    CustomerID: 'HANAR',
    OrderDate: '1998-02-24T00:00:00.000Z',
    ShippedDate: '1998-03-04T00:00:00.000Z',
    Freight: 36.71,
    ShipName: 'Hanari Carnes',
    ShipAddress: 'Rua do Paço, 67',
    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10904,
    CustomerID: 'WHITC',
    OrderDate: '1998-02-24T00:00:00.000Z',
    ShippedDate: '1998-02-27T00:00:00.000Z',
    Freight: 162.95,
    ShipName: 'White Clover Markets',
    ShipAddress: '1029 - 12th Ave. S.',
    ShipCity: 'Seattle',
    ShipRegion: 'WA',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10905,
    CustomerID: 'WELLI',
    OrderDate: '1998-02-24T00:00:00.000Z',
    ShippedDate: '1998-03-06T00:00:00.000Z',
    Freight: 13.72,
    ShipName: 'Wellington Importadora',
    ShipAddress: 'Rua do Mercado, 12',
    ShipCity: 'Resende',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },

  {
```



```
OrderID: 10906,
CustomerID: 'WOLZA',
OrderDate: '1998-02-25T00:00:00.000Z',
ShippedDate: '1998-03-03T00:00:00.000Z',
Freight: 26.29,
ShipName: 'Wolski Zajazd',
ShipAddress: 'ul. Filtrowa 68',
ShipCity: 'Warszawa',
ShipRegion: null,
ShipCountry: 'Poland',
},

{
  OrderID: 10907,
  CustomerID: 'SPECB',
  OrderDate: '1998-02-25T00:00:00.000Z',
  ShippedDate: '1998-02-27T00:00:00.000Z',
  Freight: 9.19,
  ShipName: 'Spécialités du monde',
  ShipAddress: '25, rue Lauriston',
  ShipCity: 'Paris',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10908,
  CustomerID: 'REGGC',
  OrderDate: '1998-02-26T00:00:00.000Z',
  ShippedDate: '1998-03-06T00:00:00.000Z',
  Freight: 32.96,
  ShipName: 'Reggiani Caseifici',
  ShipAddress: 'Strada Provinciale 124',
  ShipCity: 'Reggio Emilia',
  ShipRegion: null,
  ShipCountry: 'Italy',
},

{
  OrderID: 10909,
  CustomerID: 'SANTG',
  OrderDate: '1998-02-26T00:00:00.000Z',
  ShippedDate: '1998-03-10T00:00:00.000Z',
  Freight: 53.05,
  ShipName: 'Santé Gourmet',
  ShipAddress: 'Erling Skakkes gate 78',
  ShipCity: 'Stavern',
  ShipRegion: null,
  ShipCountry: 'Norway',
},

{
  OrderID: 10910,
  CustomerID: 'WILMK',
  OrderDate: '1998-02-26T00:00:00.000Z',
  ShippedDate: '1998-03-04T00:00:00.000Z',
  Freight: 38.11,
```

```
    ShipName: 'Wilman Kala',
    ShipAddress: 'Keskuskatu 45',
    ShipCity: 'Helsinki',
    ShipRegion: null,
    ShipCountry: 'Finland',
  },

  {
    OrderID: 10911,
    CustomerID: 'GODOS',
    OrderDate: '1998-02-26T00:00:00.000Z',
    ShippedDate: '1998-03-05T00:00:00.000Z',
    Freight: 38.19,
    ShipName: 'Godos Cocina Típica',
    ShipAddress: 'C/ Romero, 33',
    ShipCity: 'Sevilla',
    ShipRegion: null,
    ShipCountry: 'Spain',
  },

  {
    OrderID: 10912,
    CustomerID: 'HUNGO',
    OrderDate: '1998-02-26T00:00:00.000Z',
    ShippedDate: '1998-03-18T00:00:00.000Z',
    Freight: 580.91,
    ShipName: 'Hungry Owl All-Night Grocers',
    ShipAddress: '8 Johnstown Road',
    ShipCity: 'Cork',
    ShipRegion: 'Co. Cork',
    ShipCountry: 'Ireland',
  },

  {
    OrderID: 10913,
    CustomerID: 'QUEEN',
    OrderDate: '1998-02-26T00:00:00.000Z',
    ShippedDate: '1998-03-04T00:00:00.000Z',
    Freight: 33.05,
    ShipName: 'Queen Cozinha',
    ShipAddress: 'Alameda dos Canários, 891',
    ShipCity: 'Sao Paulo',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10914,
    CustomerID: 'QUEEN',
    OrderDate: '1998-02-27T00:00:00.000Z',
    ShippedDate: '1998-03-02T00:00:00.000Z',
    Freight: 21.19,
    ShipName: 'Queen Cozinha',
    ShipAddress: 'Alameda dos Canários, 891',
    ShipCity: 'Sao Paulo',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },
```

```
},  
  
{  
  OrderID: 10915,  
  CustomerID: 'TORTU',  
  OrderDate: '1998-02-27T00:00:00.000Z',  
  ShippedDate: '1998-03-02T00:00:00.000Z',  
  Freight: 3.51,  
  ShipName: 'Tortuga Restaurante',  
  ShipAddress: 'Avda. Azteca 123',  
  ShipCity: 'México D.F.',  
  ShipRegion: null,  
  ShipCountry: 'Mexico',  
},  
  
{  
  OrderID: 10916,  
  CustomerID: 'RANCH',  
  OrderDate: '1998-02-27T00:00:00.000Z',  
  ShippedDate: '1998-03-09T00:00:00.000Z',  
  Freight: 63.77,  
  ShipName: 'Rancho grande',  
  ShipAddress: 'Av. del Libertador 900',  
  ShipCity: 'Buenos Aires',  
  ShipRegion: null,  
  ShipCountry: 'Argentina',  
},  
  
{  
  OrderID: 10917,  
  CustomerID: 'ROMEY',  
  OrderDate: '1998-03-02T00:00:00.000Z',  
  ShippedDate: '1998-03-11T00:00:00.000Z',  
  Freight: 8.29,  
  ShipName: 'Romero y tomillo',  
  ShipAddress: 'Gran Vía, 1',  
  ShipCity: 'Madrid',  
  ShipRegion: null,  
  ShipCountry: 'Spain',  
},  
  
{  
  OrderID: 10918,  
  CustomerID: 'BOTTM',  
  OrderDate: '1998-03-02T00:00:00.000Z',  
  ShippedDate: '1998-03-11T00:00:00.000Z',  
  Freight: 48.83,  
  ShipName: 'Bottom-Dollar Markets',  
  ShipAddress: '23 Tsawassen Blvd.',  
  ShipCity: 'Tsawassen',  
  ShipRegion: 'BC',  
  ShipCountry: 'Canada',  
},  
  
{  
  OrderID: 10919,  
  CustomerID: 'LINOD',
```

```
OrderDate: '1998-03-02T00:00:00.000Z',
ShippedDate: '1998-03-04T00:00:00.000Z',
Freight: 19.8,
ShipName: 'LINO-Delicateses',
ShipAddress: 'Ave. 5 de Mayo Porlamar',
ShipCity: 'I. de Margarita',
ShipRegion: 'Nueva Esparta',
ShipCountry: 'Venezuela',
},

{
  OrderID: 10920,
  CustomerID: 'AROUT',
  OrderDate: '1998-03-03T00:00:00.000Z',
  ShippedDate: '1998-03-09T00:00:00.000Z',
  Freight: 29.61,
  ShipName: 'Around the Horn',
  ShipAddress: 'Brook Farm Stratford St. Mary',
  ShipCity: 'Colchester',
  ShipRegion: 'Essex',
  ShipCountry: 'UK',
},

{
  OrderID: 10921,
  CustomerID: 'VAFFE',
  OrderDate: '1998-03-03T00:00:00.000Z',
  ShippedDate: '1998-03-09T00:00:00.000Z',
  Freight: 176.48,
  ShipName: 'Vaffeljernet',
  ShipAddress: 'Smagsloget 45',
  ShipCity: 'Århus',
  ShipRegion: null,
  ShipCountry: 'Denmark',
},

{
  OrderID: 10922,
  CustomerID: 'HANAR',
  OrderDate: '1998-03-03T00:00:00.000Z',
  ShippedDate: '1998-03-05T00:00:00.000Z',
  Freight: 62.74,
  ShipName: 'Hanari Carnes',
  ShipAddress: 'Rua do Paço, 67',
  ShipCity: 'Rio de Janeiro',
  ShipRegion: 'RJ',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10923,
  CustomerID: 'LAMAI',
  OrderDate: '1998-03-03T00:00:00.000Z',
  ShippedDate: '1998-03-13T00:00:00.000Z',
  Freight: 68.26,
  ShipName: 'La maison d'Asie',
  ShipAddress: '1 rue Alsace-Lorraine',
```

```
    ShipCity: 'Toulouse',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10924,
    CustomerID: 'BERGS',
    OrderDate: '1998-03-04T00:00:00.000Z',
    ShippedDate: '1998-04-08T00:00:00.000Z',
    Freight: 151.52,
    ShipName: 'Berglunds snabbköp',
    ShipAddress: 'Berguvsvägen 8',
    ShipCity: 'Luleå',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },

  {
    OrderID: 10925,
    CustomerID: 'HANAR',
    OrderDate: '1998-03-04T00:00:00.000Z',
    ShippedDate: '1998-03-13T00:00:00.000Z',
    Freight: 2.27,
    ShipName: 'Hanari Carnes',
    ShipAddress: 'Rua do Paço, 67',
    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10926,
    CustomerID: 'ANATR',
    OrderDate: '1998-03-04T00:00:00.000Z',
    ShippedDate: '1998-03-11T00:00:00.000Z',
    Freight: 39.92,
    ShipName: 'Ana Trujillo Emparedados y helados',
    ShipAddress: 'Avda. de la Constitución 2222',
    ShipCity: 'México D.F.',
    ShipRegion: null,
    ShipCountry: 'Mexico',
  },

  {
    OrderID: 10927,
    CustomerID: 'LACOR',
    OrderDate: '1998-03-05T00:00:00.000Z',
    ShippedDate: '1998-04-08T00:00:00.000Z',
    Freight: 19.79,
    ShipName: 'La corne d'abondance',
    ShipAddress: '67, avenue de l'Europe',
    ShipCity: 'Versailles',
    ShipRegion: null,
    ShipCountry: 'France',
  },
```

```
{
  OrderID: 10928,
  CustomerID: 'GALED',
  OrderDate: '1998-03-05T00:00:00.000Z',
  ShippedDate: '1998-03-18T00:00:00.000Z',
  Freight: 1.36,
  ShipName: 'Galería del gastronómo',
  ShipAddress: 'Rambla de Cataluña, 23',
  ShipCity: 'Barcelona',
  ShipRegion: null,
  ShipCountry: 'Spain',
},

{
  OrderID: 10929,
  CustomerID: 'FRANK',
  OrderDate: '1998-03-05T00:00:00.000Z',
  ShippedDate: '1998-03-12T00:00:00.000Z',
  Freight: 33.93,
  ShipName: 'Frankenversand',
  ShipAddress: 'Berliner Platz 43',
  ShipCity: 'München',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10930,
  CustomerID: 'SUPRD',
  OrderDate: '1998-03-06T00:00:00.000Z',
  ShippedDate: '1998-03-18T00:00:00.000Z',
  Freight: 15.55,
  ShipName: 'Suprêmes délices',
  ShipAddress: 'Boulevard Tirou, 255',
  ShipCity: 'Charleroi',
  ShipRegion: null,
  ShipCountry: 'Belgium',
},

{
  OrderID: 10931,
  CustomerID: 'RICSU',
  OrderDate: '1998-03-06T00:00:00.000Z',
  ShippedDate: '1998-03-19T00:00:00.000Z',
  Freight: 13.6,
  ShipName: 'Richter Supermarkt',
  ShipAddress: 'Starenweg 5',
  ShipCity: 'Genève',
  ShipRegion: null,
  ShipCountry: 'Switzerland',
},

{
  OrderID: 10932,
  CustomerID: 'BONAP',
  OrderDate: '1998-03-06T00:00:00.000Z',
  ShippedDate: '1998-03-24T00:00:00.000Z',
```

```
Freight: 134.64,
ShipName: 'Bon app',
ShipAddress: '12, rue des Bouchers',
ShipCity: 'Marseille',
ShipRegion: null,
ShipCountry: 'France',
},

{
  OrderID: 10933,
  CustomerID: 'ISLAT',
  OrderDate: '1998-03-06T00:00:00.000Z',
  ShippedDate: '1998-03-16T00:00:00.000Z',
  Freight: 54.15,
  ShipName: 'Island Trading',
  ShipAddress: 'Garden House Crowther Way',
  ShipCity: 'Cowes',
  ShipRegion: 'Isle of Wight',
  ShipCountry: 'UK',
},

{
  OrderID: 10934,
  CustomerID: 'LEHMS',
  OrderDate: '1998-03-09T00:00:00.000Z',
  ShippedDate: '1998-03-12T00:00:00.000Z',
  Freight: 32.01,
  ShipName: 'Lehmanns Marktstand',
  ShipAddress: 'Magazinweg 7',
  ShipCity: 'Frankfurt a.M.',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10935,
  CustomerID: 'WELLI',
  OrderDate: '1998-03-09T00:00:00.000Z',
  ShippedDate: '1998-03-18T00:00:00.000Z',
  Freight: 47.59,
  ShipName: 'Wellington Importadora',
  ShipAddress: 'Rua do Mercado, 12',
  ShipCity: 'Resende',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 10936,
  CustomerID: 'GREAL',
  OrderDate: '1998-03-09T00:00:00.000Z',
  ShippedDate: '1998-03-18T00:00:00.000Z',
  Freight: 33.68,
  ShipName: 'Great Lakes Food Market',
  ShipAddress: '2732 Baker Blvd.',
  ShipCity: 'Eugene',
  ShipRegion: 'OR',
```

```
    ShipCountry: 'USA',
  },

  {
    OrderID: 10937,
    CustomerID: 'CACTU',
    OrderDate: '1998-03-10T00:00:00.000Z',
    ShippedDate: '1998-03-13T00:00:00.000Z',
    Freight: 31.51,
    ShipName: 'Cactus Comidas para llevar',
    ShipAddress: 'Cerrito 333',
    ShipCity: 'Buenos Aires',
    ShipRegion: null,
    ShipCountry: 'Argentina',
  },

  {
    OrderID: 10938,
    CustomerID: 'QUICK',
    OrderDate: '1998-03-10T00:00:00.000Z',
    ShippedDate: '1998-03-16T00:00:00.000Z',
    Freight: 31.89,
    ShipName: 'QUICK-Stop',
    ShipAddress: 'Taucherstraße 10',
    ShipCity: 'Cunewalde',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10939,
    CustomerID: 'MAGAA',
    OrderDate: '1998-03-10T00:00:00.000Z',
    ShippedDate: '1998-03-13T00:00:00.000Z',
    Freight: 76.33,
    ShipName: 'Magazzini Alimentari Riuniti',
    ShipAddress: 'Via Ludovico il Moro 22',
    ShipCity: 'Bergamo',
    ShipRegion: null,
    ShipCountry: 'Italy',
  },

  {
    OrderID: 10940,
    CustomerID: 'BONAP',
    OrderDate: '1998-03-11T00:00:00.000Z',
    ShippedDate: '1998-03-23T00:00:00.000Z',
    Freight: 19.77,
    ShipName: 'Bon app',
    ShipAddress: '12, rue des Bouchers',
    ShipCity: 'Marseille',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
    OrderID: 10941,
```



```
CustomerID: 'SAVEA',
OrderDate: '1998-03-11T00:00:00.000Z',
ShippedDate: '1998-03-20T00:00:00.000Z',
Freight: 400.81,
ShipName: 'Save-a-lot Markets',
ShipAddress: '187 Suffolk Ln.',
ShipCity: 'Boise',
ShipRegion: 'ID',
ShipCountry: 'USA',
},

{
  OrderID: 10942,
  CustomerID: 'REGGC',
  OrderDate: '1998-03-11T00:00:00.000Z',
  ShippedDate: '1998-03-18T00:00:00.000Z',
  Freight: 17.95,
  ShipName: 'Reggiani Caseifici',
  ShipAddress: 'Strada Provinciale 124',
  ShipCity: 'Reggio Emilia',
  ShipRegion: null,
  ShipCountry: 'Italy',
},

{
  OrderID: 10943,
  CustomerID: 'BSBEV',
  OrderDate: '1998-03-11T00:00:00.000Z',
  ShippedDate: '1998-03-19T00:00:00.000Z',
  Freight: 2.17,
  ShipName: "B' Beverages",
  ShipAddress: 'Fauntleroy Circus',
  ShipCity: 'London',
  ShipRegion: null,
  ShipCountry: 'UK',
},

{
  OrderID: 10944,
  CustomerID: 'BOTTM',
  OrderDate: '1998-03-12T00:00:00.000Z',
  ShippedDate: '1998-03-13T00:00:00.000Z',
  Freight: 52.92,
  ShipName: 'Bottom-Dollar Markets',
  ShipAddress: '23 Tsawassen Blvd.',
  ShipCity: 'Tsawassen',
  ShipRegion: 'BC',
  ShipCountry: 'Canada',
},

{
  OrderID: 10945,
  CustomerID: 'MORGK',
  OrderDate: '1998-03-12T00:00:00.000Z',
  ShippedDate: '1998-03-18T00:00:00.000Z',
  Freight: 10.22,
  ShipName: 'Morgenstern Gesundkost',
```

```
    ShipAddress: 'Heerstr. 22',
    ShipCity: 'Leipzig',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10946,
    CustomerID: 'VAFFE',
    OrderDate: '1998-03-12T00:00:00.000Z',
    ShippedDate: '1998-03-19T00:00:00.000Z',
    Freight: 27.2,
    ShipName: 'Vaffeljernet',
    ShipAddress: 'Smagsloget 45',
    ShipCity: 'Århus',
    ShipRegion: null,
    ShipCountry: 'Denmark',
  },

  {
    OrderID: 10947,
    CustomerID: 'BSBEV',
    OrderDate: '1998-03-13T00:00:00.000Z',
    ShippedDate: '1998-03-16T00:00:00.000Z',
    Freight: 3.26,
    ShipName: "B' Beverages",
    ShipAddress: 'Fauntleroy Circus',
    ShipCity: 'London',
    ShipRegion: null,
    ShipCountry: 'UK',
  },

  {
    OrderID: 10948,
    CustomerID: 'GODOS',
    OrderDate: '1998-03-13T00:00:00.000Z',
    ShippedDate: '1998-03-19T00:00:00.000Z',
    Freight: 23.39,
    ShipName: 'Godos Cocina Típica',
    ShipAddress: 'C/ Romero, 33',
    ShipCity: 'Sevilla',
    ShipRegion: null,
    ShipCountry: 'Spain',
  },

  {
    OrderID: 10949,
    CustomerID: 'BOTTM',
    OrderDate: '1998-03-13T00:00:00.000Z',
    ShippedDate: '1998-03-17T00:00:00.000Z',
    Freight: 74.44,
    ShipName: 'Bottom-Dollar Markets',
    ShipAddress: '23 Tsawassen Blvd.',
    ShipCity: 'Tsawassen',
    ShipRegion: 'BC',
    ShipCountry: 'Canada',
  },
},
```

```
{
  OrderID: 10950,
  CustomerID: 'MAGAA',
  OrderDate: '1998-03-16T00:00:00.000Z',
  ShippedDate: '1998-03-23T00:00:00.000Z',
  Freight: 2.5,
  ShipName: 'Magazzini Alimentari Riuniti',
  ShipAddress: 'Via Ludovico il Moro 22',
  ShipCity: 'Bergamo',
  ShipRegion: null,
  ShipCountry: 'Italy',
},

{
  OrderID: 10951,
  CustomerID: 'RICSU',
  OrderDate: '1998-03-16T00:00:00.000Z',
  ShippedDate: '1998-04-07T00:00:00.000Z',
  Freight: 30.85,
  ShipName: 'Richter Supermarkt',
  ShipAddress: 'Starenweg 5',
  ShipCity: 'Genève',
  ShipRegion: null,
  ShipCountry: 'Switzerland',
},

{
  OrderID: 10952,
  CustomerID: 'ALFKI',
  OrderDate: '1998-03-16T00:00:00.000Z',
  ShippedDate: '1998-03-24T00:00:00.000Z',
  Freight: 40.42,
  ShipName: "Alfred Fütterkiste",
  ShipAddress: 'Obere Str. 57',
  ShipCity: 'Berlin',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10953,
  CustomerID: 'AROUT',
  OrderDate: '1998-03-16T00:00:00.000Z',
  ShippedDate: '1998-03-25T00:00:00.000Z',
  Freight: 23.72,
  ShipName: 'Around the Horn',
  ShipAddress: 'Brook Farm Stratford St. Mary',
  ShipCity: 'Colchester',
  ShipRegion: 'Essex',
  ShipCountry: 'UK',
},

{
  OrderID: 10954,
  CustomerID: 'LINOD',
  OrderDate: '1998-03-17T00:00:00.000Z',
```

```
ShippedDate: '1998-03-20T00:00:00.000Z',
Freight: 27.91,
ShipName: 'LINO-Delicateses',
ShipAddress: 'Ave. 5 de Mayo Porlamar',
ShipCity: 'I. de Margarita',
ShipRegion: 'Nueva Esparta',
ShipCountry: 'Venezuela',
},

{
  OrderID: 10955,
  CustomerID: 'FOLKO',
  OrderDate: '1998-03-17T00:00:00.000Z',
  ShippedDate: '1998-03-20T00:00:00.000Z',
  Freight: 3.26,
  ShipName: 'Folk och fä HB',
  ShipAddress: 'Åkergatan 24',
  ShipCity: 'Bräcke',
  ShipRegion: null,
  ShipCountry: 'Sweden',
},

{
  OrderID: 10956,
  CustomerID: 'BLAUS',
  OrderDate: '1998-03-17T00:00:00.000Z',
  ShippedDate: '1998-03-20T00:00:00.000Z',
  Freight: 44.65,
  ShipName: 'Blauer See Delikatessen',
  ShipAddress: 'Forsterstr. 57',
  ShipCity: 'Mannheim',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 10957,
  CustomerID: 'HILAA',
  OrderDate: '1998-03-18T00:00:00.000Z',
  ShippedDate: '1998-03-27T00:00:00.000Z',
  Freight: 105.36,
  ShipName: 'HILARION-Abastos',
  ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
  ShipCity: 'San Cristóbal',
  ShipRegion: 'Táchira',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 10958,
  CustomerID: 'OCEAN',
  OrderDate: '1998-03-18T00:00:00.000Z',
  ShippedDate: '1998-03-27T00:00:00.000Z',
  Freight: 49.56,
  ShipName: 'Océano Atlántico Ltda.',
  ShipAddress: 'Ing. Gustavo Moncada 8585 Piso 20-A',
  ShipCity: 'Buenos Aires',
```

```
    ShipRegion: null,
    ShipCountry: 'Argentina',
  },

  {
    OrderID: 10959,
    CustomerID: 'GOURL',
    OrderDate: '1998-03-18T00:00:00.000Z',
    ShippedDate: '1998-03-23T00:00:00.000Z',
    Freight: 4.98,
    ShipName: 'Gourmet Lanchonetes',
    ShipAddress: 'Av. Brasil, 442',
    ShipCity: 'Campinas',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10960,
    CustomerID: 'HILAA',
    OrderDate: '1998-03-19T00:00:00.000Z',
    ShippedDate: '1998-04-08T00:00:00.000Z',
    Freight: 2.08,
    ShipName: 'HILARION-Abastos',
    ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipCity: 'San Cristóbal',
    ShipRegion: 'Táchira',
    ShipCountry: 'Venezuela',
  },

  {
    OrderID: 10961,
    CustomerID: 'QUEEN',
    OrderDate: '1998-03-19T00:00:00.000Z',
    ShippedDate: '1998-03-30T00:00:00.000Z',
    Freight: 104.47,
    ShipName: 'Queen Cozinha',
    ShipAddress: 'Alameda dos Canários, 891',
    ShipCity: 'Sao Paulo',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10962,
    CustomerID: 'QUICK',
    OrderDate: '1998-03-19T00:00:00.000Z',
    ShippedDate: '1998-03-23T00:00:00.000Z',
    Freight: 275.79,
    ShipName: 'QUICK-Stop',
    ShipAddress: 'Taucherstraße 10',
    ShipCity: 'Cunewalde',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
```

```
OrderID: 10963,
CustomerID: 'FURIB',
OrderDate: '1998-03-19T00:00:00.000Z',
ShippedDate: '1998-03-26T00:00:00.000Z',
Freight: 2.7,
ShipName: 'Furia Bacalhau e Frutos do Mar',
ShipAddress: 'Jardim das rosas n. 32',
ShipCity: 'Lisboa',
ShipRegion: null,
ShipCountry: 'Portugal',
},

{
  OrderID: 10964,
  CustomerID: 'SPECB',
  OrderDate: '1998-03-20T00:00:00.000Z',
  ShippedDate: '1998-03-24T00:00:00.000Z',
  Freight: 87.38,
  ShipName: 'Spécialités du monde',
  ShipAddress: '25, rue Lauriston',
  ShipCity: 'Paris',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 10965,
  CustomerID: 'OLDWO',
  OrderDate: '1998-03-20T00:00:00.000Z',
  ShippedDate: '1998-03-30T00:00:00.000Z',
  Freight: 144.38,
  ShipName: 'Old World Delicatessen',
  ShipAddress: '2743 Bering St.',
  ShipCity: 'Anchorage',
  ShipRegion: 'AK',
  ShipCountry: 'USA',
},

{
  OrderID: 10966,
  CustomerID: 'CHOPS',
  OrderDate: '1998-03-20T00:00:00.000Z',
  ShippedDate: '1998-04-08T00:00:00.000Z',
  Freight: 27.19,
  ShipName: 'Chop-suey Chinese',
  ShipAddress: 'Hauptstr. 31',
  ShipCity: 'Bern',
  ShipRegion: null,
  ShipCountry: 'Switzerland',
},

{
  OrderID: 10967,
  CustomerID: 'TOMSP',
  OrderDate: '1998-03-23T00:00:00.000Z',
  ShippedDate: '1998-04-02T00:00:00.000Z',
  Freight: 62.22,
```

```
    ShipName: 'Toms Spezialitäten',
    ShipAddress: 'Luisenstr. 48',
    ShipCity: 'Münster',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10968,
    CustomerID: 'ERNSH',
    OrderDate: '1998-03-23T00:00:00.000Z',
    ShippedDate: '1998-04-01T00:00:00.000Z',
    Freight: 74.6,
    ShipName: 'Ernst Handel',
    ShipAddress: 'Kirchgasse 6',
    ShipCity: 'Graz',
    ShipRegion: null,
    ShipCountry: 'Austria',
  },

  {
    OrderID: 10969,
    CustomerID: 'COMMI',
    OrderDate: '1998-03-23T00:00:00.000Z',
    ShippedDate: '1998-03-30T00:00:00.000Z',
    Freight: 0.21,
    ShipName: 'Comércio Mineiro',
    ShipAddress: 'Av. dos Lusíadas, 23',
    ShipCity: 'Sao Paulo',
    ShipRegion: 'SP',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10970,
    CustomerID: 'BOLID',
    OrderDate: '1998-03-24T00:00:00.000Z',
    ShippedDate: '1998-04-24T00:00:00.000Z',
    Freight: 16.16,
    ShipName: 'Bólido Comidas preparadas',
    ShipAddress: 'C/ Araquil, 67',
    ShipCity: 'Madrid',
    ShipRegion: null,
    ShipCountry: 'Spain',
  },

  {
    OrderID: 10971,
    CustomerID: 'FRANR',
    OrderDate: '1998-03-24T00:00:00.000Z',
    ShippedDate: '1998-04-02T00:00:00.000Z',
    Freight: 121.82,
    ShipName: 'France restauration',
    ShipAddress: '54, rue Royale',
    ShipCity: 'Nantes',
    ShipRegion: null,
    ShipCountry: 'France',
  },
```

```
},  
  
{  
  OrderID: 10972,  
  CustomerID: 'LACOR',  
  OrderDate: '1998-03-24T00:00:00.000Z',  
  ShippedDate: '1998-03-26T00:00:00.000Z',  
  Freight: 0.02,  
  ShipName: "La corne d'abondance",  
  ShipAddress: "67, avenue de l'Europe",  
  ShipCity: 'Versailles',  
  ShipRegion: null,  
  ShipCountry: 'France',  
},  
  
{  
  OrderID: 10973,  
  CustomerID: 'LACOR',  
  OrderDate: '1998-03-24T00:00:00.000Z',  
  ShippedDate: '1998-03-27T00:00:00.000Z',  
  Freight: 15.17,  
  ShipName: "La corne d'abondance",  
  ShipAddress: "67, avenue de l'Europe",  
  ShipCity: 'Versailles',  
  ShipRegion: null,  
  ShipCountry: 'France',  
},  
  
{  
  OrderID: 10974,  
  CustomerID: 'SPLIR',  
  OrderDate: '1998-03-25T00:00:00.000Z',  
  ShippedDate: '1998-04-03T00:00:00.000Z',  
  Freight: 12.96,  
  ShipName: 'Split Rail Beer & Ale',  
  ShipAddress: 'P.O. Box 555',  
  ShipCity: 'Lander',  
  ShipRegion: 'WY',  
  ShipCountry: 'USA',  
},  
  
{  
  OrderID: 10975,  
  CustomerID: 'BOTTM',  
  OrderDate: '1998-03-25T00:00:00.000Z',  
  ShippedDate: '1998-03-27T00:00:00.000Z',  
  Freight: 32.27,  
  ShipName: 'Bottom-Dollar Markets',  
  ShipAddress: '23 Tsawassen Blvd.',  
  ShipCity: 'Tsawassen',  
  ShipRegion: 'BC',  
  ShipCountry: 'Canada',  
},  
  
{  
  OrderID: 10976,  
  CustomerID: 'HILAA',
```



```
OrderDate: '1998-03-25T00:00:00.000Z',
ShippedDate: '1998-04-03T00:00:00.000Z',
Freight: 37.97,
ShipName: 'HILARION-Abastos',
ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
ShipCity: 'San Cristóbal',
ShipRegion: 'Táchira',
ShipCountry: 'Venezuela',
},

{
  OrderID: 10977,
  CustomerID: 'FOLKO',
  OrderDate: '1998-03-26T00:00:00.000Z',
  ShippedDate: '1998-04-10T00:00:00.000Z',
  Freight: 208.5,
  ShipName: 'Folk och fä HB',
  ShipAddress: 'Åkergatan 24',
  ShipCity: 'Bräcke',
  ShipRegion: null,
  ShipCountry: 'Sweden',
},

{
  OrderID: 10978,
  CustomerID: 'MAISD',
  OrderDate: '1998-03-26T00:00:00.000Z',
  ShippedDate: '1998-04-23T00:00:00.000Z',
  Freight: 32.82,
  ShipName: 'Maison Dewey',
  ShipAddress: 'Rue Joseph-Bens 532',
  ShipCity: 'Bruxelles',
  ShipRegion: null,
  ShipCountry: 'Belgium',
},

{
  OrderID: 10979,
  CustomerID: 'ERNSH',
  OrderDate: '1998-03-26T00:00:00.000Z',
  ShippedDate: '1998-03-31T00:00:00.000Z',
  Freight: 353.07,
  ShipName: 'Ernst Handel',
  ShipAddress: 'Kirchgasse 6',
  ShipCity: 'Graz',
  ShipRegion: null,
  ShipCountry: 'Austria',
},

{
  OrderID: 10980,
  CustomerID: 'FOLKO',
  OrderDate: '1998-03-27T00:00:00.000Z',
  ShippedDate: '1998-04-17T00:00:00.000Z',
  Freight: 1.26,
  ShipName: 'Folk och fä HB',
  ShipAddress: 'Åkergatan 24',
```

```
    ShipCity: 'Bräcke',
    ShipRegion: null,
    ShipCountry: 'Sweden',
  },

  {
    OrderID: 10981,
    CustomerID: 'HANAR',
    OrderDate: '1998-03-27T00:00:00.000Z',
    ShippedDate: '1998-04-02T00:00:00.000Z',
    Freight: 193.37,
    ShipName: 'Hanari Carnes',
    ShipAddress: 'Rua do Paço, 67',
    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 10982,
    CustomerID: 'BOTTM',
    OrderDate: '1998-03-27T00:00:00.000Z',
    ShippedDate: '1998-04-08T00:00:00.000Z',
    Freight: 14.01,
    ShipName: 'Bottom-Dollar Markets',
    ShipAddress: '23 Tsawassen Blvd.',
    ShipCity: 'Tsawassen',
    ShipRegion: 'BC',
    ShipCountry: 'Canada',
  },

  {
    OrderID: 10983,
    CustomerID: 'SAVEA',
    OrderDate: '1998-03-27T00:00:00.000Z',
    ShippedDate: '1998-04-06T00:00:00.000Z',
    Freight: 657.54,
    ShipName: 'Save-a-lot Markets',
    ShipAddress: '187 Suffolk Ln.',
    ShipCity: 'Boise',
    ShipRegion: 'ID',
    ShipCountry: 'USA',
  },

  {
    OrderID: 10984,
    CustomerID: 'SAVEA',
    OrderDate: '1998-03-30T00:00:00.000Z',
    ShippedDate: '1998-04-03T00:00:00.000Z',
    Freight: 211.22,
    ShipName: 'Save-a-lot Markets',
    ShipAddress: '187 Suffolk Ln.',
    ShipCity: 'Boise',
    ShipRegion: 'ID',
    ShipCountry: 'USA',
  },
}
```

```
{
  OrderID: 10985,
  CustomerID: 'HUNGO',
  OrderDate: '1998-03-30T00:00:00.000Z',
  ShippedDate: '1998-04-02T00:00:00.000Z',
  Freight: 91.51,
  ShipName: 'Hungry Owl All-Night Grocers',
  ShipAddress: '8 Johnstown Road',
  ShipCity: 'Cork',
  ShipRegion: 'Co. Cork',
  ShipCountry: 'Ireland',
},

{
  OrderID: 10986,
  CustomerID: 'OCEAN',
  OrderDate: '1998-03-30T00:00:00.000Z',
  ShippedDate: '1998-04-21T00:00:00.000Z',
  Freight: 217.86,
  ShipName: 'Océano Atlántico Ltda.',
  ShipAddress: 'Ing. Gustavo Moncada 8585 Piso 20-A',
  ShipCity: 'Buenos Aires',
  ShipRegion: null,
  ShipCountry: 'Argentina',
},

{
  OrderID: 10987,
  CustomerID: 'EASTC',
  OrderDate: '1998-03-31T00:00:00.000Z',
  ShippedDate: '1998-04-06T00:00:00.000Z',
  Freight: 185.48,
  ShipName: 'Eastern Connection',
  ShipAddress: '35 King George',
  ShipCity: 'London',
  ShipRegion: null,
  ShipCountry: 'UK',
},

{
  OrderID: 10988,
  CustomerID: 'RATTC',
  OrderDate: '1998-03-31T00:00:00.000Z',
  ShippedDate: '1998-04-10T00:00:00.000Z',
  Freight: 61.14,
  ShipName: 'Rattlesnake Canyon Grocery',
  ShipAddress: '2817 Milton Dr.',
  ShipCity: 'Albuquerque',
  ShipRegion: 'NM',
  ShipCountry: 'USA',
},

{
  OrderID: 10989,
  CustomerID: 'QUEDE',
  OrderDate: '1998-03-31T00:00:00.000Z',
  ShippedDate: '1998-04-02T00:00:00.000Z',
```

```
Freight: 34.76,  
ShipName: 'Que Delícia',  
ShipAddress: 'Rua da Panificadora, 12',  
ShipCity: 'Rio de Janeiro',  
ShipRegion: 'RJ',  
ShipCountry: 'Brazil',  
},  
  
{  
  OrderID: 10990,  
  CustomerID: 'ERNSH',  
  OrderDate: '1998-04-01T00:00:00.000Z',  
  ShippedDate: '1998-04-07T00:00:00.000Z',  
  Freight: 117.61,  
  ShipName: 'Ernst Handel',  
  ShipAddress: 'Kirchgasse 6',  
  ShipCity: 'Graz',  
  ShipRegion: null,  
  ShipCountry: 'Austria',  
},  
  
{  
  OrderID: 10991,  
  CustomerID: 'QUICK',  
  OrderDate: '1998-04-01T00:00:00.000Z',  
  ShippedDate: '1998-04-07T00:00:00.000Z',  
  Freight: 38.51,  
  ShipName: 'QUICK-Stop',  
  ShipAddress: 'Taucherstraße 10',  
  ShipCity: 'Cunewalde',  
  ShipRegion: null,  
  ShipCountry: 'Germany',  
},  
  
{  
  OrderID: 10992,  
  CustomerID: 'THEBI',  
  OrderDate: '1998-04-01T00:00:00.000Z',  
  ShippedDate: '1998-04-03T00:00:00.000Z',  
  Freight: 4.27,  
  ShipName: 'The Big Cheese',  
  ShipAddress: '89 Jefferson Way Suite 2',  
  ShipCity: 'Portland',  
  ShipRegion: 'OR',  
  ShipCountry: 'USA',  
},  
  
{  
  OrderID: 10993,  
  CustomerID: 'FOLKO',  
  OrderDate: '1998-04-01T00:00:00.000Z',  
  ShippedDate: '1998-04-10T00:00:00.000Z',  
  Freight: 8.81,  
  ShipName: 'Folk och fä HB',  
  ShipAddress: 'Åkergatan 24',  
  ShipCity: 'Bräcke',  
  ShipRegion: null,
```

```
    ShipCountry: 'Sweden',
  },

  {
    OrderID: 10994,
    CustomerID: 'VAFFE',
    OrderDate: '1998-04-02T00:00:00.000Z',
    ShippedDate: '1998-04-09T00:00:00.000Z',
    Freight: 65.53,
    ShipName: 'Vaffeljernet',
    ShipAddress: 'Smagsloget 45',
    ShipCity: 'Århus',
    ShipRegion: null,
    ShipCountry: 'Denmark',
  },

  {
    OrderID: 10995,
    CustomerID: 'PERIC',
    OrderDate: '1998-04-02T00:00:00.000Z',
    ShippedDate: '1998-04-06T00:00:00.000Z',
    Freight: 46,
    ShipName: 'Pericles Comidas clásicas',
    ShipAddress: 'Calle Dr. Jorge Cash 321',
    ShipCity: 'México D.F.',
    ShipRegion: null,
    ShipCountry: 'Mexico',
  },

  {
    OrderID: 10996,
    CustomerID: 'QUICK',
    OrderDate: '1998-04-02T00:00:00.000Z',
    ShippedDate: '1998-04-10T00:00:00.000Z',
    Freight: 1.12,
    ShipName: 'QUICK-Stop',
    ShipAddress: 'Taucherstraße 10',
    ShipCity: 'Cunewalde',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },

  {
    OrderID: 10997,
    CustomerID: 'LILAS',
    OrderDate: '1998-04-03T00:00:00.000Z',
    ShippedDate: '1998-04-13T00:00:00.000Z',
    Freight: 73.91,
    ShipName: 'LILA-Supermercado',
    ShipAddress: 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    ShipCity: 'Barquisimeto',
    ShipRegion: 'Lara',
    ShipCountry: 'Venezuela',
  },

  {
    OrderID: 10998,
```

```
CustomerID: 'WOLZA',
OrderDate: '1998-04-03T00:00:00.000Z',
ShippedDate: '1998-04-17T00:00:00.000Z',
Freight: 20.31,
ShipName: 'Wolski Zajazd',
ShipAddress: 'ul. Filtrowa 68',
ShipCity: 'Warszawa',
ShipRegion: null,
ShipCountry: 'Poland',
},

{
  OrderID: 10999,
  CustomerID: 'OTTIK',
  OrderDate: '1998-04-03T00:00:00.000Z',
  ShippedDate: '1998-04-10T00:00:00.000Z',
  Freight: 96.35,
  ShipName: 'Ottilies Käseladen',
  ShipAddress: 'Mehrheimerstr. 369',
  ShipCity: 'Köln',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 11000,
  CustomerID: 'RATTC',
  OrderDate: '1998-04-06T00:00:00.000Z',
  ShippedDate: '1998-04-14T00:00:00.000Z',
  Freight: 55.12,
  ShipName: 'Rattlesnake Canyon Grocery',
  ShipAddress: '2817 Milton Dr.',
  ShipCity: 'Albuquerque',
  ShipRegion: 'NM',
  ShipCountry: 'USA',
},

{
  OrderID: 11001,
  CustomerID: 'FOLKO',
  OrderDate: '1998-04-06T00:00:00.000Z',
  ShippedDate: '1998-04-14T00:00:00.000Z',
  Freight: 197.3,
  ShipName: 'Folk och fä HB',
  ShipAddress: 'Åkergatan 24',
  ShipCity: 'Bräcke',
  ShipRegion: null,
  ShipCountry: 'Sweden',
},

{
  OrderID: 11002,
  CustomerID: 'SAVEA',
  OrderDate: '1998-04-06T00:00:00.000Z',
  ShippedDate: '1998-04-16T00:00:00.000Z',
  Freight: 141.16,
  ShipName: 'Save-a-lot Markets',
```

```
    ShipAddress: '187 Suffolk Ln.',
    ShipCity: 'Boise',
    ShipRegion: 'ID',
    ShipCountry: 'USA',
  },

  {
    OrderID: 11003,
    CustomerID: 'THECR',
    OrderDate: '1998-04-06T00:00:00.000Z',
    ShippedDate: '1998-04-08T00:00:00.000Z',
    Freight: 14.91,
    ShipName: 'The Cracker Box',
    ShipAddress: '55 Grizzly Peak Rd.',
    ShipCity: 'Butte',
    ShipRegion: 'MT',
    ShipCountry: 'USA',
  },

  {
    OrderID: 11004,
    CustomerID: 'MAISD',
    OrderDate: '1998-04-07T00:00:00.000Z',
    ShippedDate: '1998-04-20T00:00:00.000Z',
    Freight: 44.84,
    ShipName: 'Maison Dewey',
    ShipAddress: 'Rue Joseph-Bens 532',
    ShipCity: 'Bruxelles',
    ShipRegion: null,
    ShipCountry: 'Belgium',
  },

  {
    OrderID: 11005,
    CustomerID: 'WILMK',
    OrderDate: '1998-04-07T00:00:00.000Z',
    ShippedDate: '1998-04-10T00:00:00.000Z',
    Freight: 0.75,
    ShipName: 'Wilman Kala',
    ShipAddress: 'Keskuskatu 45',
    ShipCity: 'Helsinki',
    ShipRegion: null,
    ShipCountry: 'Finland',
  },

  {
    OrderID: 11006,
    CustomerID: 'GREAL',
    OrderDate: '1998-04-07T00:00:00.000Z',
    ShippedDate: '1998-04-15T00:00:00.000Z',
    Freight: 25.19,
    ShipName: 'Great Lakes Food Market',
    ShipAddress: '2732 Baker Blvd.',
    ShipCity: 'Eugene',
    ShipRegion: 'OR',
    ShipCountry: 'USA',
  },
},
```

```
{
  OrderID: 11007,
  CustomerID: 'PRINI',
  OrderDate: '1998-04-08T00:00:00.000Z',
  ShippedDate: '1998-04-13T00:00:00.000Z',
  Freight: 202.24,
  ShipName: 'Princesa Isabel Vinhos',
  ShipAddress: 'Estrada da saúde n. 58',
  ShipCity: 'Lisboa',
  ShipRegion: null,
  ShipCountry: 'Portugal',
},

{
  OrderID: 11008,
  CustomerID: 'ERNSH',
  OrderDate: '1998-04-08T00:00:00.000Z',
  ShippedDate: null,
  Freight: 79.46,
  ShipName: 'Ernst Handel',
  ShipAddress: 'Kirchgasse 6',
  ShipCity: 'Graz',
  ShipRegion: null,
  ShipCountry: 'Austria',
},

{
  OrderID: 11009,
  CustomerID: 'GODOS',
  OrderDate: '1998-04-08T00:00:00.000Z',
  ShippedDate: '1998-04-10T00:00:00.000Z',
  Freight: 59.11,
  ShipName: 'Godos Cocina Típica',
  ShipAddress: 'C/ Romero, 33',
  ShipCity: 'Sevilla',
  ShipRegion: null,
  ShipCountry: 'Spain',
},

{
  OrderID: 11010,
  CustomerID: 'REGGC',
  OrderDate: '1998-04-09T00:00:00.000Z',
  ShippedDate: '1998-04-21T00:00:00.000Z',
  Freight: 28.71,
  ShipName: 'Reggiani Caseifici',
  ShipAddress: 'Strada Provinciale 124',
  ShipCity: 'Reggio Emilia',
  ShipRegion: null,
  ShipCountry: 'Italy',
},

{
  OrderID: 11011,
  CustomerID: 'ALFKI',
  OrderDate: '1998-04-09T00:00:00.000Z',
```



```
ShippedDate: '1998-04-13T00:00:00.000Z',
Freight: 1.21,
ShipName: 'Alfred' Futterkiste',
ShipAddress: 'Obere Str. 57',
ShipCity: 'Berlin',
ShipRegion: null,
ShipCountry: 'Germany',
},

{
  OrderID: 11012,
  CustomerID: 'FRANK',
  OrderDate: '1998-04-09T00:00:00.000Z',
  ShippedDate: '1998-04-17T00:00:00.000Z',
  Freight: 242.95,
  ShipName: 'Frankenversand',
  ShipAddress: 'Berliner Platz 43',
  ShipCity: 'München',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 11013,
  CustomerID: 'ROMEY',
  OrderDate: '1998-04-09T00:00:00.000Z',
  ShippedDate: '1998-04-10T00:00:00.000Z',
  Freight: 32.99,
  ShipName: 'Romero y tomillo',
  ShipAddress: 'Gran Vía, 1',
  ShipCity: 'Madrid',
  ShipRegion: null,
  ShipCountry: 'Spain',
},

{
  OrderID: 11014,
  CustomerID: 'LINOD',
  OrderDate: '1998-04-10T00:00:00.000Z',
  ShippedDate: '1998-04-15T00:00:00.000Z',
  Freight: 23.6,
  ShipName: 'LINO-Delicateses',
  ShipAddress: 'Ave. 5 de Mayo Porlamar',
  ShipCity: 'I. de Margarita',
  ShipRegion: 'Nueva Esparta',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 11015,
  CustomerID: 'SANTG',
  OrderDate: '1998-04-10T00:00:00.000Z',
  ShippedDate: '1998-04-20T00:00:00.000Z',
  Freight: 4.62,
  ShipName: 'Santé Gourmet',
  ShipAddress: 'Erling Skakkes gate 78',
  ShipCity: 'Stavern',
```

```
    ShipRegion: null,
    ShipCountry: 'Norway',
  },

  {
    OrderID: 11016,
    CustomerID: 'AROUT',
    OrderDate: '1998-04-10T00:00:00.000Z',
    ShippedDate: '1998-04-13T00:00:00.000Z',
    Freight: 33.8,
    ShipName: 'Around the Horn',
    ShipAddress: 'Brook Farm Stratford St. Mary',
    ShipCity: 'Colchester',
    ShipRegion: 'Essex',
    ShipCountry: 'UK',
  },

  {
    OrderID: 11017,
    CustomerID: 'ERNSH',
    OrderDate: '1998-04-13T00:00:00.000Z',
    ShippedDate: '1998-04-20T00:00:00.000Z',
    Freight: 754.26,
    ShipName: 'Ernst Handel',
    ShipAddress: 'Kirchgasse 6',
    ShipCity: 'Graz',
    ShipRegion: null,
    ShipCountry: 'Austria',
  },

  {
    OrderID: 11018,
    CustomerID: 'LONEP',
    OrderDate: '1998-04-13T00:00:00.000Z',
    ShippedDate: '1998-04-16T00:00:00.000Z',
    Freight: 11.65,
    ShipName: 'Lonesome Pine Restaurant',
    ShipAddress: '89 Chiaroscuro Rd.',
    ShipCity: 'Portland',
    ShipRegion: 'OR',
    ShipCountry: 'USA',
  },

  {
    OrderID: 11019,
    CustomerID: 'RANCH',
    OrderDate: '1998-04-13T00:00:00.000Z',
    ShippedDate: null,
    Freight: 3.17,
    ShipName: 'Rancho grande',
    ShipAddress: 'Av. del Libertador 900',
    ShipCity: 'Buenos Aires',
    ShipRegion: null,
    ShipCountry: 'Argentina',
  },

  {
```

```
OrderID: 11020,
CustomerID: 'OTTIK',
OrderDate: '1998-04-14T00:00:00.000Z',
ShippedDate: '1998-04-16T00:00:00.000Z',
Freight: 43.3,
ShipName: 'Ottilies Käseladen',
ShipAddress: 'Mehrheimerstr. 369',
ShipCity: 'Köln',
ShipRegion: null,
ShipCountry: 'Germany',
},

{
  OrderID: 11021,
  CustomerID: 'QUICK',
  OrderDate: '1998-04-14T00:00:00.000Z',
  ShippedDate: '1998-04-21T00:00:00.000Z',
  Freight: 297.18,
  ShipName: 'QUICK-Stop',
  ShipAddress: 'Taucherstraße 10',
  ShipCity: 'Cunewalde',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 11022,
  CustomerID: 'HANAR',
  OrderDate: '1998-04-14T00:00:00.000Z',
  ShippedDate: '1998-05-04T00:00:00.000Z',
  Freight: 6.27,
  ShipName: 'Hanari Carnes',
  ShipAddress: 'Rua do Paço, 67',
  ShipCity: 'Rio de Janeiro',
  ShipRegion: 'RJ',
  ShipCountry: 'Brazil',
},

{
  OrderID: 11023,
  CustomerID: 'BSBEV',
  OrderDate: '1998-04-14T00:00:00.000Z',
  ShippedDate: '1998-04-24T00:00:00.000Z',
  Freight: 123.83,
  ShipName: 'B' Beverages',
  ShipAddress: 'Fauntleroy Circus',
  ShipCity: 'London',
  ShipRegion: null,
  ShipCountry: 'UK',
},

{
  OrderID: 11024,
  CustomerID: 'EASTC',
  OrderDate: '1998-04-15T00:00:00.000Z',
  ShippedDate: '1998-04-20T00:00:00.000Z',
  Freight: 74.36,
```

```
    ShipName: 'Eastern Connection',
    ShipAddress: '35 King George',
    ShipCity: 'London',
    ShipRegion: null,
    ShipCountry: 'UK',
  },

  {
    OrderID: 11025,
    CustomerID: 'WARTH',
    OrderDate: '1998-04-15T00:00:00.000Z',
    ShippedDate: '1998-04-24T00:00:00.000Z',
    Freight: 29.17,
    ShipName: 'Wartian Herkku',
    ShipAddress: 'Torikatu 38',
    ShipCity: 'Oulu',
    ShipRegion: null,
    ShipCountry: 'Finland',
  },

  {
    OrderID: 11026,
    CustomerID: 'FRANS',
    OrderDate: '1998-04-15T00:00:00.000Z',
    ShippedDate: '1998-04-28T00:00:00.000Z',
    Freight: 47.09,
    ShipName: 'Franchi S.p.A.',
    ShipAddress: 'Via Monte Bianco 34',
    ShipCity: 'Torino',
    ShipRegion: null,
    ShipCountry: 'Italy',
  },

  {
    OrderID: 11027,
    CustomerID: 'BOTTM',
    OrderDate: '1998-04-16T00:00:00.000Z',
    ShippedDate: '1998-04-20T00:00:00.000Z',
    Freight: 52.52,
    ShipName: 'Bottom-Dollar Markets',
    ShipAddress: '23 Tsawassen Blvd.',
    ShipCity: 'Tsawassen',
    ShipRegion: 'BC',
    ShipCountry: 'Canada',
  },

  {
    OrderID: 11028,
    CustomerID: 'KOENE',
    OrderDate: '1998-04-16T00:00:00.000Z',
    ShippedDate: '1998-04-22T00:00:00.000Z',
    Freight: 29.59,
    ShipName: 'Königlich Essen',
    ShipAddress: 'Maubelstr. 90',
    ShipCity: 'Brandenburg',
    ShipRegion: null,
    ShipCountry: 'Germany',
  },
```

```
},  
  
{  
  OrderID: 11029,  
  CustomerID: 'CHOPS',  
  OrderDate: '1998-04-16T00:00:00.000Z',  
  ShippedDate: '1998-04-27T00:00:00.000Z',  
  Freight: 47.84,  
  ShipName: 'Chop-suey Chinese',  
  ShipAddress: 'Hauptstr. 31',  
  ShipCity: 'Bern',  
  ShipRegion: null,  
  ShipCountry: 'Switzerland',  
},  
  
{  
  OrderID: 11030,  
  CustomerID: 'SAVEA',  
  OrderDate: '1998-04-17T00:00:00.000Z',  
  ShippedDate: '1998-04-27T00:00:00.000Z',  
  Freight: 830.75,  
  ShipName: 'Save-a-lot Markets',  
  ShipAddress: '187 Suffolk Ln.',  
  ShipCity: 'Boise',  
  ShipRegion: 'ID',  
  ShipCountry: 'USA',  
},  
  
{  
  OrderID: 11031,  
  CustomerID: 'SAVEA',  
  OrderDate: '1998-04-17T00:00:00.000Z',  
  ShippedDate: '1998-04-24T00:00:00.000Z',  
  Freight: 227.22,  
  ShipName: 'Save-a-lot Markets',  
  ShipAddress: '187 Suffolk Ln.',  
  ShipCity: 'Boise',  
  ShipRegion: 'ID',  
  ShipCountry: 'USA',  
},  
  
{  
  OrderID: 11032,  
  CustomerID: 'WHITC',  
  OrderDate: '1998-04-17T00:00:00.000Z',  
  ShippedDate: '1998-04-23T00:00:00.000Z',  
  Freight: 606.19,  
  ShipName: 'White Clover Markets',  
  ShipAddress: '1029 - 12th Ave. S.',  
  ShipCity: 'Seattle',  
  ShipRegion: 'WA',  
  ShipCountry: 'USA',  
},  
  
{  
  OrderID: 11033,  
  CustomerID: 'RICSU',
```

```
OrderDate: '1998-04-17T00:00:00.000Z',
ShippedDate: '1998-04-23T00:00:00.000Z',
Freight: 84.74,
ShipName: 'Richter Supermarkt',
ShipAddress: 'Starenweg 5',
ShipCity: 'Genève',
ShipRegion: null,
ShipCountry: 'Switzerland',
},

{
  OrderID: 11034,
  CustomerID: 'OLDWO',
  OrderDate: '1998-04-20T00:00:00.000Z',
  ShippedDate: '1998-04-27T00:00:00.000Z',
  Freight: 40.32,
  ShipName: 'Old World Delicatessen',
  ShipAddress: '2743 Bering St.',
  ShipCity: 'Anchorage',
  ShipRegion: 'AK',
  ShipCountry: 'USA',
},

{
  OrderID: 11035,
  CustomerID: 'SUPRD',
  OrderDate: '1998-04-20T00:00:00.000Z',
  ShippedDate: '1998-04-24T00:00:00.000Z',
  Freight: 0.17,
  ShipName: 'Suprêmes délices',
  ShipAddress: 'Boulevard Tirou, 255',
  ShipCity: 'Charleroi',
  ShipRegion: null,
  ShipCountry: 'Belgium',
},

{
  OrderID: 11036,
  CustomerID: 'DRACD',
  OrderDate: '1998-04-20T00:00:00.000Z',
  ShippedDate: '1998-04-22T00:00:00.000Z',
  Freight: 149.47,
  ShipName: 'Drachenblut Delikatessen',
  ShipAddress: 'Walserweg 21',
  ShipCity: 'Aachen',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 11037,
  CustomerID: 'GODOS',
  OrderDate: '1998-04-21T00:00:00.000Z',
  ShippedDate: '1998-04-27T00:00:00.000Z',
  Freight: 3.2,
  ShipName: 'Godos Cocina Típica',
  ShipAddress: 'C/ Romero, 33',
```

```
    ShipCity: 'Sevilla',
    ShipRegion: null,
    ShipCountry: 'Spain',
  },

  {
    OrderID: 11038,
    CustomerID: 'SUPRD',
    OrderDate: '1998-04-21T00:00:00.000Z',
    ShippedDate: '1998-04-30T00:00:00.000Z',
    Freight: 29.59,
    ShipName: 'Suprêmes délices',
    ShipAddress: 'Boulevard Tirou, 255',
    ShipCity: 'Charleroi',
    ShipRegion: null,
    ShipCountry: 'Belgium',
  },

  {
    OrderID: 11039,
    CustomerID: 'LINOD',
    OrderDate: '1998-04-21T00:00:00.000Z',
    ShippedDate: null,
    Freight: 65,
    ShipName: 'LINO-Delicateses',
    ShipAddress: 'Ave. 5 de Mayo Porlamar',
    ShipCity: 'I. de Margarita',
    ShipRegion: 'Nueva Esparta',
    ShipCountry: 'Venezuela',
  },

  {
    OrderID: 11040,
    CustomerID: 'GREAL',
    OrderDate: '1998-04-22T00:00:00.000Z',
    ShippedDate: null,
    Freight: 18.84,
    ShipName: 'Great Lakes Food Market',
    ShipAddress: '2732 Baker Blvd.',
    ShipCity: 'Eugene',
    ShipRegion: 'OR',
    ShipCountry: 'USA',
  },

  {
    OrderID: 11041,
    CustomerID: 'CHOPS',
    OrderDate: '1998-04-22T00:00:00.000Z',
    ShippedDate: '1998-04-28T00:00:00.000Z',
    Freight: 48.22,
    ShipName: 'Chop-suey Chinese',
    ShipAddress: 'Hauptstr. 31',
    ShipCity: 'Bern',
    ShipRegion: null,
    ShipCountry: 'Switzerland',
  },
}
```

```
{
  OrderID: 11042,
  CustomerID: 'COMMI',
  OrderDate: '1998-04-22T00:00:00.000Z',
  ShippedDate: '1998-05-01T00:00:00.000Z',
  Freight: 29.99,
  ShipName: 'Comércio Mineiro',
  ShipAddress: 'Av. dos Lusíadas, 23',
  ShipCity: 'Sao Paulo',
  ShipRegion: 'SP',
  ShipCountry: 'Brazil',
},

{
  OrderID: 11043,
  CustomerID: 'SPECB',
  OrderDate: '1998-04-22T00:00:00.000Z',
  ShippedDate: '1998-04-29T00:00:00.000Z',
  Freight: 8.8,
  ShipName: 'Spécialités du monde',
  ShipAddress: '25, rue Lauriston',
  ShipCity: 'Paris',
  ShipRegion: null,
  ShipCountry: 'France',
},

{
  OrderID: 11044,
  CustomerID: 'WOLZA',
  OrderDate: '1998-04-23T00:00:00.000Z',
  ShippedDate: '1998-05-01T00:00:00.000Z',
  Freight: 8.72,
  ShipName: 'Wolski Zajazd',
  ShipAddress: 'ul. Filtrowa 68',
  ShipCity: 'Warszawa',
  ShipRegion: null,
  ShipCountry: 'Poland',
},

{
  OrderID: 11045,
  CustomerID: 'BOTTM',
  OrderDate: '1998-04-23T00:00:00.000Z',
  ShippedDate: null,
  Freight: 70.58,
  ShipName: 'Bottom-Dollar Markets',
  ShipAddress: '23 Tsawassen Blvd.',
  ShipCity: 'Tsawassen',
  ShipRegion: 'BC',
  ShipCountry: 'Canada',
},

{
  OrderID: 11046,
  CustomerID: 'WANDK',
  OrderDate: '1998-04-23T00:00:00.000Z',
  ShippedDate: '1998-04-24T00:00:00.000Z',
```



```
Freight: 71.64,  
ShipName: 'Die Wandernde Kuh',  
ShipAddress: 'Adenauerallee 900',  
ShipCity: 'Stuttgart',  
ShipRegion: null,  
ShipCountry: 'Germany',  
},  
  
{  
  OrderID: 11047,  
  CustomerID: 'EASTC',  
  OrderDate: '1998-04-24T00:00:00.000Z',  
  ShippedDate: '1998-05-01T00:00:00.000Z',  
  Freight: 46.62,  
  ShipName: 'Eastern Connection',  
  ShipAddress: '35 King George',  
  ShipCity: 'London',  
  ShipRegion: null,  
  ShipCountry: 'UK',  
},  
  
{  
  OrderID: 11048,  
  CustomerID: 'BOTTM',  
  OrderDate: '1998-04-24T00:00:00.000Z',  
  ShippedDate: '1998-04-30T00:00:00.000Z',  
  Freight: 24.12,  
  ShipName: 'Bottom-Dollar Markets',  
  ShipAddress: '23 Tsawassen Blvd.',  
  ShipCity: 'Tsawassen',  
  ShipRegion: 'BC',  
  ShipCountry: 'Canada',  
},  
  
{  
  OrderID: 11049,  
  CustomerID: 'GOURL',  
  OrderDate: '1998-04-24T00:00:00.000Z',  
  ShippedDate: '1998-05-04T00:00:00.000Z',  
  Freight: 8.34,  
  ShipName: 'Gourmet Lanchonetes',  
  ShipAddress: 'Av. Brasil, 442',  
  ShipCity: 'Campinas',  
  ShipRegion: 'SP',  
  ShipCountry: 'Brazil',  
},  
  
{  
  OrderID: 11050,  
  CustomerID: 'FOLKO',  
  OrderDate: '1998-04-27T00:00:00.000Z',  
  ShippedDate: '1998-05-05T00:00:00.000Z',  
  Freight: 59.41,  
  ShipName: 'Folk och fä HB',  
  ShipAddress: 'Åkergatan 24',  
  ShipCity: 'Bräcke',  
  ShipRegion: null,
```

```
    ShipCountry: 'Sweden',
  },
  {
    OrderID: 11051,
    CustomerID: 'LAMAI',
    OrderDate: '1998-04-27T00:00:00.000Z',
    ShippedDate: null,
    Freight: 2.79,
    ShipName: "La maison d'Asie",
    ShipAddress: '1 rue Alsace-Lorraine',
    ShipCity: 'Toulouse',
    ShipRegion: null,
    ShipCountry: 'France',
  },
  {
    OrderID: 11052,
    CustomerID: 'HANAR',
    OrderDate: '1998-04-27T00:00:00.000Z',
    ShippedDate: '1998-05-01T00:00:00.000Z',
    Freight: 67.26,
    ShipName: 'Hanari Carnes',
    ShipAddress: 'Rua do Paço, 67',
    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    ShipCountry: 'Brazil',
  },
  {
    OrderID: 11053,
    CustomerID: 'PICCO',
    OrderDate: '1998-04-27T00:00:00.000Z',
    ShippedDate: '1998-04-29T00:00:00.000Z',
    Freight: 53.05,
    ShipName: 'Piccolo und mehr',
    ShipAddress: 'Geislweg 14',
    ShipCity: 'Salzburg',
    ShipRegion: null,
    ShipCountry: 'Austria',
  },
  {
    OrderID: 11054,
    CustomerID: 'CACTU',
    OrderDate: '1998-04-28T00:00:00.000Z',
    ShippedDate: null,
    Freight: 0.33,
    ShipName: 'Cactus Comidas para llevar',
    ShipAddress: 'Cerrito 333',
    ShipCity: 'Buenos Aires',
    ShipRegion: null,
    ShipCountry: 'Argentina',
  },
  {
    OrderID: 11055,
```

```
CustomerID: 'HILAA',
OrderDate: '1998-04-28T00:00:00.000Z',
ShippedDate: '1998-05-05T00:00:00.000Z',
Freight: 120.92,
ShipName: 'HILARION-Abastos',
ShipAddress: 'Carrera 22 con Ave. Carlos Soublette #8-35',
ShipCity: 'San Cristóbal',
ShipRegion: 'Táchira',
ShipCountry: 'Venezuela',
},

{
  OrderID: 11056,
  CustomerID: 'EASTC',
  OrderDate: '1998-04-28T00:00:00.000Z',
  ShippedDate: '1998-05-01T00:00:00.000Z',
  Freight: 278.96,
  ShipName: 'Eastern Connection',
  ShipAddress: '35 King George',
  ShipCity: 'London',
  ShipRegion: null,
  ShipCountry: 'UK',
},

{
  OrderID: 11057,
  CustomerID: 'NORTS',
  OrderDate: '1998-04-29T00:00:00.000Z',
  ShippedDate: '1998-05-01T00:00:00.000Z',
  Freight: 4.13,
  ShipName: 'North/South',
  ShipAddress: 'South House 300 Queensbridge',
  ShipCity: 'London',
  ShipRegion: null,
  ShipCountry: 'UK',
},

{
  OrderID: 11058,
  CustomerID: 'BLAUS',
  OrderDate: '1998-04-29T00:00:00.000Z',
  ShippedDate: null,
  Freight: 31.14,
  ShipName: 'Blauer See Delikatessen',
  ShipAddress: 'Forsterstr. 57',
  ShipCity: 'Mannheim',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 11059,
  CustomerID: 'RICAR',
  OrderDate: '1998-04-29T00:00:00.000Z',
  ShippedDate: null,
  Freight: 85.8,
  ShipName: 'Ricardo Adocicados',
```

```
    ShipAddress: 'Av. Copacabana, 267',
    ShipCity: 'Rio de Janeiro',
    ShipRegion: 'RJ',
    ShipCountry: 'Brazil',
  },

  {
    OrderID: 11060,
    CustomerID: 'FRANS',
    OrderDate: '1998-04-30T00:00:00.000Z',
    ShippedDate: '1998-05-04T00:00:00.000Z',
    Freight: 10.98,
    ShipName: 'Franchi S.p.A.',
    ShipAddress: 'Via Monte Bianco 34',
    ShipCity: 'Torino',
    ShipRegion: null,
    ShipCountry: 'Italy',
  },

  {
    OrderID: 11061,
    CustomerID: 'GREAL',
    OrderDate: '1998-04-30T00:00:00.000Z',
    ShippedDate: null,
    Freight: 14.01,
    ShipName: 'Great Lakes Food Market',
    ShipAddress: '2732 Baker Blvd.',
    ShipCity: 'Eugene',
    ShipRegion: 'OR',
    ShipCountry: 'USA',
  },

  {
    OrderID: 11062,
    CustomerID: 'REGGC',
    OrderDate: '1998-04-30T00:00:00.000Z',
    ShippedDate: null,
    Freight: 29.93,
    ShipName: 'Reggiani Caseifici',
    ShipAddress: 'Strada Provinciale 124',
    ShipCity: 'Reggio Emilia',
    ShipRegion: null,
    ShipCountry: 'Italy',
  },

  {
    OrderID: 11063,
    CustomerID: 'HUNGO',
    OrderDate: '1998-04-30T00:00:00.000Z',
    ShippedDate: '1998-05-06T00:00:00.000Z',
    Freight: 81.73,
    ShipName: 'Hungry Owl All-Night Grocers',
    ShipAddress: '8 Johnstown Road',
    ShipCity: 'Cork',
    ShipRegion: 'Co. Cork',
    ShipCountry: 'Ireland',
  },
},
```

```
{
  OrderID: 11064,
  CustomerID: 'SAVEA',
  OrderDate: '1998-05-01T00:00:00.000Z',
  ShippedDate: '1998-05-04T00:00:00.000Z',
  Freight: 30.09,
  ShipName: 'Save-a-lot Markets',
  ShipAddress: '187 Suffolk Ln.',
  ShipCity: 'Boise',
  ShipRegion: 'ID',
  ShipCountry: 'USA',
},

{
  OrderID: 11065,
  CustomerID: 'LILAS',
  OrderDate: '1998-05-01T00:00:00.000Z',
  ShippedDate: null,
  Freight: 12.91,
  ShipName: 'LILA-Supermercado',
  ShipAddress: 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
  ShipCity: 'Barquisimeto',
  ShipRegion: 'Lara',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 11066,
  CustomerID: 'WHITC',
  OrderDate: '1998-05-01T00:00:00.000Z',
  ShippedDate: '1998-05-04T00:00:00.000Z',
  Freight: 44.72,
  ShipName: 'White Clover Markets',
  ShipAddress: '1029 - 12th Ave. S.',
  ShipCity: 'Seattle',
  ShipRegion: 'WA',
  ShipCountry: 'USA',
},

{
  OrderID: 11067,
  CustomerID: 'DRACD',
  OrderDate: '1998-05-04T00:00:00.000Z',
  ShippedDate: '1998-05-06T00:00:00.000Z',
  Freight: 7.98,
  ShipName: 'Drachenblut Delikatessen',
  ShipAddress: 'Walserweg 21',
  ShipCity: 'Aachen',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 11068,
  CustomerID: 'QUEEN',
  OrderDate: '1998-05-04T00:00:00.000Z',
```

```
ShippedDate: null,
Freight: 81.75,
ShipName: 'Queen Cozinha',
ShipAddress: 'Alameda dos Canários, 891',
ShipCity: 'Sao Paulo',
ShipRegion: 'SP',
ShipCountry: 'Brazil',
},

{
  OrderID: 11069,
  CustomerID: 'TORTU',
  OrderDate: '1998-05-04T00:00:00.000Z',
  ShippedDate: '1998-05-06T00:00:00.000Z',
  Freight: 15.67,
  ShipName: 'Tortuga Restaurante',
  ShipAddress: 'Avda. Azteca 123',
  ShipCity: 'México D.F.',
  ShipRegion: null,
  ShipCountry: 'Mexico',
},

{
  OrderID: 11070,
  CustomerID: 'LEHMS',
  OrderDate: '1998-05-05T00:00:00.000Z',
  ShippedDate: null,
  Freight: 136,
  ShipName: 'Lehmanns Marktstand',
  ShipAddress: 'Magazinweg 7',
  ShipCity: 'Frankfurt a.M.',
  ShipRegion: null,
  ShipCountry: 'Germany',
},

{
  OrderID: 11071,
  CustomerID: 'LILAS',
  OrderDate: '1998-05-05T00:00:00.000Z',
  ShippedDate: null,
  Freight: 0.93,
  ShipName: 'LILA-Supermercado',
  ShipAddress: 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
  ShipCity: 'Barquisimeto',
  ShipRegion: 'Lara',
  ShipCountry: 'Venezuela',
},

{
  OrderID: 11072,
  CustomerID: 'ERNSH',
  OrderDate: '1998-05-05T00:00:00.000Z',
  ShippedDate: null,
  Freight: 258.64,
  ShipName: 'Ernst Handel',
  ShipAddress: 'Kirchgasse 6',
  ShipCity: 'Graz',
```

```
    ShipRegion: null,
    ShipCountry: 'Austria',
  },

  {
    OrderID: 11073,
    CustomerID: 'PERIC',
    OrderDate: '1998-05-05T00:00:00.000Z',
    ShippedDate: null,
    Freight: 24.95,
    ShipName: 'Pericles Comidas clásicas',
    ShipAddress: 'Calle Dr. Jorge Cash 321',
    ShipCity: 'México D.F.',
    ShipRegion: null,
    ShipCountry: 'Mexico',
  },

  {
    OrderID: 11074,
    CustomerID: 'SIMOB',
    OrderDate: '1998-05-06T00:00:00.000Z',
    ShippedDate: null,
    Freight: 18.44,
    ShipName: 'Simons bistro',
    ShipAddress: 'Vinbæltet 34',
    ShipCity: 'Kobenhavn',
    ShipRegion: null,
    ShipCountry: 'Denmark',
  },

  {
    OrderID: 11075,
    CustomerID: 'RICSU',
    OrderDate: '1998-05-06T00:00:00.000Z',
    ShippedDate: null,
    Freight: 6.19,
    ShipName: 'Richter Supermarkt',
    ShipAddress: 'Starenweg 5',
    ShipCity: 'Genève',
    ShipRegion: null,
    ShipCountry: 'Switzerland',
  },

  {
    OrderID: 11076,
    CustomerID: 'BONAP',
    OrderDate: '1998-05-06T00:00:00.000Z',
    ShippedDate: null,
    Freight: 38.28,
    ShipName: 'Bon app',
    ShipAddress: '12, rue des Bouchers',
    ShipCity: 'Marseille',
    ShipRegion: null,
    ShipCountry: 'France',
  },

  {
```

```

    OrderID: 11077,
    CustomerID: 'RATTC',
    OrderDate: '1998-05-06T00:00:00.000Z',
    ShippedDate: null,
    Freight: 8.53,
    ShipName: 'Rattlesnake Canyon Grocery',
    ShipAddress: '2817 Milton Dr.',
    ShipCity: 'Albuquerque',
    ShipRegion: 'NM',
    ShipCountry: 'USA',
  },
]);

export const orderData: Object[] = JSON.parse(
  stringData,
  (field: any, value: any) => {
    let dupValue: any = value;
    if (
      typeof value === 'string' &&
      /^(\\d{4}\\-\\d\\d\\-\\d\\d([tT][\\d:\\.]*){1})([zZ]|([+\\-
    ])(\\d\\d):?(\\d\\d))?$/.test(
        value
      )
    ) {
      let arr: any = dupValue.split(/^[^0-9]/);
      let arg: any = parseInt(arr[4], 10);
      let arg1: any = parseInt(arr[5], 10);

      value = new Date(
        parseInt(arr[0], 10),
        parseInt(arr[1], 10) - 1,
        parseInt(arr[2], 10),
        parseInt(arr[3], 10),
        arg,
        arg1
      );
    }
    return value;
  }
);

export const customerData: Object[] = [
  {
    CustomerID: 'ALFKI',
    ContactName: 'Maria ',
    CompanyName: 'Alfreds Futterkiste',
    Address: 'Obere Str. 57',
    Country: 'Germany',
  },
  {
    CustomerID: 'ANATR',
    ContactName: 'Ana Trujillo',
    CompanyName: 'Ana Trujillo Emparedados y helados',
    Address: 'Avda. de la Constitución 2222',
    Country: 'Mexico',
  },
];

```



```
{
  CustomerID: 'ANTON',
  ContactName: 'Antonio Moreno',
  CompanyName: 'Antonio Moreno Taquería',
  Address: 'Mataderos 2312',
  Country: 'Mexico',
},

{
  CustomerID: 'AROUT',
  ContactName: 'Thomas Hardy',
  CompanyName: 'Around the Horn',
  Address: '120 Hanover Sq.',
  Country: 'UK',
},

{
  CustomerID: 'BERGS',
  ContactName: 'Christina Berglund',
  CompanyName: 'Berglunds snabbköp',
  Address: 'Berguvsvägen 8',
  Country: 'Sweden',
},

{
  CustomerID: 'BLAUS',
  ContactName: 'Hanna Moos',
  CompanyName: 'Blauer See Delikatessen',
  Address: 'Forsterstr. 57',
  Country: 'Germany',
},

{
  CustomerID: 'BLONP',
  ContactName: 'Frédérique Citeaux',
  CompanyName: 'Blondesddsl père et fils',
  Address: '24, place Kléber',
  Country: 'France',
},

{
  CustomerID: 'BOLID',
  ContactName: 'Martín Sommer',
  CompanyName: 'Bólido Comidas preparadas',
  Address: 'C/ Araquil, 67',
  Country: 'Spain',
},

{
  CustomerID: 'BONAP',
  ContactName: 'Laurence Lebihan',
  CompanyName: 'Bon app',
  Address: '12, rue des Bouchers',
  Country: 'France',
},

{
```

```
CustomerID: 'BOTTM',
ContactName: 'Elizabeth Lincoln',
CompanyName: 'Bottom-Dollar Markets',
Address: '23 Tsawassen Blvd.',
Country: 'Canada',
},

{
  CustomerID: 'BSBEV',
  ContactName: 'Victoria Ashworth',
  CompanyName: "B's Beverages",
  Address: 'Fauntleroy Circus',
  Country: 'UK',
},

{
  CustomerID: 'CACTU',
  ContactName: 'Patricio Simpson',
  CompanyName: 'Cactus Comidas para llevar',
  Address: 'Cerrito 333',
  Country: 'Argentina',
},

{
  CustomerID: 'CENTC',
  ContactName: 'Francisco Chang',
  CompanyName: 'Centro comercial Moctezuma',
  Address: 'Sierras de Granada 9993',
  Country: 'Mexico',
},

{
  CustomerID: 'CHOPS',
  ContactName: 'Yang Wang',
  CompanyName: 'Chop-suey Chinese',
  Address: 'Hauptstr. 29',
  Country: 'Switzerland',
},

{
  CustomerID: 'COMMI',
  ContactName: 'Pedro Afonso',
  CompanyName: 'Comércio Mineiro',
  Address: 'Av. dos Lusíadas, 23',
  Country: 'Brazil',
},

{
  CustomerID: 'CONSH',
  ContactName: 'Elizabeth Brown',
  CompanyName: 'Consolidated Holdings',
  Address: 'Berkeley Gardens 12 Brewery',
  Country: 'UK',
},

{
  CustomerID: 'DRACD',
```

```
    ContactName: 'Sven Ottlieb',
    CompanyName: 'Drachenblut Delikatessen',
    Address: 'Walserweg 21',
    Country: 'Germany',
  },

  {
    CustomerID: 'DUMON',
    ContactName: 'Janine Labrune',
    CompanyName: 'Du monde entier',
    Address: '67, rue des Cinquante Otages',
    Country: 'France',
  },

  {
    CustomerID: 'EASTC',
    ContactName: 'Ann Devon',
    CompanyName: 'Eastern Connection',
    Address: '35 King George',
    Country: 'UK',
  },

  {
    CustomerID: 'ERNSH',
    ContactName: 'Roland Mendel',
    CompanyName: 'Ernst Handel',
    Address: 'Kirchgasse 6',
    Country: 'Austria',
  },

  {
    CustomerID: 'FAMIA',
    ContactName: 'Aria Cruz',
    CompanyName: 'Familia Arquibaldo',
    Address: 'Rua Orós, 92',
    Country: 'Brazil',
  },

  {
    CustomerID: 'FISSA',
    ContactName: 'Diego Roel',
    CompanyName: 'FISSA Fabrica Inter. Salchichas S.A.',
    Address: 'C/ Moralzarzal, 86',
    Country: 'Spain',
  },

  {
    CustomerID: 'FOLIG',
    ContactName: 'Martine Rancé',
    CompanyName: 'Folies gourmandes',
    Address: '184, chaussée de Tournai',
    Country: 'France',
  },

  {
    CustomerID: 'FOLKO',
    ContactName: 'Maria Larsson',
```

```
    CompanyName: 'Folk och fä HB',
    Address: 'Åkergatan 24',
    Country: 'Sweden',
  },

  {
    CustomerID: 'FRANK',
    ContactName: 'Peter Franken',
    CompanyName: 'Frankenversand',
    Address: 'Berliner Platz 43',
    Country: 'Germany',
  },

  {
    CustomerID: 'FRANR',
    ContactName: 'Carine Schmitt',
    CompanyName: 'France restauration',
    Address: '54, rue Royale',
    Country: 'France',
  },

  {
    CustomerID: 'FRANS',
    ContactName: 'Paolo Accorti',
    CompanyName: 'Franchi S.p.A.',
    Address: 'Via Monte Bianco 34',
    Country: 'Italy',
  },

  {
    CustomerID: 'FURIB',
    ContactName: 'Lino Rodriguez',
    CompanyName: 'Furia Bacalhau e Frutos do Mar',
    Address: 'Jardim das rosas n. 32',
    Country: 'Portugal',
  },

  {
    CustomerID: 'GALED',
    ContactName: 'Eduardo Saavedra',
    CompanyName: 'Galería del gastrónomo',
    Address: 'Rambla de Cataluña, 23',
    Country: 'Spain',
  },

  {
    CustomerID: 'GODOS',
    ContactName: 'José Pedro Freyre',
    CompanyName: 'Godos Cocina Típica',
    Address: 'C/ Romero, 33',
    Country: 'Spain',
  },

  {
    CustomerID: 'GOURL',
    ContactName: 'André Fonseca',
    CompanyName: 'Gourmet Lanchonetes',
```

```
Address: 'Av. Brasil, 442',
Country: 'Brazil',
},

{
  CustomerID: 'GREAL',
  ContactName: 'Howard Snyder',
  CompanyName: 'Great Lakes Food Market',
  Address: '2732 Baker Blvd.',
  Country: 'USA',
},

{
  CustomerID: 'GROSR',
  ContactName: 'Manuel Pereira',
  CompanyName: 'GROSELLA-Restaurante',
  Address: '5ª Ave. Los Palos Grandes',
  Country: 'Venezuela',
},

{
  CustomerID: 'HANAR',
  ContactName: 'Mario Pontes',
  CompanyName: 'Hanari Carnes',
  Address: 'Rua do Paço, 67',
  Country: 'Brazil',
},

{
  CustomerID: 'HILAA',
  ContactName: 'Carlos Hernández',
  CompanyName: 'HILARION-Abastos',
  Address: 'Carrera 22 con Ave. Carlos Soublette #8-35',
  Country: 'Venezuela',
},

{
  CustomerID: 'HUNGC',
  ContactName: 'Yoshi Latimer',
  CompanyName: 'Hungry Coyote Import Store',
  Address: 'City Center Plaza 516 Main St.',
  Country: 'USA',
},

{
  CustomerID: 'HUNGO',
  ContactName: 'Patricia McKenna',
  CompanyName: 'Hungry Owl All-Night Grocers',
  Address: '8 Johnstown Road',
  Country: 'Ireland',
},

{
  CustomerID: 'ISLAT',
  ContactName: 'Helen Bennett',
  CompanyName: 'Island Trading',
  Address: 'Garden House Crowther Way',
```

```
Country: 'UK',
},

{
  CustomerID: 'KOENE',
  ContactName: 'Philip Cramer',
  CompanyName: 'Königlich Essen',
  Address: 'Maubelstr. 90',
  Country: 'Germany',
},

{
  CustomerID: 'LACOR',
  ContactName: 'Daniel Tonini',
  CompanyName: 'La corne d'abondance',
  Address: '67, avenue de l'Europe',
  Country: 'France',
},

{
  CustomerID: 'LAMAI',
  ContactName: 'Annette Roulet',
  CompanyName: 'La maison d'Asie',
  Address: '1 rue Alsace-Lorraine',
  Country: 'France',
},

{
  CustomerID: 'LAUGB',
  ContactName: 'Yoshi Tannamuri',
  CompanyName: 'Laughing Bacchus Wine Cellars',
  Address: '1900 Oak St.',
  Country: 'Canada',
},

{
  CustomerID: 'LAZYK',
  ContactName: 'John Steel',
  CompanyName: 'Lazy K Kountry Store',
  Address: '12 Orchestra Terrace',
  Country: 'USA',
},

{
  CustomerID: 'LEHMS',
  ContactName: 'Renate Messner',
  CompanyName: 'Lehmanns Marktstand',
  Address: 'Magazinweg 7',
  Country: 'Germany',
},

{
  CustomerID: 'LETSS',
  ContactName: 'Jaime Yorres',
  CompanyName: 'Let's Stop N Shop',
  Address: '87 Polk St. Suite 5',
  Country: 'USA',
}
```

```
    },  
  
    {  
      CustomerID: 'LILAS',  
      ContactName: 'Carlos González',  
      CompanyName: 'LILA-Supermercado',  
      Address: 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',  
      Country: 'Venezuela',  
    },  
  
    {  
      CustomerID: 'LINOD',  
      ContactName: 'Felipe Izquierdo',  
      CompanyName: 'LINO-Delicateses',  
      Address: 'Ave. 5 de Mayo Porlamar',  
      Country: 'Venezuela',  
    },  
  
    {  
      CustomerID: 'LONEP',  
      ContactName: 'Fran Wilson',  
      CompanyName: 'Lonesome Pine Restaurant',  
      Address: '89 Chiaroscuro Rd.',  
      Country: 'USA',  
    },  
  
    {  
      CustomerID: 'MAGAA',  
      ContactName: 'Giovanni Rovelli',  
      CompanyName: 'Magazzini Alimentari Riuniti',  
      Address: 'Via Ludovico il Moro 22',  
      Country: 'Italy',  
    },  
  
    {  
      CustomerID: 'MAISD',  
      ContactName: 'Catherine Dewey',  
      CompanyName: 'Maison Dewey',  
      Address: 'Rue Joseph-Bens 532',  
      Country: 'Belgium',  
    },  
  
    {  
      CustomerID: 'MEREP',  
      ContactName: 'Jean Fresnière',  
      CompanyName: 'Mère Paillarde',  
      Address: '43 rue St. Laurent',  
      Country: 'Canada',  
    },  
  
    {  
      CustomerID: 'MORGK',  
      ContactName: 'Alexander Feuer',  
      CompanyName: 'Morgenstern Gesundkost',  
      Address: 'Heerstr. 22',  
      Country: 'Germany',  
    },  
  ],
```

```
{
  CustomerID: 'NORTS',
  ContactName: 'Simon Crowther',
  CompanyName: 'North/South',
  Address: 'South House 300 Queensbridge',
  Country: 'UK',
},

{
  CustomerID: 'OCEAN',
  ContactName: 'Yvonne Moncada',
  CompanyName: 'Océano Atlántico Ltda.',
  Address: 'Ing. Gustavo Moncada 8585 Piso 20-A',
  Country: 'Argentina',
},

{
  CustomerID: 'OLDWO',
  ContactName: 'Rene Phillips',
  CompanyName: 'Old World Delicatessen',
  Address: '2743 Bering St.',
  Country: 'USA',
},

{
  CustomerID: 'OTTIK',
  ContactName: 'Henriette Pfalzheim',
  CompanyName: 'Ottilies Käseladen',
  Address: 'Mehrheimerstr. 369',
  Country: 'Germany',
},

{
  CustomerID: 'PARIS',
  ContactName: 'Marie Bertrand',
  CompanyName: 'Paris spécialités',
  Address: '265, boulevard Charonne',
  Country: 'France',
},

{
  CustomerID: 'PERIC',
  ContactName: 'Guillermo Fernández',
  CompanyName: 'Pericles Comidas clásicas',
  Address: 'Calle Dr. Jorge Cash 321',
  Country: 'Mexico',
},

{
  CustomerID: 'PICCO',
  ContactName: 'Georg Pipps',
  CompanyName: 'Piccolo und mehr',
  Address: 'Geislweg 14',
  Country: 'Austria',
},
```



```
{
  CustomerID: 'PRINI',
  ContactName: 'Isabel de Castro',
  CompanyName: 'Princesa Isabel Vinhos',
  Address: 'Estrada da saúde n. 58',
  Country: 'Portugal',
},

{
  CustomerID: 'QUEDE',
  ContactName: 'Bernardo Batista',
  CompanyName: 'Que Delícia',
  Address: 'Rua da Panificadora, 12',
  Country: 'Brazil',
},

{
  CustomerID: 'QUEEN',
  ContactName: 'Lúcia Carvalho',
  CompanyName: 'Queen Cozinha',
  Address: 'Alameda dos Canários, 891',
  Country: 'Brazil',
},

{
  CustomerID: 'QUICK',
  ContactName: 'Horst Kloss',
  CompanyName: 'QUICK-Stop',
  Address: 'Taucherstraße 10',
  Country: 'Germany',
},

{
  CustomerID: 'RANCH',
  ContactName: 'Sergio Gutiérrez',
  CompanyName: 'Rancho grande',
  Address: 'Av. del Libertador 900',
  Country: 'Argentina',
},

{
  CustomerID: 'RATTC',
  ContactName: 'Paula Wilson',
  CompanyName: 'Rattlesnake Canyon Grocery',
  Address: '2817 Milton Dr.',
  Country: 'USA',
},

{
  CustomerID: 'REGGC',
  ContactName: 'Maurizio Moroni',
  CompanyName: 'Reggiani Caseifici',
  Address: 'Strada Provinciale 124',
  Country: 'Italy',
},

{
```

```
CustomerID: 'RICAR',
ContactName: 'Janete Limeira',
CompanyName: 'Ricardo Adocicados',
Address: 'Av. Copacabana, 267',
Country: 'Brazil',
},

{
  CustomerID: 'RICSU',
  ContactName: 'Michael Holz',
  CompanyName: 'Richter Supermarkt',
  Address: 'Grenzacherweg 237',
  Country: 'Switzerland',
},

{
  CustomerID: 'ROMEY',
  ContactName: 'Alejandra Camino',
  CompanyName: 'Romero y tomillo',
  Address: 'Gran Vía, 1',
  Country: 'Spain',
},

{
  CustomerID: 'SANTG',
  ContactName: 'Jonas Bergulfsen',
  CompanyName: 'Santé Gourmet',
  Address: 'Erling Skakkes gate 78',
  Country: 'Norway',
},

{
  CustomerID: 'SAVEA',
  ContactName: 'Jose Pavarotti',
  CompanyName: 'Save-a-lot Markets',
  Address: '187 Suffolk Ln.',
  Country: 'USA',
},

{
  CustomerID: 'SEVES',
  ContactName: 'Hari Kumar',
  CompanyName: 'Seven Seas Imports',
  Address: '90 Wadhurst Rd.',
  Country: 'UK',
},

{
  CustomerID: 'SIMOB',
  ContactName: 'Jytte Petersen',
  CompanyName: 'Simons bistro',
  Address: 'Vinbæltet 34',
  Country: 'Denmark',
},

{
  CustomerID: 'SPECB',
```

```
    ContactName: 'Dominique Perrier',
    CompanyName: 'Spécialités du monde',
    Address: '25, rue Lauriston',
    Country: 'France',
  },

  {
    CustomerID: 'SPLIR',
    ContactName: 'Art Braunschweiger',
    CompanyName: 'Split Rail Beer & Ale',
    Address: 'P.O. Box 555',
    Country: 'USA',
  },

  {
    CustomerID: 'SUPRD',
    ContactName: 'Pascale Cartrain',
    CompanyName: 'Suprêmes délices',
    Address: 'Boulevard Tirou, 255',
    Country: 'Belgium',
  },

  {
    CustomerID: 'THEBI',
    ContactName: 'Liz Nixon',
    CompanyName: 'The Big Cheese',
    Address: '89 Jefferson Way Suite 2',
    Country: 'USA',
  },

  {
    CustomerID: 'THECR',
    ContactName: 'Liu Wong',
    CompanyName: 'The Cracker Box',
    Address: '55 Grizzly Peak Rd.',
    Country: 'USA',
  },

  {
    CustomerID: 'TOMSP',
    ContactName: 'Karin Josephs',
    CompanyName: 'Toms Spezialitäten',
    Address: 'Luisenstr. 48',
    Country: 'Germany',
  },

  {
    CustomerID: 'TORTU',
    ContactName: 'Miguel Angel Paolino',
    CompanyName: 'Tortuga Restaurante',
    Address: 'Avda. Azteca 123',
    Country: 'Mexico',
  },

  {
    CustomerID: 'TRADH',
    ContactName: 'Anabela Domingues',
```

```
    CompanyName: 'Tradição Hipermercados',
    Address: 'Av. Inês de Castro, 414',
    Country: 'Brazil',
  },

  {
    CustomerID: 'TRAIH',
    ContactName: 'Helvetius Nagy',
    CompanyName: "Trail's Head Gourmet Provisioners",
    Address: '722 DaVinci Blvd.',
    Country: 'USA',
  },

  {
    CustomerID: 'VAFFE',
    ContactName: 'Palle Ibsen',
    CompanyName: 'Vaffeljernet',
    Address: 'Smagsloget 45',
    Country: 'Denmark',
  },

  {
    CustomerID: 'VICTE',
    ContactName: 'Mary Saveley',
    CompanyName: 'Victuailles en stock',
    Address: '2, rue du Commerce',
    Country: 'France',
  },

  {
    CustomerID: 'VINET',
    ContactName: 'Paul Henriot',
    CompanyName: 'Vins et alcools Chevalier',
    Address: "59 rue de l'Abbaye",
    Country: 'France',
  },

  {
    CustomerID: 'WANDK',
    ContactName: 'Rita Müller',
    CompanyName: 'Die Wandernde Kuh',
    Address: 'Adenauerallee 900',
    Country: 'Germany',
  },

  {
    CustomerID: 'WARTH',
    ContactName: 'Pirkko Koskitalo',
    CompanyName: 'Wartian Herkku',
    Address: 'Torikatu 38',
    Country: 'Finland',
  },

  {
    CustomerID: 'WELLI',
    ContactName: 'Paula Parente',
    CompanyName: 'Wellington Importadora',
```

```

    Address: 'Rua do Mercado, 12',
    Country: 'Brazil',
  },

  {
    CustomerID: 'WHITC',
    ContactName: 'Karl Jablonski',
    CompanyName: 'White Clover Markets',
    Address: '305 - 14th Ave. S. Suite 3B',
    Country: 'USA',
  },

  {
    CustomerID: 'WILMK',
    ContactName: 'Matti Karttunen',
    CompanyName: 'Wilman Kala',
    Address: 'Keskuskatu 45',
    Country: 'Finland',
  },

  {
    CustomerID: 'WOLZA',
    ContactName: 'Zbyszek Piestrzeniewicz',
    CompanyName: 'Wolski Zajazd',
    Address: 'ul. Filtrowa 68',
    Country: 'Poland',
  },
];

type cType = { CustomerID: string; ContactName: string; CustomerName:
string };
export const data = orderData.map((item: any) => {
  let name:any = (customerData).filter((cItem:any) => {
    return cItem.CustomerID === item.CustomerID;
  })[0];
  item.CustomerName = (name || {}).ContactName;
  return item;
});

```

Print large number of columns

When printing a grid with a large number of columns, the browser's default page size (usually A4) might not be sufficient to display all the columns properly. As a result, the browser's print preview may automatically hide the overflowed content, leading to a cut-off appearance.

To show a large number of columns when printing, you can adjust the scale option from the print option panel based on your content size. This will allow you to fit the entire grid content within the printable area.



Show or hide columns while printing

In the Syncfusion React Grid, you have the flexibility to control the visibility of columns during the printing process. You can dynamically show or hide specific columns using the [toolbarClick](#) and [printComplete](#) events while printing. This capability enhances your control over which columns are included in the printed output, allowing you to tailor the printed grid to your specific needs.

In the [toolbarClick](#) event, you can show or hide columns by setting [visible](#) property to **true** or **false** respectively.

In the [printComplete](#) event, the column visibility state is reset back to its original configuration.

Here's a code example that demonstrates how to show a hidden column (CustomerID) and hide a visible column (ShipCity) during printing and then reset their visibility after printing:

APP.JSX

```
import { Column, ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Inject, Page, PageSettingsModel, Toolbar, ToolbarItems,
 PrintEventArgs } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const toolbar = ['Print'];
  let grid;
  const pageOptions = { pageSize: 6 };
  const toolbarClick = (args) => {
    if (args.item.text === 'Print') {
      for (const column of (grid.columns)) {
        if (column.field === "CustomerID") {
          column.visible = true;
        }
        else if (column.field === "ShipCity") {
          column.visible = false;
        }
      }
    }
  }
  const printComplete = () => {
    for (const column of (grid.columns)) {
```

```

        if (column.field === "CustomerID") {
            column.visible = false;
        }
        else if (column.field === "ShipCity") {
            column.visible = true;
        }
    }
}

return (<GridComponent ref={g => grid = g} dataSource={data}
toolbar={toolbar}
allowPaging={true} pageSettings={pageOptions}
toolbarClick={toolbarClick}
printComplete={printComplete}>
    <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
visible={false} width='150' />
        <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
        <ColumnDirective field='ShipName' headerText='Ship Name'
width='150' />
    </ColumnsDirective>
    <Inject services={[Toolbar, Page]} />
</GridComponent >
);
export default App;

```

APP.TSX

```

import { Column, ColumnDirective, ColumnsDirective, GridComponent } from
'@syncfusion/ej2-react-grids';
import { Inject, Page, PageSettingsModel, Toolbar, ToolbarItems,
PrintEventArgs } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    const toolbar: ToolbarItems[] = ['Print'];
    let grid: GridComponent | null;
    const pageOptions: PageSettingsModel = { pageSize: 6 };
    const toolbarClick = (args: PrintEventArgs) => {
        if (args.item.text === 'Print') {
            for (const column of ((grid as GridComponent).columns)) {
                if ((column as Column).field === "CustomerID") {
                    (column as Column).visible = true;
                }
                else if ((column as Column).field === "ShipCity") {
                    (column as Column).visible = false;
                }
            }
        }
    }
    const printComplete = () => {
        for (const column of ((grid as GridComponent).columns)) {
            if ((column as Column).field === "CustomerID") {
                (column as Column).visible = false;
            }
        }
    }
}

```

```

    }
    else if ((column as Column).field === "ShipCity") {
      (column as Column).visible = true;
    }
  }
}
return (<GridComponent ref={g => grid = g} dataSource={data}
toolbar={toolbar}
allowPaging={true} pageSettings={pageOptions} toolbarClick={toolbarClick}
printComplete={printComplete}>
  <ColumnsDirective>
    <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
    <ColumnDirective field='CustomerID' headerText='Customer ID'
visible={false} width='150' />
    <ColumnDirective field='ShipCity' headerText='Ship City' width='150' />
    <ColumnDirective field='ShipName' headerText='Ship Name' width='150' />
  </ColumnsDirective>
  <Inject services={[Toolbar, Page]} />
</GridComponent >
);
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',

```



```
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
    Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
    Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
    Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
    'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
    'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
    Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
    6',
```

```

        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]
  ];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },

```

```

    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {

```

```

    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

Limitations of printing large data

Printing a large volume of data all at once in the grid can have certain limitations due to potential browser performance issues. Rendering numerous DOM elements on a single page can lead to browser slowdowns or even hang the browser. The grid offers a solution to manage extensive datasets through virtualization. However, it's important to note that virtualization for both rows and columns is not feasible during the printing process.

If printing all the data remains a requirement, an alternative approach is recommended. Exporting the grid data to formats like [Excel](#) or [CSV](#) or [Pdf](#) is advised. This exported data can then be printed using non-web-based applications, mitigating the potential performance challenges associated with printing large datasets directly from the browser.

Retain grid styles while printing

The Syncfusion React Grid provides a [beforePrint](#) event that allows you to customize the appearance and styles of the grid before it is sent to the printer. By handling this event, you can ensure that the grid retains its styles and appearance while printing.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Inject, Page, PageSettingsModel, Toolbar, ToolbarItems } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const toolbar = ['Print'];
  const pageOptions = { pageSize: 6 };
  const beforePrint = () => {
    const styleElement = document.createElement('style');
    styleElement.innerHTML = `
      .e-grid .e-headercell {
        background: #24a0ed !important;
      }
      .e-grid .e-row .e-rowcell {
        background: #cbefff !important;
      }
      .e-grid .e-altrow .e-rowcell{
        background: #e7d7f7 !important;
      }
    `;
    document.querySelector('head').appendChild(styleElement);
  }
  return (<GridComponent dataSource={data} toolbar={toolbar}
    allowPaging={true} pageSettings={pageOptions}
    beforePrint={beforePrint}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
visible={false} width='150' />
      <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
      <ColumnDirective field='ShipName' headerText='Ship Name'
width='150' />
    </ColumnsDirective>
    <Inject services={[Toolbar, Page]} />
  </GridComponent >
  );
}
export default App;
```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Inject, Page, PageSettingsModel, Toolbar, ToolbarItems } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  const toolbar: ToolbarItems[] = ['Print'];
  const pageOptions: PageSettingsModel = { pageSize: 6 };
  const beforePrint = () => {
    const styleElement: HTMLElement = document.createElement('style');
    styleElement.innerHTML = `
      .e-grid .e-headercell {
        background: #24a0ed !important;
      }
      .e-grid .e-row .e-rowcell {
        background: #cbecff !important;
      }
      .e-grid .e-altrow .e-rowcell{
        background: #e7d7f7 !important;
      }
    `;
    (document.querySelector('head') as
    HTMLElement).appendChild(styleElement);
  }
  return (<GridComponent dataSource={data} toolbar={toolbar}
    allowPaging={true} pageSettings={pageOptions}
    beforePrint={beforePrint}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
visible={false} width='150' />
      <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
      <ColumnDirective field='ShipName' headerText='Ship Name'
width='150' />
    </ColumnsDirective>
    <Inject services={[Toolbar, Page]} />
  </GridComponent >)
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {

```

```

    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {

```

```

    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
];
export const customerData = [

```



```
    "CustomerID": "BONAP",
    "ContactName": "Laurence Lebihan",
    "CompanyName": "Bon app'",
    "Address": "12, rue des Bouchers",
    "Country": "France"
  },
  {
    "CustomerID": "BOTTM",
    "ContactName": "Elizabeth Lincoln",
    "CompanyName": "Bottom-Dollar Markets",
    "Address": "23 Tsawassen Blvd.",
    "Country": "Canada"
  },
  {
    "CustomerID": "BSBEV",
    "ContactName": "Victoria Ashworth",
    "CompanyName": "B's Beverages",
    "Address": "Fauntleroy Circus",
    "Country": "UK"
  },
  {
    "CustomerID": "CACTU",
    "ContactName": "Patricio Simpson",
    "CompanyName": "Cactus Comidas para llevar",
    "Address": "Cerrito 333",
    "Country": "Argentina"
  },
  {
    "CustomerID": "CENTC",
    "ContactName": "Francisco Chang",
    "CompanyName": "Centro comercial Moctezuma",
    "Address": "Sierras de Granada 9993",
    "Country": "Mexico"
  },
  {
    "CustomerID": "CHOPS",
    "ContactName": "Yang Wang",
    "CompanyName": "Chop-suey Chinese",
    "Address": "Hauptstr. 29",
    "Country": "Switzerland"
  },
  {
    "CustomerID": "COMMI",
    "ContactName": "Pedro Afonso",
    "CompanyName": "Comércio Mineiro",
    "Address": "Av. dos Lusíadas, 23",
    "Country": "Brazil"
  },
  {
    "CustomerID": "CONSH",
    "ContactName": "Elizabeth Brown",
    "CompanyName": "Consolidated Holdings",
    "Address": "Berkeley Gardens 12 Brewery",
    "Country": "UK"
  },
  {
    "CustomerID": "DRACD",
```

```
    "ContactName": "Sven Ottlieb",
    "CompanyName": "Drachenblut Delikatessen",
    "Address": "Walserweg 21",
    "Country": "Germany"
  },
  {
    "CustomerID": "DUMON",
    "ContactName": "Janine Labrune",
    "CompanyName": "Du monde entier",
    "Address": "67, rue des Cinquante Otages",
    "Country": "France"
  },
  {
    "CustomerID": "EASTC",
    "ContactName": "Ann Devon",
    "CompanyName": "Eastern Connection",
    "Address": "35 King George",
    "Country": "UK"
  },
  {
    "CustomerID": "ERNSH",
    "ContactName": "Roland Mendel",
    "CompanyName": "Ernst Handel",
    "Address": "Kirchgasse 6",
    "Country": "Austria"
  },
  {
    "CustomerID": "FAMIA",
    "ContactName": "Aria Cruz",
    "CompanyName": "Familia Arquibaldo",
    "Address": "Rua Orós, 92",
    "Country": "Brazil"
  },
  {
    "CustomerID": "FISSA",
    "ContactName": "Diego Roel",
    "CompanyName": "FISSA Fabrica Inter. Salchichas S.A.",
    "Address": "C/ Moralzarzal, 86",
    "Country": "Spain"
  },
  {
    "CustomerID": "FOLIG",
    "ContactName": "Martine Rancé",
    "CompanyName": "Folies gourmandes",
    "Address": "184, chaussée de Tournai",
    "Country": "France"
  },
  {
    "CustomerID": "FOLKO",
    "ContactName": "Maria Larsson",
    "CompanyName": "Folk och fä HB",
    "Address": "Åkergatan 24",
    "Country": "Sweden"
  },
  {
    "CustomerID": "FRANK",
    "ContactName": "Peter Franken",
```

```
"CompanyName": "Frankenversand",
"Address": "Berliner Platz 43",
"Country": "Germany"
},
{
  "CustomerID": "FRANR",
  "ContactName": "Carine Schmitt",
  "CompanyName": "France restauration",
  "Address": "54, rue Royale",
  "Country": "France"
},
{
  "CustomerID": "FRANS",
  "ContactName": "Paolo Accorti",
  "CompanyName": "Franchi S.p.A.",
  "Address": "Via Monte Bianco 34",
  "Country": "Italy"
},
{
  "CustomerID": "FURIB",
  "ContactName": "Lino Rodriguez",
  "CompanyName": "Furia Bacalhau e Frutos do Mar",
  "Address": "Jardim das rosas n. 32",
  "Country": "Portugal"
},
{
  "CustomerID": "GALED",
  "ContactName": "Eduardo Saavedra",
  "CompanyName": "Galería del gastrónomo",
  "Address": "Rambla de Cataluña, 23",
  "Country": "Spain"
},
{
  "CustomerID": "GODOS",
  "ContactName": "José Pedro Freyre",
  "CompanyName": "Godos Cocina Típica",
  "Address": "C/ Romero, 33",
  "Country": "Spain"
},
{
  "CustomerID": "GOURL",
  "ContactName": "André Fonseca",
  "CompanyName": "Gourmet Lanchonetes",
  "Address": "Av. Brasil, 442",
  "Country": "Brazil"
},
{
  "CustomerID": "GREAL",
  "ContactName": "Howard Snyder",
  "CompanyName": "Great Lakes Food Market",
  "Address": "2732 Baker Blvd.",
  "Country": "USA"
},
{
  "CustomerID": "GROSR",
  "ContactName": "Manuel Pereira",
  "CompanyName": "GROSELLA-Restaurante",
```

```
    "Address": "5ª Ave. Los Palos Grandes",
    "Country": "Venezuela"
  },
  {
    "CustomerID": "HANAR",
    "ContactName": "Mario Pontes",
    "CompanyName": "Hanari Carnes",
    "Address": "Rua do Paço, 67",
    "Country": "Brazil"
  },
  {
    "CustomerID": "HILAA",
    "ContactName": "Carlos Hernández",
    "CompanyName": "HILARION-Abastos",
    "Address": "Carrera 22 con Ave. Carlos Soublette #8-35",
    "Country": "Venezuela"
  },
  {
    "CustomerID": "HUNGC",
    "ContactName": "Yoshi Latimer",
    "CompanyName": "Hungry Coyote Import Store",
    "Address": "City Center Plaza 516 Main St.",
    "Country": "USA"
  },
  {
    "CustomerID": "HUNGO",
    "ContactName": "Patricia McKenna",
    "CompanyName": "Hungry Owl All-Night Grocers",
    "Address": "8 Johnstown Road",
    "Country": "Ireland"
  },
  {
    "CustomerID": "ISLAT",
    "ContactName": "Helen Bennett",
    "CompanyName": "Island Trading",
    "Address": "Garden House Crowther Way",
    "Country": "UK"
  },
  {
    "CustomerID": "KOENE",
    "ContactName": "Philip Cramer",
    "CompanyName": "Königlich Essen",
    "Address": "Maubelstr. 90",
    "Country": "Germany"
  },
  {
    "CustomerID": "LACOR",
    "ContactName": "Daniel Tonini",
    "CompanyName": "La corne d'abondance",
    "Address": "67, avenue de l'Europe",
    "Country": "France"
  },
  {
    "CustomerID": "LAMAI",
    "ContactName": "Annette Roulet",
    "CompanyName": "La maison d'Asie",
    "Address": "1 rue Alsace-Lorraine",
```

```
    "Country": "France"
  },
  {
    "CustomerID": "LAUGB",
    "ContactName": "Yoshi Tannamuri",
    "CompanyName": "Laughing Bacchus Wine Cellars",
    "Address": "1900 Oak St.",
    "Country": "Canada"
  },
  {
    "CustomerID": "LAZYK",
    "ContactName": "John Steel",
    "CompanyName": "Lazy K Kountry Store",
    "Address": "12 Orchestra Terrace",
    "Country": "USA"
  },
  {
    "CustomerID": "LEHMS",
    "ContactName": "Renate Messner",
    "CompanyName": "Lehmanns Marktstand",
    "Address": "Magazinweg 7",
    "Country": "Germany"
  },
  {
    "CustomerID": "LETSS",
    "ContactName": "Jaime Yorres",
    "CompanyName": "Let's Stop N Shop",
    "Address": "87 Polk St. Suite 5",
    "Country": "USA"
  },
  {
    "CustomerID": "LILAS",
    "ContactName": "Carlos González",
    "CompanyName": "LILA-Supermercado",
    "Address": "Carrera 52 con Ave. Bolívar #65-98 Llano Largo",
    "Country": "Venezuela"
  },
  {
    "CustomerID": "LINOD",
    "ContactName": "Felipe Izquierdo",
    "CompanyName": "LINO-Delicateses",
    "Address": "Ave. 5 de Mayo Porlamar",
    "Country": "Venezuela"
  },
  {
    "CustomerID": "LONEP",
    "ContactName": "Fran Wilson",
    "CompanyName": "Lonesome Pine Restaurant",
    "Address": "89 Chiaroscuro Rd.",
    "Country": "USA"
  },
  {
    "CustomerID": "MAGAA",
    "ContactName": "Giovanni Rovelli",
    "CompanyName": "Magazzini Alimentari Riuniti",
    "Address": "Via Ludovico il Moro 22",
    "Country": "Italy"
  }
```

```
    },
    {
      "CustomerID": "MAISD",
      "ContactName": "Catherine Dewey",
      "CompanyName": "Maison Dewey",
      "Address": "Rue Joseph-Bens 532",
      "Country": "Belgium"
    },
    {
      "CustomerID": "MEREP",
      "ContactName": "Jean Fresnière",
      "CompanyName": "Mère Paillarde",
      "Address": "43 rue St. Laurent",
      "Country": "Canada"
    },
    {
      "CustomerID": "MORGK",
      "ContactName": "Alexander Feuer",
      "CompanyName": "Morgenstern Gesundkost",
      "Address": "Heerstr. 22",
      "Country": "Germany"
    },
    {
      "CustomerID": "NORTS",
      "ContactName": "Simon Crowther",
      "CompanyName": "North/South",
      "Address": "South House 300 Queensbridge",
      "Country": "UK"
    },
    {
      "CustomerID": "OCEAN",
      "ContactName": "Yvonne Moncada",
      "CompanyName": "Océano Atlántico Ltda.",
      "Address": "Ing. Gustavo Moncada 8585 Piso 20-A",
      "Country": "Argentina"
    },
    {
      "CustomerID": "OLDWO",
      "ContactName": "Rene Phillips",
      "CompanyName": "Old World Delicatessen",
      "Address": "2743 Bering St.",
      "Country": "USA"
    },
    {
      "CustomerID": "OTTIK",
      "ContactName": "Henriette Pfalzheim",
      "CompanyName": "Ottilies Käseladen",
      "Address": "Mehrheimerstr. 369",
      "Country": "Germany"
    },
    {
      "CustomerID": "PARIS",
      "ContactName": "Marie Bertrand",
      "CompanyName": "Paris spécialités",
      "Address": "265, boulevard Charonne",
      "Country": "France"
    }
  ],
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    "CustomerID": "REGGC",
    "ContactName": "Maurizio Moroni",
    "CompanyName": "Reggiani Caseifici",
    "Address": "Strada Provinciale 124",
    "Country": "Italy"
  },
  {
    "CustomerID": "RICAR",
    "ContactName": "Janete Limeira",
    "CompanyName": "Ricardo Adocicados",
    "Address": "Av. Copacabana, 267",
    "Country": "Brazil"
  },
  {
    "CustomerID": "RICSU",
    "ContactName": "Michael Holz",
    "CompanyName": "Richter Supermarkt",
    "Address": "Grenzacherweg 237",
    "Country": "Switzerland"
  },
  {
    "CustomerID": "ROMEY",
    "ContactName": "Alejandra Camino",
    "CompanyName": "Romero y tomillo",
    "Address": "Gran Vía, 1",
    "Country": "Spain"
  },
  {
    "CustomerID": "SANTG",
    "ContactName": "Jonas Bergulfsen",
    "CompanyName": "Santé Gourmet",
    "Address": "Erling Skakkes gate 78",
    "Country": "Norway"
  },
  {
    "CustomerID": "SAVEA",
    "ContactName": "Jose Pavarotti",
    "CompanyName": "Save-a-lot Markets",
    "Address": "187 Suffolk Ln.",
    "Country": "USA"
  },
  {
    "CustomerID": "SEVES",
    "ContactName": "Hari Kumar",
    "CompanyName": "Seven Seas Imports",
    "Address": "90 Wadhurst Rd.",
    "Country": "UK"
  },
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    "CustomerID": "SIMOB",
    "ContactName": "Jytte Petersen",
    "CompanyName": "Simons bistro",
    "Address": "Vinbæltet 34",
    "Country": "Denmark"
  },
  {
    "CustomerID": "SPECDD",

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    "ContactName": "Dominique Perrier",
    "CompanyName": "Spécialités du monde",
    "Address": "25, rue Lauriston",
    "Country": "France"
  },
  {
    "CustomerID": "SPLIR",
    "ContactName": "Art Braunschweiger",
    "CompanyName": "Split Rail Beer & Ale",
    "Address": "P.O. Box 555",
    "Country": "USA"
  },
  {
    "CustomerID": "SUPRD",
    "ContactName": "Pascale Cartrain",
    "CompanyName": "Suprêmes délices",
    "Address": "Boulevard Tirou, 255",
    "Country": "Belgium"
  },
  {
    "CustomerID": "THEBI",
    "ContactName": "Liz Nixon",
    "CompanyName": "The Big Cheese",
    "Address": "89 Jefferson Way Suite 2",
    "Country": "USA"
  },
  {
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    "ContactName": "Liu Wong",
    "CompanyName": "The Cracker Box",
    "Address": "55 Grizzly Peak Rd.",
    "Country": "USA"
  },
  {
    "CustomerID": "TOMSP",
    "ContactName": "Karin Josephs",
    "CompanyName": "Toms Spezialitäten",
    "Address": "Luisenstr. 48",
    "Country": "Germany"
  },
  {
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    "ContactName": "Miguel Angel Paolino",
    "CompanyName": "Tortuga Restaurante",
    "Address": "Avda. Azteca 123",
    "Country": "Mexico"
  },
  {
    "CustomerID": "TRADH",
    "ContactName": "Anabela Domingues",
    "CompanyName": "Tradição Hipermercados",
    "Address": "Av. Inês de Castro, 414",
    "Country": "Brazil"
  },
  {
    "CustomerID": "TRAIH",
    "ContactName": "Helvetius Nagy",
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    "CompanyName": "Trail's Head Gourmet Provisioners",
    "Address": "722 DaVinci Blvd.",
    "Country": "USA"
  },
  {
    "CustomerID": "VAFFE",
    "ContactName": "Palle Ibsen",
    "CompanyName": "Vaffeljernet",
    "Address": "Smagsloget 45",
    "Country": "Denmark"
  },
  {
    "CustomerID": "VICTE",
    "ContactName": "Mary Saveley",
    "CompanyName": "Victuailles en stock",
    "Address": "2, rue du Commerce",
    "Country": "France"
  },
  {
    "CustomerID": "VINET",
    "ContactName": "Paul Henriot",
    "CompanyName": "Vins et alcools Chevalier",
    "Address": "59 rue de l'Abbaye",
    "Country": "France"
  },
  {
    "CustomerID": "WANDK",
    "ContactName": "Rita Müller",
    "CompanyName": "Die Wandernde Kuh",
    "Address": "Adenauerallee 900",
    "Country": "Germany"
  },
  {
    "CustomerID": "WARTH",
    "ContactName": "Pirkko Koskitalo",
    "CompanyName": "Wartian Herkku",
    "Address": "Torikatu 38",
    "Country": "Finland"
  },
  {
    "CustomerID": "WELLI",
    "ContactName": "Paula Parente",
    "CompanyName": "Wellington Importadora",
    "Address": "Rua do Mercado, 12",
    "Country": "Brazil"
  },
  {
    "CustomerID": "WHITC",
    "ContactName": "Karl Jablonski",
    "CompanyName": "White Clover Markets",
    "Address": "305 - 14th Ave. S. Suite 3B",
    "Country": "USA"
  },
  {
    "CustomerID": "WILMK",
    "ContactName": "Matti Karttunen",
    "CompanyName": "Wilman Kala",
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```

        "Address": "Keskuskatu 45",
        "Country": "Finland"
    },
    {
        "CustomerID": "WOLZA",
        "ContactName": "Zbyszek Piestrzeniewicz",
        "CompanyName": "Wolski Zajazd",
        "Address": "ul. Filtrowa 68",
        "Country": "Poland"
    }
];

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DATASOURCE.TSX

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export let data: Object[] = [
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        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {

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```

    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {

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    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }];
export const customerData: Object[] = [
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    "CustomerID": "ALFKI",
    "ContactName": "Maria ",
    "CompanyName": "Alfreds Futterkiste",
    "Address": "Obere Str. 57",
    "Country": "Germany"
  },
  {
    "CustomerID": "ANATR",
    "ContactName": "Ana Trujillo",
    "CompanyName": "Ana Trujillo Emparedados y helados",
    "Address": "Avda. de la Constitución 2222",
    "Country": "Mexico"
  },
  {
    "CustomerID": "ANTON",
    "ContactName": "Antonio Moreno",
    "CompanyName": "Antonio Moreno Taquería",
    "Address": "Mataderos 2312",
    "Country": "Mexico"
  },
  {
    "CustomerID": "AROUT",
    "ContactName": "Thomas Hardy",
    "CompanyName": "Around the Horn",
    "Address": "120 Hanover Sq.",
    "Country": "UK"
  },
  {
    "CustomerID": "BERGS",
    "ContactName": "Christina Berglund",
    "CompanyName": "Berglunds snabbköp",
    "Address": "Berguvsvägen 8",

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    "Country": "Sweden"
  },
  {
    "CustomerID": "BLAUS",
    "ContactName": "Hanna Moos",
    "CompanyName": "Blauer See Delikatessen",
    "Address": "Forsterstr. 57",
    "Country": "Germany"
  },
  {
    "CustomerID": "BLONP",
    "ContactName": "Frédérique Citeaux",
    "CompanyName": "Blondesddsl père et fils",
    "Address": "24, place Kléber",
    "Country": "France"
  },
  {
    "CustomerID": "BOLID",
    "ContactName": "Martín Sommer",
    "CompanyName": "Bólido Comidas preparadas",
    "Address": "C/ Araquil, 67",
    "Country": "Spain"
  },
  {
    "CustomerID": "BONAP",
    "ContactName": "Laurence Lebihan",
    "CompanyName": "Bon app'",
    "Address": "12, rue des Bouchers",
    "Country": "France"
  },
  {
    "CustomerID": "BOTTM",
    "ContactName": "Elizabeth Lincoln",
    "CompanyName": "Bottom-Dollar Markets",
    "Address": "23 Tsawassen Blvd.",
    "Country": "Canada"
  },
  {
    "CustomerID": "BSBEV",
    "ContactName": "Victoria Ashworth",
    "CompanyName": "B's Beverages",
    "Address": "Fauntleroy Circus",
    "Country": "UK"
  },
  {
    "CustomerID": "CACTU",
    "ContactName": "Patricio Simpson",
    "CompanyName": "Cactus Comidas para llevar",
    "Address": "Cerrito 333",
    "Country": "Argentina"
  },
  {
    "CustomerID": "CENTC",
    "ContactName": "Francisco Chang",
    "CompanyName": "Centro comercial Moctezuma",
    "Address": "Sierras de Granada 9993",
    "Country": "Mexico"
  }
```

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    },
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      "CompanyName": "Comércio Mineiro",
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      "Country": "Brazil"
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      "CompanyName": "Consolidated Holdings",
      "Address": "Berkeley Gardens 12 Brewery",
      "Country": "UK"
    },
    {
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      "ContactName": "Sven Ottlieb",
      "CompanyName": "Drachenblut Delikatessen",
      "Address": "Walserweg 21",
      "Country": "Germany"
    },
    {
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      "ContactName": "Janine Labrune",
      "CompanyName": "Du monde entier",
      "Address": "67, rue des Cinquante Otages",
      "Country": "France"
    },
    {
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      "ContactName": "Ann Devon",
      "CompanyName": "Eastern Connection",
      "Address": "35 King George",
      "Country": "UK"
    },
    {
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      "ContactName": "Roland Mendel",
      "CompanyName": "Ernst Handel",
      "Address": "Kirchgasse 6",
      "Country": "Austria"
    },
    {
      "CustomerID": "FAMIA",
      "ContactName": "Aria Cruz",
      "CompanyName": "Familia Arquibaldo",
      "Address": "Rua Orós, 92",
      "Country": "Brazil"
    }
  ],
```



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{
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  "ContactName": "Diego Roel",
  "CompanyName": "FISSA Fabrica Inter. Salchichas S.A.",
  "Address": "C/ Moralzarzal, 86",
  "Country": "Spain"
},
{
  "CustomerID": "FOLIG",
  "ContactName": "Martine Rancé",
  "CompanyName": "Folies gourmandes",
  "Address": "184, chaussée de Tournai",
  "Country": "France"
},
{
  "CustomerID": "FOLKO",
  "ContactName": "Maria Larsson",
  "CompanyName": "Folk och fä HB",
  "Address": "Åkergatan 24",
  "Country": "Sweden"
},
{
  "CustomerID": "FRANK",
  "ContactName": "Peter Franken",
  "CompanyName": "Frankenversand",
  "Address": "Berliner Platz 43",
  "Country": "Germany"
},
{
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  "ContactName": "Carine Schmitt",
  "CompanyName": "France restauration",
  "Address": "54, rue Royale",
  "Country": "France"
},
{
  "CustomerID": "FRANS",
  "ContactName": "Paolo Accorti",
  "CompanyName": "Franchi S.p.A.",
  "Address": "Via Monte Bianco 34",
  "Country": "Italy"
},
{
  "CustomerID": "FURIB",
  "ContactName": "Lino Rodriguez",
  "CompanyName": "Furia Bacalhau e Frutos do Mar",
  "Address": "Jardim das rosas n. 32",
  "Country": "Portugal"
},
{
  "CustomerID": "GALED",
  "ContactName": "Eduardo Saavedra",
  "CompanyName": "Galería del gastrónomo",
  "Address": "Rambla de Cataluña, 23",
  "Country": "Spain"
},
{
```

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    "CompanyName": "Godos Cocina Típica",
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    "Country": "Spain"
  },
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    "CustomerID": "GOURL",
    "ContactName": "André Fonseca",
    "CompanyName": "Gourmet Lanchonetes",
    "Address": "Av. Brasil, 442",
    "Country": "Brazil"
  },
  {
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    "ContactName": "Howard Snyder",
    "CompanyName": "Great Lakes Food Market",
    "Address": "2732 Baker Blvd.",
    "Country": "USA"
  },
  {
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    "ContactName": "Manuel Pereira",
    "CompanyName": "GROSELLA-Restaurante",
    "Address": "5ª Ave. Los Palos Grandes",
    "Country": "Venezuela"
  },
  {
    "CustomerID": "HANAR",
    "ContactName": "Mario Pontes",
    "CompanyName": "Hanari Carnes",
    "Address": "Rua do Paço, 67",
    "Country": "Brazil"
  },
  {
    "CustomerID": "HILAA",
    "ContactName": "Carlos Hernández",
    "CompanyName": "HILARION-Abastos",
    "Address": "Carrera 22 con Ave. Carlos Soublette #8-35",
    "Country": "Venezuela"
  },
  {
    "CustomerID": "HUNGC",
    "ContactName": "Yoshi Latimer",
    "CompanyName": "Hungry Coyote Import Store",
    "Address": "City Center Plaza 516 Main St.",
    "Country": "USA"
  },
  {
    "CustomerID": "HUNGO",
    "ContactName": "Patricia McKenna",
    "CompanyName": "Hungry Owl All-Night Grocers",
    "Address": "8 Johnstown Road",
    "Country": "Ireland"
  },
  {
    "CustomerID": "ISLAT",
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"ContactName": "Helen Bennett",
"CompanyName": "Island Trading",
"Address": "Garden House Crowther Way",
"Country": "UK"
},
{
  "CustomerID": "KOENE",
  "ContactName": "Philip Cramer",
  "CompanyName": "Königlich Essen",
  "Address": "Maubelstr. 90",
  "Country": "Germany"
},
{
  "CustomerID": "LACOR",
  "ContactName": "Daniel Tonini",
  "CompanyName": "La corne d'abondance",
  "Address": "67, avenue de l'Europe",
  "Country": "France"
},
{
  "CustomerID": "LAMAI",
  "ContactName": "Annette Roulet",
  "CompanyName": "La maison d'Asie",
  "Address": "1 rue Alsace-Lorraine",
  "Country": "France"
},
{
  "CustomerID": "LAUGB",
  "ContactName": "Yoshi Tannamuri",
  "CompanyName": "Laughing Bacchus Wine Cellars",
  "Address": "1900 Oak St.",
  "Country": "Canada"
},
{
  "CustomerID": "LAZYK",
  "ContactName": "John Steel",
  "CompanyName": "Lazy K Kountry Store",
  "Address": "12 Orchestra Terrace",
  "Country": "USA"
},
{
  "CustomerID": "LEHMS",
  "ContactName": "Renate Messner",
  "CompanyName": "Lehmanns Marktstand",
  "Address": "Magazinweg 7",
  "Country": "Germany"
},
{
  "CustomerID": "LETSS",
  "ContactName": "Jaime Yorres",
  "CompanyName": "Let's Stop N Shop",
  "Address": "87 Polk St. Suite 5",
  "Country": "USA"
},
{
  "CustomerID": "LILAS",
  "ContactName": "Carlos González",
```

```
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    "Address": "Carrera 52 con Ave. Bolívar #65-98 Llano Largo",
    "Country": "Venezuela"
  },
  {
    "CustomerID": "LINOD",
    "ContactName": "Felipe Izquierdo",
    "CompanyName": "LINO-Delicateses",
    "Address": "Ave. 5 de Mayo Porlamar",
    "Country": "Venezuela"
  },
  {
    "CustomerID": "LONEP",
    "ContactName": "Fran Wilson",
    "CompanyName": "Lonesome Pine Restaurant",
    "Address": "89 Chiaroscuro Rd.",
    "Country": "USA"
  },
  {
    "CustomerID": "MAGAA",
    "ContactName": "Giovanni Rovelli",
    "CompanyName": "Magazzini Alimentari Riuniti",
    "Address": "Via Ludovico il Moro 22",
    "Country": "Italy"
  },
  {
    "CustomerID": "MAISD",
    "ContactName": "Catherine Dewey",
    "CompanyName": "Maison Dewey",
    "Address": "Rue Joseph-Bens 532",
    "Country": "Belgium"
  },
  {
    "CustomerID": "MEREP",
    "ContactName": "Jean Fresnière",
    "CompanyName": "Mère Paillarde",
    "Address": "43 rue St. Laurent",
    "Country": "Canada"
  },
  {
    "CustomerID": "MORGK",
    "ContactName": "Alexander Feuer",
    "CompanyName": "Morgenstern Gesundkost",
    "Address": "Heerstr. 22",
    "Country": "Germany"
  },
  {
    "CustomerID": "NORTS",
    "ContactName": "Simon Crowther",
    "CompanyName": "North/South",
    "Address": "South House 300 Queensbridge",
    "Country": "UK"
  },
  {
    "CustomerID": "OCEAN",
    "ContactName": "Yvonne Moncada",
    "CompanyName": "Océano Atlántico Ltda.",
```

```
    "Address": "Ing. Gustavo Moncada 8585 Piso 20-A",
    "Country": "Argentina"
  },
  {
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    "ContactName": "Rene Phillips",
    "CompanyName": "Old World Delicatessen",
    "Address": "2743 Bering St.",
    "Country": "USA"
  },
  {
    "CustomerID": "OTTIK",
    "ContactName": "Henriette Pfalzheim",
    "CompanyName": "Ottilies Käseladen",
    "Address": "Mehrheimerstr. 369",
    "Country": "Germany"
  },
  {
    "CustomerID": "PARIS",
    "ContactName": "Marie Bertrand",
    "CompanyName": "Paris spécialités",
    "Address": "265, boulevard Charonne",
    "Country": "France"
  },
  {
    "CustomerID": "PERIC",
    "ContactName": "Guillermo Fernández",
    "CompanyName": "Pericles Comidas clásicas",
    "Address": "Calle Dr. Jorge Cash 321",
    "Country": "Mexico"
  },
  {
    "CustomerID": "PICCO",
    "ContactName": "Georg Pipps",
    "CompanyName": "Piccolo und mehr",
    "Address": "Geislweg 14",
    "Country": "Austria"
  },
  {
    "CustomerID": "PRINI",
    "ContactName": "Isabel de Castro",
    "CompanyName": "Princesa Isabel Vinhos",
    "Address": "Estrada da saúde n. 58",
    "Country": "Portugal"
  },
  {
    "CustomerID": "QUEDE",
    "ContactName": "Bernardo Batista",
    "CompanyName": "Que Delícia",
    "Address": "Rua da Panificadora, 12",
    "Country": "Brazil"
  },
  {
    "CustomerID": "QUEEN",
    "ContactName": "Lúcia Carvalho",
    "CompanyName": "Queen Cozinha",
    "Address": "Alameda dos Canários, 891",
```

```
    "Country": "Brazil"
  },
  {
    "CustomerID": "QUICK",
    "ContactName": "Horst Kloss",
    "CompanyName": "QUICK-Stop",
    "Address": "Taucherstraße 10",
    "Country": "Germany"
  },
  {
    "CustomerID": "RANCH",
    "ContactName": "Sergio Gutiérrez",
    "CompanyName": "Rancho grande",
    "Address": "Av. del Libertador 900",
    "Country": "Argentina"
  },
  {
    "CustomerID": "RATTC",
    "ContactName": "Paula Wilson",
    "CompanyName": "Rattlesnake Canyon Grocery",
    "Address": "2817 Milton Dr.",
    "Country": "USA"
  },
  {
    "CustomerID": "REGGC",
    "ContactName": "Maurizio Moroni",
    "CompanyName": "Reggiani Caseifici",
    "Address": "Strada Provinciale 124",
    "Country": "Italy"
  },
  {
    "CustomerID": "RICAR",
    "ContactName": "Janete Limeira",
    "CompanyName": "Ricardo Adocicados",
    "Address": "Av. Copacabana, 267",
    "Country": "Brazil"
  },
  {
    "CustomerID": "RICSU",
    "ContactName": "Michael Holz",
    "CompanyName": "Richter Supermarkt",
    "Address": "Grenzacherweg 237",
    "Country": "Switzerland"
  },
  {
    "CustomerID": "ROMEY",
    "ContactName": "Alejandra Camino",
    "CompanyName": "Romero y tomillo",
    "Address": "Gran Vía, 1",
    "Country": "Spain"
  },
  {
    "CustomerID": "SANTG",
    "ContactName": "Jonas Bergulfsen",
    "CompanyName": "Santé Gourmet",
    "Address": "Erling Skakkes gate 78",
    "Country": "Norway"
  }
```

```
    },
    {
      "CustomerID": "SAVEA",
      "ContactName": "Jose Pavarotti",
      "CompanyName": "Save-a-lot Markets",
      "Address": "187 Suffolk Ln.",
      "Country": "USA"
    },
    {
      "CustomerID": "SEVES",
      "ContactName": "Hari Kumar",
      "CompanyName": "Seven Seas Imports",
      "Address": "90 Wadhurst Rd.",
      "Country": "UK"
    },
    {
      "CustomerID": "SIMOB",
      "ContactName": "Jytte Petersen",
      "CompanyName": "Simons bistro",
      "Address": "Vinbæltet 34",
      "Country": "Denmark"
    },
    {
      "CustomerID": "SPECB",
      "ContactName": "Dominique Perrier",
      "CompanyName": "Spécialités du monde",
      "Address": "25, rue Lauriston",
      "Country": "France"
    },
    {
      "CustomerID": "SPLIR",
      "ContactName": "Art Braunschweiger",
      "CompanyName": "Split Rail Beer & Ale",
      "Address": "P.O. Box 555",
      "Country": "USA"
    },
    {
      "CustomerID": "SUPRD",
      "ContactName": "Pascale Cartrain",
      "CompanyName": "Suprêmes délices",
      "Address": "Boulevard Tirou, 255",
      "Country": "Belgium"
    },
    {
      "CustomerID": "THEBI",
      "ContactName": "Liz Nixon",
      "CompanyName": "The Big Cheese",
      "Address": "89 Jefferson Way Suite 2",
      "Country": "USA"
    },
    {
      "CustomerID": "THECR",
      "ContactName": "Liu Wong",
      "CompanyName": "The Cracker Box",
      "Address": "55 Grizzly Peak Rd.",
      "Country": "USA"
    }
  ],
```

```
{
  "CustomerID": "TOMSP",
  "ContactName": "Karin Josephs",
  "CompanyName": "Toms Spezialitäten",
  "Address": "Luisenstr. 48",
  "Country": "Germany"
},
{
  "CustomerID": "TORTU",
  "ContactName": "Miguel Angel Paolino",
  "CompanyName": "Tortuga Restaurante",
  "Address": "Avda. Azteca 123",
  "Country": "Mexico"
},
{
  "CustomerID": "TRADH",
  "ContactName": "Anabela Domingues",
  "CompanyName": "Tradição Hipermercados",
  "Address": "Av. Inês de Castro, 414",
  "Country": "Brazil"
},
{
  "CustomerID": "TRAIH",
  "ContactName": "Helvetius Nagy",
  "CompanyName": "Trail's Head Gourmet Provisioners",
  "Address": "722 DaVinci Blvd.",
  "Country": "USA"
},
{
  "CustomerID": "VAFFE",
  "ContactName": "Palle Ibsen",
  "CompanyName": "Vaffeljernet",
  "Address": "Smagsloget 45",
  "Country": "Denmark"
},
{
  "CustomerID": "VICTE",
  "ContactName": "Mary Saveley",
  "CompanyName": "Victuailles en stock",
  "Address": "2, rue du Commerce",
  "Country": "France"
},
{
  "CustomerID": "VINET",
  "ContactName": "Paul Henriot",
  "CompanyName": "Vins et alcools Chevalier",
  "Address": "59 rue de l'Abbaye",
  "Country": "France"
},
{
  "CustomerID": "WANDK",
  "ContactName": "Rita Müller",
  "CompanyName": "Die Wandernde Kuh",
  "Address": "Adenauerallee 900",
  "Country": "Germany"
},
{
```



```

    "CustomerID": "WARTH",
    "ContactName": "Pirkko Koskitalo",
    "CompanyName": "Wartian Herkku",
    "Address": "Torikatu 38",
    "Country": "Finland"
  },
  {
    "CustomerID": "WELLI",
    "ContactName": "Paula Parente",
    "CompanyName": "Wellington Importadora",
    "Address": "Rua do Mercado, 12",
    "Country": "Brazil"
  },
  {
    "CustomerID": "WHITC",
    "ContactName": "Karl Jablonski",
    "CompanyName": "White Clover Markets",
    "Address": "305 - 14th Ave. S. Suite 3B",
    "Country": "USA"
  },
  {
    "CustomerID": "WILMK",
    "ContactName": "Matti Karttunen",
    "CompanyName": "Wilman Kala",
    "Address": "Keskuskatu 45",
    "Country": "Finland"
  },
  {
    "CustomerID": "WOLZA",
    "ContactName": "Zbyszek Piestrzeniewicz",
    "CompanyName": "Wolski Zajazd",
    "Address": "ul. Filtrowa 68",
    "Country": "Poland"
  }
];

```

Print grid along with other components

To print the Syncfusion React Grid along with another component, such as a chart, you can use the [beforePrint](#) event of the grid. In this event, you can clone the content of the other component and append it to the print document.

Here is an example of how to print grid along with chart component:

APP.JSX

```

import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ChartComponent, SeriesDirective, SeriesCollectionDirective, Inject
as ChartInject, LineSeries, Legend, DateTime, Tooltip } from
 '@syncfusion/ej2-react-charts';
import { ActionEventArgs, ColumnDirective, ColumnsDirective, GridComponent }
 from '@syncfusion/ej2-react-grids';
import { Inject, Page, PageSettingsModel, Toolbar } from '@syncfusion/ej2-
react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {

```

```

let grid;
let chart;
let chartContainer;
const pageOptions = { pageSize: 6 };
const dataBound = () => {
    if (chart) {
        chart.series[0].marker = { visible: true };
        chart.series[0].xName = 'OrderDate';
        chart.series[0].yName = 'Freight';
        chart.series[0].dataSource = grid.getCurrentViewRecords();
        chart.refresh();
    }
}
const printClick = () => {
    grid.print();
}
const beforePrint = (args) => {
    if (chartContainer) {
        const clonedChartContainer = chartContainer.cloneNode(true);
        args.element.appendChild(clonedChartContainer);
    }
}
const actionComplete = (args) => {
    if (chart) {
        if (args.requestType === 'paging') {
            chart.series[0].dataSource = grid.getCurrentViewRecords();
            chart.refresh();
        }
    }
}
return (<div>
    <ButtonComponent className='printbtn' cssClass='e-danger'
onClick={printClick}>Print</ButtonComponent>
    <GridComponent ref={g => grid = g} dataSource={data.slice(0, 20)}
        allowPaging={true} pageSettings={pageOptions}
dataBound={dataBound} beforePrint={beforePrint}
actionComplete={actionComplete} >
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign="Right" />
            <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
            <ColumnDirective field='OrderDate' headerText='OrderDate'
format='yMd' width='150' />
            <ColumnDirective field='Freight' headerText='Freight'
format='C' width='150' />
            <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
            <ColumnDirective field='ShipName' headerText='Ship Name'
width='150' />
        </ColumnsDirective>
        <Inject services={[Toolbar, Page]} />
    </GridComponent >
    <h4>Chart</h4>
    <div ref={cc => chartContainer = cc}>
        <ChartComponent ref={c => chart = c} width='60%' title='Chart
Title' primaryXAxis={{ valueType: 'DateTime', labelFormat: 'MMM d' }}>

```

```

        <SeriesCollectionDirective>
            <SeriesDirective type="Line" width={1}
columnWidth={0.4}></SeriesDirective>
        </SeriesCollectionDirective>
        <ChartInject services={[LineSeries, Tooltip, Legend,
DateTime]} />
    </ChartComponent>
</div>
</div>
);
export default App;

```

APP.TSX

```

import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ChartComponent, SeriesDirective, SeriesCollectionDirective, Inject
as ChartInject, LineSeries, Legend, DateTime, Tooltip, PrintEventArgs } from
 '@syncfusion/ej2-react-charts';
import { ActionEventArgs, ColumnDirective, ColumnsDirective, GridComponent }
from '@syncfusion/ej2-react-grids';
import { Inject, Page, PageSettingsModel, Toolbar } from '@syncfusion/ej2-
react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
    let grid: GridComponent | null;
    let chart: ChartComponent | null;
    let chartContainer;
    const pageOptions: PageSettingsModel = { pageSize: 6 };
    const dataBound = () => {
        if (chart) {
            (chart as ChartComponent).series[0].marker = { visible: true };
            (chart as ChartComponent).series[0].xName = 'OrderDate';
            (chart as ChartComponent).series[0].yName = 'Freight';
            (chart as ChartComponent).series[0].dataSource = (grid as
GridComponent).getCurrentViewRecords();
            (chart as ChartComponent).refresh();
        }
    }
    const printClick = () => {
        (grid as GridComponent).print();
    }
    const beforePrint = (args: PrintEventArgs) => {
        if (chartContainer) {
            const clonedChartContainer = chartContainer.cloneNode(true);
            args.element.appendChild(clonedChartContainer);
        }
    }
    const actionComplete = (args: ActionEventArgs) => {
        if (chart) {
            if (args.requestType === 'paging') {
                (chart as ChartComponent).series[0].dataSource = (grid as
GridComponent).getCurrentViewRecords();
                (chart as ChartComponent).refresh();
            }
        }
    }
}

```

```

    }
    return (<div>
      <ButtonComponent className='printbtn' cssClass='e-danger'
onClick={printClick}>Print</ButtonComponent>
      <GridComponent ref={g => grid = g} dataSource={data.slice(0, 20)}
        allowPaging={true} pageSettings={pageOptions}
dataBound={dataBound} beforePrint={beforePrint}
actionComplete={actionComplete} >
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign="Right" />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
          <ColumnDirective field='OrderDate' headerText='OrderDate'
format='yMd' width='150' />
          <ColumnDirective field='Freight' headerText='Freight'
format='C' width='150' />
          <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
          <ColumnDirective field='ShipName' headerText='Ship Name'
width='150' />
        </ColumnsDirective>
        <Inject services={[Toolbar, Page]} />
      </GridComponent>
      <h4>Chart</h4>
      <div ref={cc => chartContainer = cc}>
        <ChartComponent ref={c => chart = c} width='60%' title='Chart
Title' primaryXAxis={{ valueType: 'DateTime', labelFormat: 'MMM d' }}>
          <SeriesCollectionDirective>
            <SeriesDirective type="Line" width={1}
columnWidth={0.4}></SeriesDirective>
          </SeriesCollectionDirective>
          <ChartInject services={[LineSeries, Tooltip, Legend,
DateTime]} />
        </ChartComponent>
      </div>
    </div>);
  };
  export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',

```

```

        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ];
    export const customerData = [
      {
        "CustomerID": "ALFKI",
        "ContactName": "Maria ",
        "CompanyName": "Alfreds Futterkiste",

```

```
    "Address": "Obere Str. 57",
    "Country": "Germany"
  },
  {
    "CustomerID": "ANATR",
    "ContactName": "Ana Trujillo",
    "CompanyName": "Ana Trujillo Emparedados y helados",
    "Address": "Avda. de la Constitución 2222",
    "Country": "Mexico"
  },
  {
    "CustomerID": "ANTON",
    "ContactName": "Antonio Moreno",
    "CompanyName": "Antonio Moreno Taquería",
    "Address": "Mataderos 2312",
    "Country": "Mexico"
  },
  {
    "CustomerID": "AROUT",
    "ContactName": "Thomas Hardy",
    "CompanyName": "Around the Horn",
    "Address": "120 Hanover Sq.",
    "Country": "UK"
  },
  {
    "CustomerID": "BERGS",
    "ContactName": "Christina Berglund",
    "CompanyName": "Berglunds snabbköp",
    "Address": "Berguvsvägen 8",
    "Country": "Sweden"
  },
  {
    "CustomerID": "BLAUS",
    "ContactName": "Hanna Moos",
    "CompanyName": "Blauer See Delikatessen",
    "Address": "Forsterstr. 57",
    "Country": "Germany"
  },
  {
    "CustomerID": "BLONP",
    "ContactName": "Frédérique Citeaux",
    "CompanyName": "Blondesddsl père et fils",
    "Address": "24, place Kléber",
    "Country": "France"
  },
  {
    "CustomerID": "BOLID",
    "ContactName": "Martín Sommer",
    "CompanyName": "Bólido Comidas preparadas",
    "Address": "C/ Araquil, 67",
    "Country": "Spain"
  },
  {
    "CustomerID": "BONAP",
    "ContactName": "Laurence Lebihan",
    "CompanyName": "Bon app'",
    "Address": "12, rue des Bouchers",
```

```
    "Country": "France"
  },
  {
    "CustomerID": "BOTTM",
    "ContactName": "Elizabeth Lincoln",
    "CompanyName": "Bottom-Dollar Markets",
    "Address": "23 Tsawassen Blvd.",
    "Country": "Canada"
  },
  {
    "CustomerID": "BSBEV",
    "ContactName": "Victoria Ashworth",
    "CompanyName": "B's Beverages",
    "Address": "Fauntleroy Circus",
    "Country": "UK"
  },
  {
    "CustomerID": "CACTU",
    "ContactName": "Patricio Simpson",
    "CompanyName": "Cactus Comidas para llevar",
    "Address": "Cerrito 333",
    "Country": "Argentina"
  },
  {
    "CustomerID": "CENTC",
    "ContactName": "Francisco Chang",
    "CompanyName": "Centro comercial Moctezuma",
    "Address": "Sierras de Granada 9993",
    "Country": "Mexico"
  },
  {
    "CustomerID": "CHOPS",
    "ContactName": "Yang Wang",
    "CompanyName": "Chop-suey Chinese",
    "Address": "Hauptstr. 29",
    "Country": "Switzerland"
  },
  {
    "CustomerID": "COMMI",
    "ContactName": "Pedro Afonso",
    "CompanyName": "Comércio Mineiro",
    "Address": "Av. dos Lusíadas, 23",
    "Country": "Brazil"
  },
  {
    "CustomerID": "CONSH",
    "ContactName": "Elizabeth Brown",
    "CompanyName": "Consolidated Holdings",
    "Address": "Berkeley Gardens 12 Brewery",
    "Country": "UK"
  },
  {
    "CustomerID": "DRACD",
    "ContactName": "Sven Ottlieb",
    "CompanyName": "Drachenblut Delikatessen",
    "Address": "Walserweg 21",
    "Country": "Germany"
```



```
    },
    {
      "CustomerID": "DUMON",
      "ContactName": "Janine Labrune",
      "CompanyName": "Du monde entier",
      "Address": "67, rue des Cinquante Otages",
      "Country": "France"
    },
    {
      "CustomerID": "EASTC",
      "ContactName": "Ann Devon",
      "CompanyName": "Eastern Connection",
      "Address": "35 King George",
      "Country": "UK"
    },
    {
      "CustomerID": "ERNSH",
      "ContactName": "Roland Mendel",
      "CompanyName": "Ernst Handel",
      "Address": "Kirchgasse 6",
      "Country": "Austria"
    },
    {
      "CustomerID": "FAMIA",
      "ContactName": "Aria Cruz",
      "CompanyName": "Familia Arquibaldo",
      "Address": "Rua Orós, 92",
      "Country": "Brazil"
    },
    {
      "CustomerID": "FISSA",
      "ContactName": "Diego Roel",
      "CompanyName": "FISSA Fabrica Inter. Salchichas S.A.",
      "Address": "C/ Moralzarzal, 86",
      "Country": "Spain"
    },
    {
      "CustomerID": "FOLIG",
      "ContactName": "Martine Rancé",
      "CompanyName": "Folies gourmandes",
      "Address": "184, chaussée de Tournai",
      "Country": "France"
    },
    {
      "CustomerID": "FOLKO",
      "ContactName": "Maria Larsson",
      "CompanyName": "Folk och fä HB",
      "Address": "Åkergatan 24",
      "Country": "Sweden"
    },
    {
      "CustomerID": "FRANK",
      "ContactName": "Peter Franken",
      "CompanyName": "Frankenversand",
      "Address": "Berliner Platz 43",
      "Country": "Germany"
    },
  ],
```

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{
  "CustomerID": "FRANR",
  "ContactName": "Carine Schmitt",
  "CompanyName": "France restauration",
  "Address": "54, rue Royale",
  "Country": "France"
},
{
  "CustomerID": "FRANS",
  "ContactName": "Paolo Accorti",
  "CompanyName": "Franchi S.p.A.",
  "Address": "Via Monte Bianco 34",
  "Country": "Italy"
},
{
  "CustomerID": "FURIB",
  "ContactName": "Lino Rodriguez",
  "CompanyName": "Furia Bacalhau e Frutos do Mar",
  "Address": "Jardim das rosas n. 32",
  "Country": "Portugal"
},
{
  "CustomerID": "GALED",
  "ContactName": "Eduardo Saavedra",
  "CompanyName": "Galería del gastrónomo",
  "Address": "Rambla de Cataluña, 23",
  "Country": "Spain"
},
{
  "CustomerID": "GODOS",
  "ContactName": "José Pedro Freyre",
  "CompanyName": "Godos Cocina Típica",
  "Address": "C/ Romero, 33",
  "Country": "Spain"
},
{
  "CustomerID": "GOURL",
  "ContactName": "André Fonseca",
  "CompanyName": "Gourmet Lanchonetes",
  "Address": "Av. Brasil, 442",
  "Country": "Brazil"
},
{
  "CustomerID": "GREAL",
  "ContactName": "Howard Snyder",
  "CompanyName": "Great Lakes Food Market",
  "Address": "2732 Baker Blvd.",
  "Country": "USA"
},
{
  "CustomerID": "GROSR",
  "ContactName": "Manuel Pereira",
  "CompanyName": "GROSELLA-Restaurante",
  "Address": "5ª Ave. Los Palos Grandes",
  "Country": "Venezuela"
},
{
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"CustomerID": "HANAR",
"ContactName": "Mario Pontes",
"CompanyName": "Hanari Carnes",
"Address": "Rua do Paço, 67",
"Country": "Brazil"
},
{
  "CustomerID": "HILAA",
  "ContactName": "Carlos Hernández",
  "CompanyName": "HILARION-Abastos",
  "Address": "Carrera 22 con Ave. Carlos Soublette #8-35",
  "Country": "Venezuela"
},
{
  "CustomerID": "HUNGC",
  "ContactName": "Yoshi Latimer",
  "CompanyName": "Hungry Coyote Import Store",
  "Address": "City Center Plaza 516 Main St.",
  "Country": "USA"
},
{
  "CustomerID": "HUNGO",
  "ContactName": "Patricia McKenna",
  "CompanyName": "Hungry Owl All-Night Grocers",
  "Address": "8 Johnstown Road",
  "Country": "Ireland"
},
{
  "CustomerID": "ISLAT",
  "ContactName": "Helen Bennett",
  "CompanyName": "Island Trading",
  "Address": "Garden House Crowther Way",
  "Country": "UK"
},
{
  "CustomerID": "KOENE",
  "ContactName": "Philip Cramer",
  "CompanyName": "Königlich Essen",
  "Address": "Maubelstr. 90",
  "Country": "Germany"
},
{
  "CustomerID": "LACOR",
  "ContactName": "Daniel Tonini",
  "CompanyName": "La corne d'abondance",
  "Address": "67, avenue de l'Europe",
  "Country": "France"
},
{
  "CustomerID": "LAMAI",
  "ContactName": "Annette Roulet",
  "CompanyName": "La maison d'Asie",
  "Address": "1 rue Alsace-Lorraine",
  "Country": "France"
},
{
  "CustomerID": "LAUGB",
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"ContactName": "Yoshi Tannamuri",
"CompanyName": "Laughing Bacchus Wine Cellars",
"Address": "1900 Oak St.",
"Country": "Canada"
},
{
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  "ContactName": "John Steel",
  "CompanyName": "Lazy K Kountry Store",
  "Address": "12 Orchestra Terrace",
  "Country": "USA"
},
{
  "CustomerID": "LEHMS",
  "ContactName": "Renate Messner",
  "CompanyName": "Lehmanns Marktstand",
  "Address": "Magazinweg 7",
  "Country": "Germany"
},
{
  "CustomerID": "LETSS",
  "ContactName": "Jaime Yorres",
  "CompanyName": "Let's Stop N Shop",
  "Address": "87 Polk St. Suite 5",
  "Country": "USA"
},
{
  "CustomerID": "LILAS",
  "ContactName": "Carlos González",
  "CompanyName": "LILA-Supermercado",
  "Address": "Carrera 52 con Ave. Bolívar #65-98 Llano Largo",
  "Country": "Venezuela"
},
{
  "CustomerID": "LINOD",
  "ContactName": "Felipe Izquierdo",
  "CompanyName": "LINO-Delicateses",
  "Address": "Ave. 5 de Mayo Porlamar",
  "Country": "Venezuela"
},
{
  "CustomerID": "LONEP",
  "ContactName": "Fran Wilson",
  "CompanyName": "Lonesome Pine Restaurant",
  "Address": "89 Chiaroscuro Rd.",
  "Country": "USA"
},
{
  "CustomerID": "MAGAA",
  "ContactName": "Giovanni Rovelli",
  "CompanyName": "Magazzini Alimentari Riuniti",
  "Address": "Via Ludovico il Moro 22",
  "Country": "Italy"
},
{
  "CustomerID": "MAISD",
  "ContactName": "Catherine Dewey",
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    "CompanyName": "Maison Dewey",
    "Address": "Rue Joseph-Bens 532",
    "Country": "Belgium"
  },
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    "ContactName": "Jean Fresnière",
    "CompanyName": "Mère Paillarde",
    "Address": "43 rue St. Laurent",
    "Country": "Canada"
  },
  {
    "CustomerID": "MORGK",
    "ContactName": "Alexander Feuer",
    "CompanyName": "Morgenstern Gesundkost",
    "Address": "Heerstr. 22",
    "Country": "Germany"
  },
  {
    "CustomerID": "NORTS",
    "ContactName": "Simon Crowther",
    "CompanyName": "North/South",
    "Address": "South House 300 Queensbridge",
    "Country": "UK"
  },
  {
    "CustomerID": "OCEAN",
    "ContactName": "Yvonne Moncada",
    "CompanyName": "Océano Atlántico Ltda.",
    "Address": "Ing. Gustavo Moncada 8585 Piso 20-A",
    "Country": "Argentina"
  },
  {
    "CustomerID": "OLDWO",
    "ContactName": "Rene Phillips",
    "CompanyName": "Old World Delicatessen",
    "Address": "2743 Bering St.",
    "Country": "USA"
  },
  {
    "CustomerID": "OTTIK",
    "ContactName": "Henriette Pfalzheim",
    "CompanyName": "Ottilies Käseladen",
    "Address": "Mehrheimerstr. 369",
    "Country": "Germany"
  },
  {
    "CustomerID": "PARIS",
    "ContactName": "Marie Bertrand",
    "CompanyName": "Paris spécialités",
    "Address": "265, boulevard Charonne",
    "Country": "France"
  },
  {
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    "ContactName": "Guillermo Fernández",
    "CompanyName": "Pericles Comidas clásicas",
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    "Address": "Calle Dr. Jorge Cash 321",
    "Country": "Mexico"
  },
  {
    "CustomerID": "PICCO",
    "ContactName": "Georg Pipps",
    "CompanyName": "Piccolo und mehr",
    "Address": "Geislweg 14",
    "Country": "Austria"
  },
  {
    "CustomerID": "PRINI",
    "ContactName": "Isabel de Castro",
    "CompanyName": "Princesa Isabel Vinhos",
    "Address": "Estrada da saúde n. 58",
    "Country": "Portugal"
  },
  {
    "CustomerID": "QUEDE",
    "ContactName": "Bernardo Batista",
    "CompanyName": "Que Delícia",
    "Address": "Rua da Panificadora, 12",
    "Country": "Brazil"
  },
  {
    "CustomerID": "QUEEN",
    "ContactName": "Lúcia Carvalho",
    "CompanyName": "Queen Cozinha",
    "Address": "Alameda dos Canários, 891",
    "Country": "Brazil"
  },
  {
    "CustomerID": "QUICK",
    "ContactName": "Horst Kloss",
    "CompanyName": "QUICK-Stop",
    "Address": "Taucherstraße 10",
    "Country": "Germany"
  },
  {
    "CustomerID": "RANCH",
    "ContactName": "Sergio Gutiérrez",
    "CompanyName": "Rancho grande",
    "Address": "Av. del Libertador 900",
    "Country": "Argentina"
  },
  {
    "CustomerID": "RATTC",
    "ContactName": "Paula Wilson",
    "CompanyName": "Rattlesnake Canyon Grocery",
    "Address": "2817 Milton Dr.",
    "Country": "USA"
  },
  {
    "CustomerID": "REGGC",
    "ContactName": "Maurizio Moroni",
    "CompanyName": "Reggiani Caseifici",
    "Address": "Strada Provinciale 124",
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      "Country": "Italy"
    },
    {
      "CustomerID": "RICAR",
      "ContactName": "Janete Limeira",
      "CompanyName": "Ricardo Adocicados",
      "Address": "Av. Copacabana, 267",
      "Country": "Brazil"
    },
    {
      "CustomerID": "RICSU",
      "ContactName": "Michael Holz",
      "CompanyName": "Richter Supermarkt",
      "Address": "Grenzacherweg 237",
      "Country": "Switzerland"
    },
    {
      "CustomerID": "ROMEY",
      "ContactName": "Alejandra Camino",
      "CompanyName": "Romero y tomillo",
      "Address": "Gran Vía, 1",
      "Country": "Spain"
    },
    {
      "CustomerID": "SANTG",
      "ContactName": "Jonas Bergulfsen",
      "CompanyName": "Santé Gourmet",
      "Address": "Erling Skakkes gate 78",
      "Country": "Norway"
    },
    {
      "CustomerID": "SAVEA",
      "ContactName": "Jose Pavarotti",
      "CompanyName": "Save-a-lot Markets",
      "Address": "187 Suffolk Ln.",
      "Country": "USA"
    },
    {
      "CustomerID": "SEVES",
      "ContactName": "Hari Kumar",
      "CompanyName": "Seven Seas Imports",
      "Address": "90 Wadhurst Rd.",
      "Country": "UK"
    },
    {
      "CustomerID": "SIMOB",
      "ContactName": "Jytte Petersen",
      "CompanyName": "Simons bistro",
      "Address": "Vinbæltet 34",
      "Country": "Denmark"
    },
    {
      "CustomerID": "SPECB",
      "ContactName": "Dominique Perrier",
      "CompanyName": "Spécialités du monde",
      "Address": "25, rue Lauriston",
      "Country": "France"
    }
  ]
}
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    },
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      "CustomerID": "SPLIR",
      "ContactName": "Art Braunschweiger",
      "CompanyName": "Split Rail Beer & Ale",
      "Address": "P.O. Box 555",
      "Country": "USA"
    },
    {
      "CustomerID": "SUPRD",
      "ContactName": "Pascale Cartrain",
      "CompanyName": "Suprêmes délices",
      "Address": "Boulevard Tirou, 255",
      "Country": "Belgium"
    },
    {
      "CustomerID": "THEBI",
      "ContactName": "Liz Nixon",
      "CompanyName": "The Big Cheese",
      "Address": "89 Jefferson Way Suite 2",
      "Country": "USA"
    },
    {
      "CustomerID": "THECR",
      "ContactName": "Liu Wong",
      "CompanyName": "The Cracker Box",
      "Address": "55 Grizzly Peak Rd.",
      "Country": "USA"
    },
    {
      "CustomerID": "TOMSP",
      "ContactName": "Karin Josephs",
      "CompanyName": "Toms Spezialitäten",
      "Address": "Luisenstr. 48",
      "Country": "Germany"
    },
    {
      "CustomerID": "TORTU",
      "ContactName": "Miguel Angel Paolino",
      "CompanyName": "Tortuga Restaurante",
      "Address": "Avda. Azteca 123",
      "Country": "Mexico"
    },
    {
      "CustomerID": "TRADH",
      "ContactName": "Anabela Domingues",
      "CompanyName": "Tradição Hipermercados",
      "Address": "Av. Inês de Castro, 414",
      "Country": "Brazil"
    },
    {
      "CustomerID": "TRAIH",
      "ContactName": "Helvetius Nagy",
      "CompanyName": "Trail's Head Gourmet Provisioners",
      "Address": "722 DaVinci Blvd.",
      "Country": "USA"
    }
  ],
```



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{
  {
    "CustomerID": "VAFFE",
    "ContactName": "Palle Ibsen",
    "CompanyName": "Vaffeljernet",
    "Address": "Smagsloget 45",
    "Country": "Denmark"
  },
  {
    "CustomerID": "VICTE",
    "ContactName": "Mary Saveley",
    "CompanyName": "Victuailles en stock",
    "Address": "2, rue du Commerce",
    "Country": "France"
  },
  {
    "CustomerID": "VINET",
    "ContactName": "Paul Henriot",
    "CompanyName": "Vins et alcools Chevalier",
    "Address": "59 rue de l'Abbaye",
    "Country": "France"
  },
  {
    "CustomerID": "WANDK",
    "ContactName": "Rita Müller",
    "CompanyName": "Die Wandernde Kuh",
    "Address": "Adenauerallee 900",
    "Country": "Germany"
  },
  {
    "CustomerID": "WARTH",
    "ContactName": "Pirkko Koskitalo",
    "CompanyName": "Wartian Herkku",
    "Address": "Torikatu 38",
    "Country": "Finland"
  },
  {
    "CustomerID": "WELLI",
    "ContactName": "Paula Parente",
    "CompanyName": "Wellington Importadora",
    "Address": "Rua do Mercado, 12",
    "Country": "Brazil"
  },
  {
    "CustomerID": "WHITC",
    "ContactName": "Karl Jablonski",
    "CompanyName": "White Clover Markets",
    "Address": "305 - 14th Ave. S. Suite 3B",
    "Country": "USA"
  },
  {
    "CustomerID": "WILMK",
    "ContactName": "Matti Karttunen",
    "CompanyName": "Wilman Kala",
    "Address": "Keskuskatu 45",
    "Country": "Finland"
  }
}
```

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        "CustomerID": "WOLZA",
        "ContactName": "Zbyszek Piestrzeniewicz",
        "CompanyName": "Wolski Zajazd",
        "Address": "ul. Filtrowa 68",
        "Country": "Poland"
    }
];

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DATASOURCE.TSX

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export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',

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```

        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
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        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]];
export const customerData: Object[] = [
  {
    "CustomerID": "ALFKI",
    "ContactName": "Maria ",
    "CompanyName": "Alfreds Futterkiste",
    "Address": "Obere Str. 57",
    "Country": "Germany"
  },
  {
    "CustomerID": "ANATR",
    "ContactName": "Ana Trujillo",
    "CompanyName": "Ana Trujillo Emparedados y helados",
    "Address": "Avda. de la Constitución 2222",
    "Country": "Mexico"
  },
  {
    "CustomerID": "ANTON",
    "ContactName": "Antonio Moreno",
    "CompanyName": "Antonio Moreno Taquería",
    "Address": "Mataderos 2312",
    "Country": "Mexico"
  },
  {
    "CustomerID": "AROUT",
    "ContactName": "Thomas Hardy",
    "CompanyName": "Around the Horn",
    "Address": "120 Hanover Sq.",
    "Country": "UK"
  },
  {
    "CustomerID": "BERGS",
    "ContactName": "Christina Berglund",
    "CompanyName": "Berglunds snabbköp",
    "Address": "Berguvsvägen 8",
    "Country": "Sweden"
  },
  {
    "CustomerID": "BLAUS",

```

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    "ContactName": "Hanna Moos",
    "CompanyName": "Blauer See Delikatessen",
    "Address": "Forsterstr. 57",
    "Country": "Germany"
  },
  {
    "CustomerID": "BLONP",
    "ContactName": "Frédérique Citeaux",
    "CompanyName": "Blondesddsl père et fils",
    "Address": "24, place Kléber",
    "Country": "France"
  },
  {
    "CustomerID": "BOLID",
    "ContactName": "Martín Sommer",
    "CompanyName": "Bólido Comidas preparadas",
    "Address": "C/ Araquil, 67",
    "Country": "Spain"
  },
  {
    "CustomerID": "BONAP",
    "ContactName": "Laurence Lebihan",
    "CompanyName": "Bon app'",
    "Address": "12, rue des Bouchers",
    "Country": "France"
  },
  {
    "CustomerID": "BOTTM",
    "ContactName": "Elizabeth Lincoln",
    "CompanyName": "Bottom-Dollar Markets",
    "Address": "23 Tsawassen Blvd.",
    "Country": "Canada"
  },
  {
    "CustomerID": "BSBEV",
    "ContactName": "Victoria Ashworth",
    "CompanyName": "B's Beverages",
    "Address": "Fauntleroy Circus",
    "Country": "UK"
  },
  {
    "CustomerID": "CACTU",
    "ContactName": "Patricio Simpson",
    "CompanyName": "Cactus Comidas para llevar",
    "Address": "Cerrito 333",
    "Country": "Argentina"
  },
  {
    "CustomerID": "CENTC",
    "ContactName": "Francisco Chang",
    "CompanyName": "Centro comercial Moctezuma",
    "Address": "Sierras de Granada 9993",
    "Country": "Mexico"
  },
  {
    "CustomerID": "CHOPS",
    "ContactName": "Yang Wang",
```

```
    "CompanyName": "Chop-suey Chinese",
    "Address": "Hauptstr. 29",
    "Country": "Switzerland"
  },
  {
    "CustomerID": "COMMI",
    "ContactName": "Pedro Afonso",
    "CompanyName": "Comércio Mineiro",
    "Address": "Av. dos Lusíadas, 23",
    "Country": "Brazil"
  },
  {
    "CustomerID": "CONSH",
    "ContactName": "Elizabeth Brown",
    "CompanyName": "Consolidated Holdings",
    "Address": "Berkeley Gardens 12 Brewery",
    "Country": "UK"
  },
  {
    "CustomerID": "DRACD",
    "ContactName": "Sven Ottlieb",
    "CompanyName": "Drachenblut Delikatessen",
    "Address": "Walserweg 21",
    "Country": "Germany"
  },
  {
    "CustomerID": "DUMON",
    "ContactName": "Janine Labrune",
    "CompanyName": "Du monde entier",
    "Address": "67, rue des Cinquante Otages",
    "Country": "France"
  },
  {
    "CustomerID": "EASTC",
    "ContactName": "Ann Devon",
    "CompanyName": "Eastern Connection",
    "Address": "35 King George",
    "Country": "UK"
  },
  {
    "CustomerID": "ERNSH",
    "ContactName": "Roland Mendel",
    "CompanyName": "Ernst Handel",
    "Address": "Kirchgasse 6",
    "Country": "Austria"
  },
  {
    "CustomerID": "FAMIA",
    "ContactName": "Aria Cruz",
    "CompanyName": "Familia Arquibaldo",
    "Address": "Rua Orós, 92",
    "Country": "Brazil"
  },
  {
    "CustomerID": "FISSA",
    "ContactName": "Diego Roel",
    "CompanyName": "FISSA Fabrica Inter. Salchichas S.A.",
```

```
    "Address": "C/ Moralarzal, 86",
    "Country": "Spain"
  },
  {
    "CustomerID": "FOLIG",
    "ContactName": "Martine Rancé",
    "CompanyName": "Folies gourmandes",
    "Address": "184, chaussée de Tournai",
    "Country": "France"
  },
  {
    "CustomerID": "FOLKO",
    "ContactName": "Maria Larsson",
    "CompanyName": "Folk och få HB",
    "Address": "Åkergatan 24",
    "Country": "Sweden"
  },
  {
    "CustomerID": "FRANK",
    "ContactName": "Peter Franken",
    "CompanyName": "Frankenversand",
    "Address": "Berliner Platz 43",
    "Country": "Germany"
  },
  {
    "CustomerID": "FRANR",
    "ContactName": "Carine Schmitt",
    "CompanyName": "France restauration",
    "Address": "54, rue Royale",
    "Country": "France"
  },
  {
    "CustomerID": "FRANS",
    "ContactName": "Paolo Accorti",
    "CompanyName": "Franchi S.p.A.",
    "Address": "Via Monte Bianco 34",
    "Country": "Italy"
  },
  {
    "CustomerID": "FURIB",
    "ContactName": "Lino Rodriguez",
    "CompanyName": "Furia Bacalhau e Frutos do Mar",
    "Address": "Jardim das rosas n. 32",
    "Country": "Portugal"
  },
  {
    "CustomerID": "GALED",
    "ContactName": "Eduardo Saavedra",
    "CompanyName": "Galería del gastrónomo",
    "Address": "Rambla de Cataluña, 23",
    "Country": "Spain"
  },
  {
    "CustomerID": "GODOS",
    "ContactName": "José Pedro Freyre",
    "CompanyName": "Godos Cocina Típica",
    "Address": "C/ Romero, 33",
```

```
    "Country": "Spain"
  },
  {
    "CustomerID": "GOURL",
    "ContactName": "André Fonseca",
    "CompanyName": "Gourmet Lanchonetes",
    "Address": "Av. Brasil, 442",
    "Country": "Brazil"
  },
  {
    "CustomerID": "GREAL",
    "ContactName": "Howard Snyder",
    "CompanyName": "Great Lakes Food Market",
    "Address": "2732 Baker Blvd.",
    "Country": "USA"
  },
  {
    "CustomerID": "GROSR",
    "ContactName": "Manuel Pereira",
    "CompanyName": "GROSELLA-Restaurante",
    "Address": "5ª Ave. Los Palos Grandes",
    "Country": "Venezuela"
  },
  {
    "CustomerID": "HANAR",
    "ContactName": "Mario Pontes",
    "CompanyName": "Hanari Carnes",
    "Address": "Rua do Paço, 67",
    "Country": "Brazil"
  },
  {
    "CustomerID": "HILAA",
    "ContactName": "Carlos Hernández",
    "CompanyName": "HILARION-Abastos",
    "Address": "Carrera 22 con Ave. Carlos Soublette #8-35",
    "Country": "Venezuela"
  },
  {
    "CustomerID": "HUNGC",
    "ContactName": "Yoshi Latimer",
    "CompanyName": "Hungry Coyote Import Store",
    "Address": "City Center Plaza 516 Main St.",
    "Country": "USA"
  },
  {
    "CustomerID": "HUNGO",
    "ContactName": "Patricia McKenna",
    "CompanyName": "Hungry Owl All-Night Grocers",
    "Address": "8 Johnstown Road",
    "Country": "Ireland"
  },
  {
    "CustomerID": "ISLAT",
    "ContactName": "Helen Bennett",
    "CompanyName": "Island Trading",
    "Address": "Garden House Crowther Way",
    "Country": "UK"
  }
```



```
    },
    {
      "CustomerID": "KOENE",
      "ContactName": "Philip Cramer",
      "CompanyName": "Königlich Essen",
      "Address": "Maubelstr. 90",
      "Country": "Germany"
    },
    {
      "CustomerID": "LACOR",
      "ContactName": "Daniel Tonini",
      "CompanyName": "La corne d'abondance",
      "Address": "67, avenue de l'Europe",
      "Country": "France"
    },
    {
      "CustomerID": "LAMAI",
      "ContactName": "Annette Roulet",
      "CompanyName": "La maison d'Asie",
      "Address": "1 rue Alsace-Lorraine",
      "Country": "France"
    },
    {
      "CustomerID": "LAUGB",
      "ContactName": "Yoshi Tannamuri",
      "CompanyName": "Laughing Bacchus Wine Cellars",
      "Address": "1900 Oak St.",
      "Country": "Canada"
    },
    {
      "CustomerID": "LAZYK",
      "ContactName": "John Steel",
      "CompanyName": "Lazy K Kountry Store",
      "Address": "12 Orchestra Terrace",
      "Country": "USA"
    },
    {
      "CustomerID": "LEHMS",
      "ContactName": "Renate Messner",
      "CompanyName": "Lehmanns Marktstand",
      "Address": "Magazinweg 7",
      "Country": "Germany"
    },
    {
      "CustomerID": "LETSS",
      "ContactName": "Jaime Yorres",
      "CompanyName": "Let's Stop N Shop",
      "Address": "87 Polk St. Suite 5",
      "Country": "USA"
    },
    {
      "CustomerID": "LILAS",
      "ContactName": "Carlos González",
      "CompanyName": "LILA-Supermercado",
      "Address": "Carrera 52 con Ave. Bolívar #65-98 Llano Largo",
      "Country": "Venezuela"
    }
  ],
```

```
{
  {
    "CustomerID": "LINOD",
    "ContactName": "Felipe Izquierdo",
    "CompanyName": "LINO-Delicateses",
    "Address": "Ave. 5 de Mayo Porlamar",
    "Country": "Venezuela"
  },
  {
    "CustomerID": "LONEP",
    "ContactName": "Fran Wilson",
    "CompanyName": "Lonesome Pine Restaurant",
    "Address": "89 Chiaroscuro Rd.",
    "Country": "USA"
  },
  {
    "CustomerID": "MAGAA",
    "ContactName": "Giovanni Rovelli",
    "CompanyName": "Magazzini Alimentari Riuniti",
    "Address": "Via Ludovico il Moro 22",
    "Country": "Italy"
  },
  {
    "CustomerID": "MAISD",
    "ContactName": "Catherine Dewey",
    "CompanyName": "Maison Dewey",
    "Address": "Rue Joseph-Bens 532",
    "Country": "Belgium"
  },
  {
    "CustomerID": "MEREP",
    "ContactName": "Jean Fresnière",
    "CompanyName": "Mère Paillarde",
    "Address": "43 rue St. Laurent",
    "Country": "Canada"
  },
  {
    "CustomerID": "MORGK",
    "ContactName": "Alexander Feuer",
    "CompanyName": "Morgenstern Gesundkost",
    "Address": "Heerstr. 22",
    "Country": "Germany"
  },
  {
    "CustomerID": "NORTS",
    "ContactName": "Simon Crowther",
    "CompanyName": "North/South",
    "Address": "South House 300 Queensbridge",
    "Country": "UK"
  },
  {
    "CustomerID": "OCEAN",
    "ContactName": "Yvonne Moncada",
    "CompanyName": "Océano Atlántico Ltda.",
    "Address": "Ing. Gustavo Moncada 8585 Piso 20-A",
    "Country": "Argentina"
  }
}
```

```
"CustomerID": "OLDWO",
"ContactName": "Rene Phillips",
"CompanyName": "Old World Delicatessen",
"Address": "2743 Bering St.",
"Country": "USA"
},
{
  "CustomerID": "OTTIK",
  "ContactName": "Henriette Pfalzheim",
  "CompanyName": "Ottilies Käseladen",
  "Address": "Mehrheimerstr. 369",
  "Country": "Germany"
},
{
  "CustomerID": "PARIS",
  "ContactName": "Marie Bertrand",
  "CompanyName": "Paris spécialités",
  "Address": "265, boulevard Charonne",
  "Country": "France"
},
{
  "CustomerID": "PERIC",
  "ContactName": "Guillermo Fernández",
  "CompanyName": "Pericles Comidas clásicas",
  "Address": "Calle Dr. Jorge Cash 321",
  "Country": "Mexico"
},
{
  "CustomerID": "PICCO",
  "ContactName": "Georg Pipps",
  "CompanyName": "Piccolo und mehr",
  "Address": "Geislweg 14",
  "Country": "Austria"
},
{
  "CustomerID": "PRINI",
  "ContactName": "Isabel de Castro",
  "CompanyName": "Princesa Isabel Vinhos",
  "Address": "Estrada da saúde n. 58",
  "Country": "Portugal"
},
{
  "CustomerID": "QUEDE",
  "ContactName": "Bernardo Batista",
  "CompanyName": "Que Delícia",
  "Address": "Rua da Panificadora, 12",
  "Country": "Brazil"
},
{
  "CustomerID": "QUEEN",
  "ContactName": "Lúcia Carvalho",
  "CompanyName": "Queen Cozinha",
  "Address": "Alameda dos Canários, 891",
  "Country": "Brazil"
},
{
  "CustomerID": "QUICK",
```

```
    "ContactName": "Horst Kloss",
    "CompanyName": "QUICK-Stop",
    "Address": "Taucherstraße 10",
    "Country": "Germany"
  },
  {
    "CustomerID": "RANCH",
    "ContactName": "Sergio Gutiérrez",
    "CompanyName": "Rancho grande",
    "Address": "Av. del Libertador 900",
    "Country": "Argentina"
  },
  {
    "CustomerID": "RATTC",
    "ContactName": "Paula Wilson",
    "CompanyName": "Rattlesnake Canyon Grocery",
    "Address": "2817 Milton Dr.",
    "Country": "USA"
  },
  {
    "CustomerID": "REGGC",
    "ContactName": "Maurizio Moroni",
    "CompanyName": "Reggiani Caseifici",
    "Address": "Strada Provinciale 124",
    "Country": "Italy"
  },
  {
    "CustomerID": "RICAR",
    "ContactName": "Janete Limeira",
    "CompanyName": "Ricardo Adocicados",
    "Address": "Av. Copacabana, 267",
    "Country": "Brazil"
  },
  {
    "CustomerID": "RICSU",
    "ContactName": "Michael Holz",
    "CompanyName": "Richter Supermarkt",
    "Address": "Grenzacherweg 237",
    "Country": "Switzerland"
  },
  {
    "CustomerID": "ROMEY",
    "ContactName": "Alejandra Camino",
    "CompanyName": "Romero y tomillo",
    "Address": "Gran Vía, 1",
    "Country": "Spain"
  },
  {
    "CustomerID": "SANTG",
    "ContactName": "Jonas Bergulfsen",
    "CompanyName": "Santé Gourmet",
    "Address": "Erling Skakkes gate 78",
    "Country": "Norway"
  },
  {
    "CustomerID": "SAVEA",
    "ContactName": "Jose Pavarotti",
```

```
    "CompanyName": "Save-a-lot Markets",
    "Address": "187 Suffolk Ln.",
    "Country": "USA"
  },
  {
    "CustomerID": "SEVES",
    "ContactName": "Hari Kumar",
    "CompanyName": "Seven Seas Imports",
    "Address": "90 Wadhurst Rd.",
    "Country": "UK"
  },
  {
    "CustomerID": "SIMOB",
    "ContactName": "Jytte Petersen",
    "CompanyName": "Simons bistro",
    "Address": "Vinbæltet 34",
    "Country": "Denmark"
  },
  {
    "CustomerID": "SPECB",
    "ContactName": "Dominique Perrier",
    "CompanyName": "Spécialités du monde",
    "Address": "25, rue Lauriston",
    "Country": "France"
  },
  {
    "CustomerID": "SPLIR",
    "ContactName": "Art Braunschweiger",
    "CompanyName": "Split Rail Beer & Ale",
    "Address": "P.O. Box 555",
    "Country": "USA"
  },
  {
    "CustomerID": "SUPRD",
    "ContactName": "Pascale Cartrain",
    "CompanyName": "Suprêmes délices",
    "Address": "Boulevard Tirou, 255",
    "Country": "Belgium"
  },
  {
    "CustomerID": "THEBI",
    "ContactName": "Liz Nixon",
    "CompanyName": "The Big Cheese",
    "Address": "89 Jefferson Way Suite 2",
    "Country": "USA"
  },
  {
    "CustomerID": "THECR",
    "ContactName": "Liu Wong",
    "CompanyName": "The Cracker Box",
    "Address": "55 Grizzly Peak Rd.",
    "Country": "USA"
  },
  {
    "CustomerID": "TOMSP",
    "ContactName": "Karin Josephs",
    "CompanyName": "Toms Spezialitäten",
```

```
    "Address": "Luisenstr. 48",
    "Country": "Germany"
  },
  {
    "CustomerID": "TORTU",
    "ContactName": "Miguel Angel Paolino",
    "CompanyName": "Tortuga Restaurante",
    "Address": "Avda. Azteca 123",
    "Country": "Mexico"
  },
  {
    "CustomerID": "TRADH",
    "ContactName": "Anabela Domingues",
    "CompanyName": "Tradição Hipermercados",
    "Address": "Av. Inês de Castro, 414",
    "Country": "Brazil"
  },
  {
    "CustomerID": "TRAIH",
    "ContactName": "Helvetius Nagy",
    "CompanyName": "Trail's Head Gourmet Provisioners",
    "Address": "722 DaVinci Blvd.",
    "Country": "USA"
  },
  {
    "CustomerID": "VAFFE",
    "ContactName": "Palle Ibsen",
    "CompanyName": "Vaffeljernet",
    "Address": "Smagsloget 45",
    "Country": "Denmark"
  },
  {
    "CustomerID": "VICTE",
    "ContactName": "Mary Saveley",
    "CompanyName": "Victuailles en stock",
    "Address": "2, rue du Commerce",
    "Country": "France"
  },
  {
    "CustomerID": "VINET",
    "ContactName": "Paul Henriot",
    "CompanyName": "Vins et alcools Chevalier",
    "Address": "59 rue de l'Abbaye",
    "Country": "France"
  },
  {
    "CustomerID": "WANDK",
    "ContactName": "Rita Müller",
    "CompanyName": "Die Wandernde Kuh",
    "Address": "Adenauerallee 900",
    "Country": "Germany"
  },
  {
    "CustomerID": "WARTH",
    "ContactName": "Pirkko Koskitalo",
    "CompanyName": "Wartian Herkku",
    "Address": "Torikatu 38",
```

```
    "Country": "Finland"
  },
  {
    "CustomerID": "WELLI",
    "ContactName": "Paula Parente",
    "CompanyName": "Wellington Importadora",
    "Address": "Rua do Mercado, 12",
    "Country": "Brazil"
  },
  {
    "CustomerID": "WHITC",
    "ContactName": "Karl Jablonski",
    "CompanyName": "White Clover Markets",
    "Address": "305 - 14th Ave. S. Suite 3B",
    "Country": "USA"
  },
  {
    "CustomerID": "WILMK",
    "ContactName": "Matti Karttunen",
    "CompanyName": "Wilman Kala",
    "Address": "Keskuskatu 45",
    "Country": "Finland"
  },
  {
    "CustomerID": "WOLZA",
    "ContactName": "Zbyszek Piestrzeniewicz",
    "CompanyName": "Wolski Zajazd",
    "Address": "ul. Filtrowa 68",
    "Country": "Poland"
  }
];
```

Hierarchy grid in React Grid component

The Hierarchy Grid in an React Grid component is typically used when you need to display hierarchical data in a tabular format with expandable and collapsible rows. It allows you to represent parent and child relationships within the grid, making it easier for you to navigate and understand the data.

This feature can be enabled by utilizing the [childGrid](#) and [childGrid.queryString](#) properties of the grid component.

To enable the Hierarchy Grid feature:

1. Inject the **DetailRow** module in the grid. This module is essential for handling the hierarchy grid functionality.
2. Define the `childGrid` property within the Grid component configuration. This property describes the options of the child grid.
3. Specify the `childGrid.queryString` property to establish the relation between the parent and child grids and visualizes the data in a hierarchical structure. This property determines how the child records are fetched based on the parent record.

The following example demonstrates how to enable the hierarchy feature in the grid

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { DetailRow, Inject } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data, employeeData } from '../datasource';
function App() {
  const childGridOptions = {
    columns: [
      { field: 'OrderID', headerText: 'Order ID', textAlign: 'Right',
width: 120 },
      { field: 'CustomerID', headerText: 'Customer ID', width: 150 },
      { field: 'ShipCity', headerText: 'Ship City', width: 150 },
      { field: 'ShipName', headerText: 'Ship Name', width: 150 }
    ],
    dataSource: data,
    queryString: 'EmployeeID'
  };
  return (<GridComponent dataSource={employeeData}
childGrid={childGridOptions} height={315}>
    <ColumnsDirective>
      <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='120' textAlign='Right' />
      <ColumnDirective field='FirstName' headerText='First Name'
width='150' />
      <ColumnDirective field='City' headerText='City' width='150' />
      <ColumnDirective field='Country' headerText='Country'
width='150' />
    </ColumnsDirective>
    <Inject services={[DetailRow]} />
  </GridComponent>);
}
;
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { DetailRow, GridModel, Inject } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data, employeeData } from '../datasource';
function App() {
  const childGridOptions : GridModel = {
    columns: [
      { field: 'OrderID', headerText: 'Order ID', textAlign: 'Right', width:
120 },
      { field: 'CustomerID', headerText: 'Customer ID', width: 150 },
      { field: 'ShipCity', headerText: 'Ship City', width: 150 },
      { field: 'ShipName', headerText: 'Ship Name', width: 150 }
    ],
    dataSource: data,
    queryString: 'EmployeeID'
  };
  return (<GridComponent dataSource={employeeData}
childGrid={childGridOptions} height={315}>
    <ColumnsDirective>

```



```

        <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='120' textAlign='Right' />
        <ColumnDirective field='FirstName' headerText='First Name'
width='150' />
        <ColumnDirective field='City' headerText='City' width='150' />
        <ColumnDirective field='Country' headerText='Country'
width='150' />
    </ColumnsDirective>
    <Inject services={[DetailRow]} />
    </GridComponent >
};
export default App;

```

DATASOURCE.JSX

```

export let employeeData = [{
    'EmployeeID': 1,
    'LastName': 'Davolio',
    'FirstName': 'Nancy',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-664743600000),
    'HireDate': new Date(704692800000),
    'Address': '507 - 20th Ave. E.\r\nApt. 2A',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98122',
    'Country': 'USA',
    'HomePhone': '(206) 555-9857',
    'Extension': '5467',
    'Photo': { 'Length': 21626 },
    'Notes': 'Education includes a BA in psychology from Colorado State
University in 1970. She also completed\
\'The Art of the Cold Call.\' Nancy is a member of Toastmasters
International.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
    'EmployeeID': 2,
    'LastName': 'Fuller',
    'FirstName': 'Andrew',
    'Title': 'Vice President, Sales',
    'TitleOfCourtesy': 'Dr.',
    'BirthDate': new Date(-563828400000),
    'HireDate': new Date(713764800000),
    'Address': '908 W. Capital Way',
    'City': 'Tacoma',
    'Region': 'WA',
    'PostalCode': '98401',
    'Country': 'USA',
    'HomePhone': '(206) 555-9482',
    'Extension': '3457',
    'Photo': { 'Length': 21626 },
    'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \

```

```

Dallas in 1981. He is fluent in French and Italian and reads German. He
joined the company as a sales representative, \
was promoted to sales manager in January 1992 and to vice president of sales
in March 1993. Andrew is a member of the \
Sales Management Roundtable, the Seattle Chamber of Commerce, and the Pacific
Rim Importers Association.',
  'ReportsTo': 0,
  'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
},
{
  'EmployeeID': 3,
  'LastName': 'Leverling',
  'FirstName': 'Janet',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-200088000000),
  'HireDate': new Date(702104400000),
  'Address': '722 Moss Bay Blvd.',
  'City': 'Kirkland',
  'Region': 'WA',
  'PostalCode': '98033',
  'Country': 'USA',
  'HomePhone': '(206) 555-3412',
  'Extension': '3355',
  'Photo': { 'Length': 21722 },
  'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
\
She has also completed a certificate program in food retailing management.\
Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
},
{
  'EmployeeID': 4,
  'LastName': 'Peacock',
  'FirstName': 'Margaret',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Mrs.',
  'BirthDate': new Date(-1018814400000),
  'HireDate': new Date(736401600000),
  'Address': '4110 Old Redmond Rd.',
  'City': 'Redmond',
  'Region': 'WA',
  'PostalCode': '98052',
  'Country': 'USA',
  'HomePhone': '(206) 555-8122',
  'Extension': '5176',
  'Photo': { 'Length': 21626 },
  'Notes': 'Margaret holds a BA in English literature from Concordia
College (1958) and an MA from the American \
Institute of Culinary Arts (1966). She was assigned to the London office
temporarily from July through November 1992.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
},
{

```

```

      'EmployeeID': 5,
      'LastName': 'Buchanan',
      'FirstName': 'Steven',
      'Title': 'Sales Manager',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-468010800000),
      'HireDate': new Date(750830400000),
      'Address': '14 Garrett Hill',
      'City': 'London',
      'Region': null,
      'PostalCode': 'SW1 8JR',
      'Country': 'UK',
      'HomePhone': '(71) 555-4848',
      'Extension': '3453',
      'Photo': { 'Length': 21626 },
      'Notes': 'Steven Buchanan graduated from St. Andrews University,
Scotland, with a BSC degree in 1976. Upon joining the company as \
a sales representative in 1992, he spent 6 months in an orientation program
at the Seattle office and then returned to his permanent \
post in London. He was promoted to sales manager in March 1993. Mr.
Buchanan has completed the courses \'Successful \
Telemarketing\' and \'International Sales Management.\' He is fluent in
French.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
    },
    {
      'EmployeeID': 6,
      'LastName': 'Suyama',
      'FirstName': 'Michael',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-205185600000),
      'HireDate': new Date(750830400000),
      'Address': 'Coventry House\r\nMiner Rd.',
      'City': 'London',
      'Region': null,
      'PostalCode': 'EC2 7JR',
      'Country': 'UK',
      'HomePhone': '(71) 555-7773',
      'Extension': '428',
      'Photo': { 'Length': 21626 },
      'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese, and
Spanish.',
      'ReportsTo': 5,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 7,
      'LastName': 'King',
      'FirstName': 'Robert',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mr.',

```

```

    'BirthDate': new Date(-302731200000),
    'HireDate': new Date(757486800000),
    'Address': 'Edgeham Hollow\r\nWinchester Way',
    'City': 'London',
    'Region': null,
    'PostalCode': 'RG1 9SP',
    'Country': 'UK',
    'HomePhone': '(71) 555-5598',
    'Extension': '465',
    'Photo': { 'Length': 21626 },
    'Notes': 'Robert King served in the Peace Corps and traveled extensively
before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 8,
    'LastName': 'Callahan',
    'FirstName': 'Laura',
    'Title': 'Inside Sales Coordinator',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-377982000000),
    'HireDate': new Date(762843600000),
    'Address': '4726 - 11th Ave. N.E.',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98105',
    'Country': 'USA',
    'HomePhone': '(206) 555-1189',
    'Extension': '2344',
    'Photo': { 'Length': 21626 },
    'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 9,
    'LastName': 'Dodsworth',
    'FirstName': 'Anne',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-123966000000),
    'HireDate': new Date(784875600000),
    'Address': '7 Houndstooth Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'WG2 7LT',
    'Country': 'UK',
    'HomePhone': '(71) 555-4444',
    'Extension': '452',
    'Photo': { 'Length': 21626 },

```

```

    'Notes': 'Anne has a BA degree in English from St. Lawrence College. She
is fluent in French and German.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  }];
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims', ShipAddress:
'59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua
do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2, rue
du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua
do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),

```

```

    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress: 'Hauptstr.
31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry: 'Venezuela',
    Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse 6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
    Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
    ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
    Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
    Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua da
Panificadora, 12',

```

```

    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
    Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
    Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
    ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA', Freight:
    48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let employeeData: Object[] = [{
  'EmployeeID': 1,
  'LastName': 'Davolio',
  'FirstName': 'Nancy',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-664743600000),
  'HireDate': new Date(704692800000),
  'Address': '507 - 20th Ave. E.\r\nApt. 2A',
  'City': 'Seattle',
  'Region': 'WA',
  'PostalCode': '98122',
  'Country': 'USA',
  'HomePhone': '(206) 555-9857',
  'Extension': '5467',
  'Photo': { 'Length': 21626 },
  'Notes': 'Education includes a BA in psychology from Colorado State
  University in 1970. She also completed\
  \'The Art of the Cold Call.\' Nancy is a member of Toastmasters
  International.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
  'EmployeeID': 2,
  'LastName': 'Fuller',
  'FirstName': 'Andrew',
  'Title': 'Vice President, Sales',
  'TitleOfCourtesy': 'Dr.',
  'BirthDate': new Date(-563828400000),
  'HireDate': new Date(713764800000),
  'Address': '908 W. Capital Way',
  'City': 'Tacoma',
  'Region': 'WA',
  'PostalCode': '98401',
  'Country': 'USA',
  'HomePhone': '(206) 555-9482',
  'Extension': '3457',
  'Photo': { 'Length': 21626 },
  'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
  international marketing from the University of \

```

```

Dallas in 1981. He is fluent in French and Italian and reads German. He
joined the company as a sales representative, \
  was promoted to sales manager in January 1992 and to vice president of
sales in March 1993. Andrew is a member of the \
  Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.',
  'ReportsTo': 0,
  'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
},
{
  'EmployeeID': 3,
  'LastName': 'Leverling',
  'FirstName': 'Janet',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-200088000000),
  'HireDate': new Date(702104400000),
  'Address': '722 Moss Bay Blvd.',
  'City': 'Kirkland',
  'Region': 'WA',
  'PostalCode': '98033',
  'Country': 'USA',
  'HomePhone': '(206) 555-3412',
  'Extension': '3355',
  'Photo': { 'Length': 21722 },
  'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
\
  She has also completed a certificate program in food retailing
management.\
  Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
},
{
  'EmployeeID': 4,
  'LastName': 'Peacock',
  'FirstName': 'Margaret',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Mrs.',
  'BirthDate': new Date(-1018814400000),
  'HireDate': new Date(736401600000),
  'Address': '4110 Old Redmond Rd.',
  'City': 'Redmond',
  'Region': 'WA',
  'PostalCode': '98052',
  'Country': 'USA',
  'HomePhone': '(206) 555-8122',
  'Extension': '5176',
  'Photo': { 'Length': 21626 },
  'Notes': 'Margaret holds a BA in English literature from Concordia
College (1958) and an MA from the American \
  Institute of Culinary Arts (1966). She was assigned to the London office
temporarily from July through November 1992.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
},

```



```

{
  'EmployeeID': 5,
  'LastName': 'Buchanan',
  'FirstName': 'Steven',
  'Title': 'Sales Manager',
  'TitleOfCourtesy': 'Mr.',
  'BirthDate': new Date(-468010800000),
  'HireDate': new Date(750830400000),
  'Address': '14 Garrett Hill',
  'City': 'London',
  'Region': null,
  'PostalCode':
  'SW1 8JR',
  'Country': 'UK',
  'HomePhone': '(71) 555-4848',
  'Extension': '3453',
  'Photo': { 'Length': 21626 },
  'Notes': 'Steven Buchanan graduated from St. Andrews University,
Scotland, with a BSC degree in 1976. Upon joining the company as \
a sales representative in 1992, he spent 6 months in an orientation
program at the Seattle office and then returned to his permanent \
post in London. He was promoted to sales manager in March 1993. Mr.
Buchanan has completed the courses \'Successful \
Telemarketing\' and \'International Sales Management.\' He is fluent in
French.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
},
{
  'EmployeeID': 6,
  'LastName': 'Suyama',
  'FirstName': 'Michael',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Mr.',
  'BirthDate': new Date(-205185600000),
  'HireDate': new Date(750830400000),
  'Address': 'Coventry House\r\nMiner Rd.',
  'City': 'London',
  'Region': null,
  'PostalCode': 'EC2 7JR',
  'Country': 'UK',
  'HomePhone': '(71) 555-7773',
  'Extension': '428',
  'Photo': { 'Length': 21626 },
  'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese, and
Spanish.',
  'ReportsTo': 5,
  'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
  'EmployeeID': 7,
  'LastName': 'King',
  'FirstName': 'Robert',

```

```

    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-302731200000),
    'HireDate': new Date(757486800000),
    'Address': 'Edgeham Hollow\r\nWinchester Way',
    'City': 'London',
    'Region': null,
    'PostalCode': 'RG1 9SP',
    'Country': 'UK',
    'HomePhone': '(71) 555-5598',
    'Extension': '465',
    'Photo': { 'Length': 21626 },
    'Notes': 'Robert King served in the Peace Corps and traveled extensively
before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 8,
    'LastName': 'Callahan',
    'FirstName': 'Laura',
    'Title': 'Inside Sales Coordinator',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-377982000000),
    'HireDate': new Date(762843600000),
    'Address': '4726 - 11th Ave. N.E.',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98105',
    'Country': 'USA',
    'HomePhone': '(206) 555-1189',
    'Extension': '2344',
    'Photo': { 'Length': 21626 },
    'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 9,
    'LastName': 'Dodsworth',
    'FirstName': 'Anne',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-123966000000),
    'HireDate': new Date(784875600000),
    'Address': '7 Houndstooth Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'WG2 7LT',
    'Country': 'UK',
    'HomePhone': '(71) 555-4444',
    'Extension': '452',
  }

```

```

    'Photo': { 'Length': 21626 },
    'Notes': 'Anne has a BA degree in English from St. Lawrence College. She
is fluent in French and German.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  }];
export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {

```

```

    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
        },
        {
            OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
            ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
            ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
            },
            {
                OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
                ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
                ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
                },
                {
                    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
                    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
                    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
                    },
                    {
                        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
                        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
                        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
                        },
                        {
                            OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
                            ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
                            ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
                            },
                            {

```

```

    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

* Grid supports n level of child grids.

* Hierarchical binding is not supported when [DetailTemplate](#) is enabled.

Bind hierarchy grid with different field

By default, the parent and child grids have the same field name to map and render a hierarchical grid. However, the component supports establishing a parent-child relationship between grids with different field names. This feature is beneficial when you want to create a parent-child relationship between grids but need to use distinct field names for mapping the data. As a result, you can easily establish the desired relationship between the parent and child grids, even with different field names for data mapping.

By default, the parent and child grid relation is maintained using the [queryString](#) property, which requires the same field name for both grids. However, to achieve the parent and child relation with different fields, you need to modify the mapping value in the [load](#) event of child grid.

In the following example, the `load` event is utilized to customize the mapping value for the child grid. By accessing the `parentDetails` property and its `parentKeyFieldValue`, you can set the desired mapping value. The `parentRowData` property contains the data of the parent row, and by using the `EmployeeID` field name, you can extract the corresponding value from the parent row data.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
'@syncfusion/ej2-react-grids';
import { DetailRow, Inject } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { childdata, employeeData } from './datasource';
function App() {
  let grid;
  let childGridOptions = {
    columns: [
      { field: 'OrderID', headerText: 'Order ID', textAlign: 'Right',
width: 120 },
      { field: 'CustomerID', headerText: 'Customer ID', width: 150 },
      { field: 'ShipCity', headerText: 'Ship City', width: 150 },
      { field: 'ShipName', headerText: 'Ship Name', width: 150 }
    ],
    dataSource: childdata,

```

```

        load() {
            const str = 'EmployeeID';
            this.parentDetails.parentKeyFieldValue =
                this.parentDetails.parentRowData[str];
        },
        queryString: 'ID'
    };
    return (<div>
        <GridComponent dataSource={employeeData} childGrid={childGridOptions}
        height={265} ref={g => grid = g}>
            <ColumnsDirective>
                <ColumnDirective field='EmployeeID' headerText='Employee ID'
                width='120' textAlign='Right' />
                <ColumnDirective field='FirstName' headerText='First Name'
                width='150' />
                <ColumnDirective field='City' headerText='City' width='150' />
                <ColumnDirective field='Country' headerText='Country' width='150' />
            </ColumnsDirective>
            <Inject services={[DetailRow]} />
        </GridComponent></div>);
    }
    ;
    export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
'@syncfusion/ej2-react-grids';
import { DetailRow, Grid, GridModel, Inject } from '@syncfusion/ej2-react-
grids';
import * as React from 'react';
import { childdata, employeeData } from './datasource';
function App() {
    let grid: Grid | null;
    let childGridOptions : GridModel = {
        columns: [
            { field: 'OrderID', headerText: 'Order ID', textAlign: 'Right', width:
120 },
            { field: 'CustomerID', headerText: 'Customer ID', width: 150 },
            { field: 'ShipCity', headerText: 'Ship City', width: 150 },
            { field: 'ShipName', headerText: 'Ship Name', width: 150 }
        ],
        dataSource: childdata,
        load() {
            const str: string = 'EmployeeID';
            (this as any).parentDetails.parentKeyFieldValue =
                (this as any).parentDetails.parentRowData[str];
        },
        queryString: 'ID'
    };
    return (<div>
        <GridComponent dataSource={employeeData} childGrid={childGridOptions}
        height={265}
        ref={g => grid = g} >
            <ColumnsDirective>

```

```

    <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='120' textAlign='Right' />
    <ColumnDirective field='FirstName' headerText='First Name'
width='150' />
    <ColumnDirective field='City' headerText='City' width='150' />
    <ColumnDirective field='Country' headerText='Country' width='150' />
  </ColumnsDirective>
  <Inject services={[DetailRow]} />
</GridComponent></div>
};
export default App;

```

DATASOURCE.JSX

```

export let childdata = [
  {
    OrderID: 10248, CustomerID: 'VINET', ID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', ID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', ID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', ID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', ID: 2, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {

```

```

      OrderID: 10253, CustomerID: 'HANAR', ID: 7, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', ID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', ID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', ID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', ID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', ID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', ID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {

```



```

      OrderID: 10260, CustomerID: 'OTTIK', ID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', ID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', ID: 8, OrderDate: new
Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
  ];
export let employeeData = [{
  'EmployeeID': 1,
  'LastName': 'Davolio',
  'FirstName': 'Nancy',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-664743600000),
  'HireDate': new Date(704692800000),
  'Address': '507 - 20th Ave. E.\r\nApt. 2A',
  'City': 'Seattle',
  'Region': 'WA',
  'PostalCode': '98122',
  'Country': 'USA',
  'HomePhone': '(206) 555-9857',
  'Extension': '5467',
  'Photo': { 'Length': 21626 },
  'Notes': 'Education includes a BA in psychology from Colorado State
University in 1970. She also completed\
  \'The Art of the Cold Call.\' Nancy is a member of Toastmasters
International.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
  'EmployeeID': 2,
  'LastName': 'Fuller',
  'FirstName': 'Andrew',
  'Title': 'Vice President, Sales',
  'TitleOfCourtesy': 'Dr.',
  'BirthDate': new Date(-563828400000),
  'HireDate': new Date(713764800000),
  'Address': '908 W. Capital Way',
  'City': 'Tacoma',

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      'Region': 'WA',
      'PostalCode': '98401',
      'Country': 'USA',
      'HomePhone': '(206) 555-9482',
      'Extension': '3457',
      'Photo': { 'Length': 21626 },
      'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
      Dallas in 1981. He is fluent in French and Italian and reads German. He
joined the company as a sales representative, \
      was promoted to sales manager in January 1992 and to vice president of
sales in March 1993. Andrew is a member of the \
      Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.',
      'ReportsTo': 0,
      'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
    },
    {
      'EmployeeID': 3,
      'LastName': 'Leverling',
      'FirstName': 'Janet',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-200088000000),
      'HireDate': new Date(702104400000),
      'Address': '722 Moss Bay Blvd.',
      'City': 'Kirkland',
      'Region': 'WA',
      'PostalCode': '98033',
      'Country': 'USA',
      'HomePhone': '(206) 555-3412',
      'Extension': '3355',
      'Photo': { 'Length': 21722 },
      'Notes': 'Janet has a BS degree in chemistry from Boston College
(1984). \
      She has also completed a certificate program in food retailing
management.\
      Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
    },
    {
      'EmployeeID': 4,
      'LastName': 'Peacock',
      'FirstName': 'Margaret',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mrs.',
      'BirthDate': new Date(-1018814400000),
      'HireDate': new Date(736401600000),
      'Address': '4110 Old Redmond Rd.',
      'City': 'Redmond',
      'Region': 'WA',
      'PostalCode': '98052',
      'Country': 'USA',
      'HomePhone': '(206) 555-8122',
      'Extension': '5176',

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```

      'Photo': { 'Length': 21626 },
      'Notes': 'Margaret holds a BA in English literature from Concordia
College (1958) and an MA from the American \
Institute of Culinary Arts (1966). She was assigned to the London office
temporarily from July through November 1992.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
    },
    {
      'EmployeeID': 5,
      'LastName': 'Buchanan',
      'FirstName': 'Steven',
      'Title': 'Sales Manager',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-468010800000),
      'HireDate': new Date(750830400000),
      'Address': '14 Garrett Hill',
      'City': 'London',
      'Region': null,
      'PostalCode': 'SW1 8JR',
      'Country': 'UK',
      'HomePhone': '(71) 555-4848',
      'Extension': '3453',
      'Photo': { 'Length': 21626 },
      'Notes': 'Steven Buchanan graduated from St. Andrews University,
Scotland, with a BSC degree in 1976. Upon joining the company as \
a sales representative in 1992, he spent 6 months in an orientation
program at the Seattle office and then returned to his permanent \
post in London. He was promoted to sales manager in March 1993. Mr.
Buchanan has completed the courses \'Successful \
Telemarketing\' and \'International Sales Management.\' He is fluent in
French.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
    },
    {
      'EmployeeID': 6,
      'LastName': 'Suyama',
      'FirstName': 'Michael',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-205185600000),
      'HireDate': new Date(750830400000),
      'Address': 'Coventry House\r\nMiner Rd.',
      'City': 'London',
      'Region': null,
      'PostalCode': 'EC2 7JR',
      'Country': 'UK',
      'HomePhone': '(71) 555-7773',
      'Extension': '428',
      'Photo': { 'Length': 21626 },
      'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese, and
Spanish.',

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```

      'ReportsTo': 5,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 7,
      'LastName': 'King',
      'FirstName': 'Robert',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-302731200000),
      'HireDate': new Date(757486800000),
      'Address': 'Edgeham Hollow\r\nWinchester Way',
      'City': 'London',
      'Region': null,
      'PostalCode': 'RG1 9SP',
      'Country': 'UK',
      'HomePhone': '(71) 555-5598',
      'Extension': '465',
      'Photo': { 'Length': 21626 },
      'Notes': 'Robert King served in the Peace Corps and traveled
extensively before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
      'ReportsTo': 5,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 8,
      'LastName': 'Callahan',
      'FirstName': 'Laura',
      'Title': 'Inside Sales Coordinator',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-377982000000),
      'HireDate': new Date(762843600000),
      'Address': '4726 - 11th Ave. N.E.',
      'City': 'Seattle',
      'Region': 'WA',
      'PostalCode': '98105',
      'Country': 'USA',
      'HomePhone': '(206) 555-1189',
      'Extension': '2344',
      'Photo': { 'Length': 21626 },
      'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 9,
      'LastName': 'Dodsworth',
      'FirstName': 'Anne',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-123966000000),
      'HireDate': new Date(784875600000),

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        'Address': '7 Houndstooth Rd.',
        'City': 'London',
        'Region': null,
        'PostalCode': 'WG2 7LT',
        'Country': 'UK',
        'HomePhone': '(71) 555-4444',
        'Extension': '452',
        'Photo': { 'Length': 21626 },
        'Notes': 'Anne has a BA degree in English from St. Lawrence College.
She is fluent in French and German.',
        'ReportsTo': 5,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    }
  ];

```

DATASOURCE.TSX

```

export let childdata: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', ID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', ID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', ID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', ID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', ID: 2, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  }
]

```

```

    },
    {
      OrderID: 10253, CustomerID: 'HANAR', ID: 7, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', ID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', ID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', ID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', ID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', ID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', ID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
  },

```

```

    {
      OrderID: 10260, CustomerID: 'OTTIK', ID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', ID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', ID: 8, OrderDate: new
Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
  ];
export let employeeData: Object[] = [{
  'EmployeeID': 1,
  'LastName': 'Davolio',
  'FirstName': 'Nancy',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-664743600000),
  'HireDate': new Date(704692800000),
  'Address': '507 - 20th Ave. E.\r\nApt. 2A',
  'City': 'Seattle',
  'Region': 'WA',
  'PostalCode': '98122',
  'Country': 'USA',
  'HomePhone': '(206) 555-9857',
  'Extension': '5467',
  'Photo': { 'Length': 21626 },
  'Notes': 'Education includes a BA in psychology from Colorado State
University in 1970. She also completed\
\'The Art of the Cold Call.\' Nancy is a member of Toastmasters
International.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
  'EmployeeID': 2,
  'LastName': 'Fuller',
  'FirstName': 'Andrew',
  'Title': 'Vice President, Sales',
  'TitleOfCourtesy': 'Dr.',
  'BirthDate': new Date(-563828400000),
  'HireDate': new Date(713764800000),
  'Address': '908 W. Capital Way',
  'City': 'Tacoma',

```

```

    'Region': 'WA',
    'PostalCode': '98401',
    'Country': 'USA',
    'HomePhone': '(206) 555-9482',
    'Extension': '3457',
    'Photo': { 'Length': 21626 },
    'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
    Dallas in 1981. He is fluent in French and Italian and reads German. He
joined the company as a sales representative, \
    was promoted to sales manager in January 1992 and to vice president of
sales in March 1993. Andrew is a member of the \
    Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.',
    'ReportsTo': 0,
    'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
  },
  {
    'EmployeeID': 3,
    'LastName': 'Leverling',
    'FirstName': 'Janet',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-200088000000),
    'HireDate': new Date(702104400000),
    'Address': '722 Moss Bay Blvd.',
    'City': 'Kirkland',
    'Region': 'WA',
    'PostalCode': '98033',
    'Country': 'USA',
    'HomePhone': '(206) 555-3412',
    'Extension': '3355',
    'Photo': { 'Length': 21722 },
    'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
\
    She has also completed a certificate program in food retailing
management.\
    Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
  },
  {
    'EmployeeID': 4,
    'LastName': 'Peacock',
    'FirstName': 'Margaret',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mrs.',
    'BirthDate': new Date(-1018814400000),
    'HireDate': new Date(736401600000),
    'Address': '4110 Old Redmond Rd.',
    'City': 'Redmond',
    'Region': 'WA',
    'PostalCode': '98052',
    'Country': 'USA',
    'HomePhone': '(206) 555-8122',
    'Extension': '5176',

```



```

    'Photo': { 'Length': 21626 },
    'Notes': 'Margaret holds a BA in English literature from Concordia
College (1958) and an MA from the American \
Institute of Culinary Arts (1966). She was assigned to the London office
temporarily from July through November 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
  },
  {
    'EmployeeID': 5,
    'LastName': 'Buchanan',
    'FirstName': 'Steven',
    'Title': 'Sales Manager',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-468010800000),
    'HireDate': new Date(750830400000),
    'Address': '14 Garrett Hill',
    'City': 'London',
    'Region': null,
    'PostalCode':
    'SW1 8JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-4848',
    'Extension': '3453',
    'Photo': { 'Length': 21626 },
    'Notes': 'Steven Buchanan graduated from St. Andrews University,
Scotland, with a BSC degree in 1976. Upon joining the company as \
a sales representative in 1992, he spent 6 months in an orientation
program at the Seattle office and then returned to his permanent \
post in London. He was promoted to sales manager in March 1993. Mr.
Buchanan has completed the courses \'Successful \
Telemarketing\' and \'International Sales Management.\' He is fluent in
French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
  },
  {
    'EmployeeID': 6,
    'LastName': 'Suyama',
    'FirstName': 'Michael',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-205185600000),
    'HireDate': new Date(750830400000),
    'Address': 'Coventry House\r\nMiner Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'EC2 7JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-7773',
    'Extension': '428',
    'Photo': { 'Length': 21626 },
    'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \

```

```

    He is fluent in Japanese and can read and write French, Portuguese, and
    Spanish.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 7,
    'LastName': 'King',
    'FirstName': 'Robert',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-302731200000),
    'HireDate': new Date(757486800000),
    'Address': 'Edgeham Hollow\r\nWinchester Way',
    'City': 'London',
    'Region': null,
    'PostalCode': 'RG1 9SP',
    'Country': 'UK',
    'HomePhone': '(71) 555-5598',
    'Extension': '465',
    'Photo': { 'Length': 21626 },
    'Notes': 'Robert King served in the Peace Corps and traveled extensively
before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 8,
    'LastName': 'Callahan',
    'FirstName': 'Laura',
    'Title': 'Inside Sales Coordinator',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-377982000000),
    'HireDate': new Date(762843600000),
    'Address': '4726 - 11th Ave. N.E.',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98105',
    'Country': 'USA',
    'HomePhone': '(206) 555-1189',
    'Extension': '2344',
    'Photo': { 'Length': 21626 },
    'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 9,
    'LastName': 'Dodsworth',
    'FirstName': 'Anne',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',

```

```
'BirthDate': new Date(-123966000000),
'HireDate': new Date(784875600000),
'Address': '7 Houndstooth Rd.',
'City': 'London',
'Region': null,
'PostalCode': 'WG2 7LT',
'Country': 'UK',
'HomePhone': '(71) 555-4444',
'Extension': '452',
'Photo': { 'Length': 21626 },
'Notes': 'Anne has a BA degree in English from St. Lawrence College. She
is fluent in French and German.',
'ReportsTo': 5,
'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
}];
```

Make sure to adjust the field name according to your specific scenario.

Expand child grid initially

Expanding the child grid initially in the Syncfusion React Grid component is helpful when you want to display the child rows of the hierarchical grid expanded by default upon grid load. This can be beneficial in scenarios where you want to provide immediate visibility into the hierarchical data without requiring you to manually expand each child row.

To achieve this, you can use the [expand](#) method with the desired target index (number) in the [dataBound](#) event of the grid.

In the provided example, expand the third record of the grid by utilizing the `expand` method within the `dataBound` event.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { DetailRow, Inject } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data, employeeData } from './datasource';
function App() {
  let grid;
  const childGridOptions = {
    columns: [
      { field: 'OrderID', headerText: 'Order ID', textAlign: 'Right',
width: 120 },
      { field: 'CustomerID', headerText: 'Customer ID', width: 150 },
      { field: 'ShipCity', headerText: 'Ship City', width: 150 },
      { field: 'ShipName', headerText: 'Ship Name', width: 150 }
    ],
    dataSource: data,
    queryString: 'EmployeeID'
  };
  const onDataBound = () => {
    if (grid) {
      grid.detailRowModule.expand(2);
    }
  };
  return (<div>
```

```

    <GridComponent dataSource={employeeData} childGrid={childGridOptions}
    height={265} ref={g => grid = g} dataBound={onDataBound}>
      <ColumnsDirective>
        <ColumnDirective field='EmployeeID' headerText='Employee ID'
        width='120' textAlign="Right"/>
        <ColumnDirective field='FirstName' headerText='First Name'
        width='150' />
        <ColumnDirective field='City' headerText='City' width='150' />
        <ColumnDirective field='Country' headerText='Country' width='150' />
      </ColumnsDirective>
      <Inject services={[DetailRow]} />
    </GridComponent></div>;
  }
;
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { DetailRow, Grid, GridModel, Inject } from '@syncfusion/ej2-react-
grids';
import * as React from 'react';
import { data, employeeData } from '../datasource';
function App() {
  let grid: Grid | null;
  const childGridOptions : GridModel = {
    columns: [
      { field: 'OrderID', headerText: 'Order ID', textAlign: 'Right',
width: 120 },
      { field: 'CustomerID', headerText: 'Customer ID', width: 150 },
      { field: 'ShipCity', headerText: 'Ship City', width: 150 },
      { field: 'ShipName', headerText: 'Ship Name', width: 150 }
    ],
    dataSource: data,
    queryString: 'EmployeeID'
  };

  const onDataBound = () => {
    if (grid) {
      grid.detailRowModule.expand(2);
    }
  }

  return (<div>
    <GridComponent dataSource={employeeData} childGrid={childGridOptions}
    height={265}
    ref={g => grid = g} dataBound={onDataBound}>
      <ColumnsDirective>
        <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='120' textAlign="Right"/>
        <ColumnDirective field='FirstName' headerText='First Name'
width='150' />
        <ColumnDirective field='City' headerText='City' width='150' />
        <ColumnDirective field='Country' headerText='Country' width='150' />
      </ColumnsDirective>
      <Inject services={[DetailRow]} />

```

```

    </GridComponent></div>)
  };
  export default App;

```

DATASOURCE.JSX

```

export let employeeData = [{
  'EmployeeID': 1,
  'LastName': 'Davolio',
  'FirstName': 'Nancy',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-664743600000),
  'HireDate': new Date(704692800000),
  'Address': '507 - 20th Ave. E.\r\nApt. 2A',
  'City': 'Seattle',
  'Region': 'WA',
  'PostalCode': '98122',
  'Country': 'USA',
  'HomePhone': '(206) 555-9857',
  'Extension': '5467',
  'Photo': { 'Length': 21626 },
  'Notes': 'Education includes a BA in psychology from Colorado State University in 1970. She also completed \'The Art of the Cold Call.\' Nancy is a member of Toastmasters International.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
  'EmployeeID': 2,
  'LastName': 'Fuller',
  'FirstName': 'Andrew',
  'Title': 'Vice President, Sales',
  'TitleOfCourtesy': 'Dr.',
  'BirthDate': new Date(-563828400000),
  'HireDate': new Date(713764800000),
  'Address': '908 W. Capital Way',
  'City': 'Tacoma',
  'Region': 'WA',
  'PostalCode': '98401',
  'Country': 'USA',
  'HomePhone': '(206) 555-9482',
  'Extension': '3457',
  'Photo': { 'Length': 21626 },
  'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in international marketing from the University of \ Dallas in 1981. He is fluent in French and Italian and reads German. He joined the company as a sales representative, \ was promoted to sales manager in January 1992 and to vice president of sales in March 1993. Andrew is a member of the \ Sales Management Roundtable, the Seattle Chamber of Commerce, and the Pacific Rim Importers Association.',
  'ReportsTo': 0,
  'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
},

```

```

{
  'EmployeeID': 3,
  'LastName': 'Leverling',
  'FirstName': 'Janet',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-200088000000),
  'HireDate': new Date(702104400000),
  'Address': '722 Moss Bay Blvd.',
  'City': 'Kirkland',
  'Region': 'WA',
  'PostalCode': '98033',
  'Country': 'USA',
  'HomePhone': '(206) 555-3412',
  'Extension': '3355',
  'Photo': { 'Length': 21722 },
  'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
\
  She has also completed a certificate program in food retailing management.\
  Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
},
{
  'EmployeeID': 4,
  'LastName': 'Peacock',
  'FirstName': 'Margaret',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Mrs.',
  'BirthDate': new Date(-1018814400000),
  'HireDate': new Date(736401600000),
  'Address': '4110 Old Redmond Rd.',
  'City': 'Redmond',
  'Region': 'WA',
  'PostalCode': '98052',
  'Country': 'USA',
  'HomePhone': '(206) 555-8122',
  'Extension': '5176',
  'Photo': { 'Length': 21626 },
  'Notes': 'Margaret holds a BA in English literature from Concordia
College (1958) and an MA from the American \
Institute of Culinary Arts (1966). She was assigned to the London office
temporarily from July through November 1992.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
},
{
  'EmployeeID': 5,
  'LastName': 'Buchanan',
  'FirstName': 'Steven',
  'Title': 'Sales Manager',
  'TitleOfCourtesy': 'Mr.',
  'BirthDate': new Date(-468010800000),
  'HireDate': new Date(750830400000),
  'Address': '14 Garrett Hill',
  'City': 'London',

```

```

      'Region': null,
      'PostalCode': 'SW1 8JR',
      'Country': 'UK',
      'HomePhone': '(71) 555-4848',
      'Extension': '3453',
      'Photo': { 'Length': 21626 },
      'Notes': 'Steven Buchanan graduated from St. Andrews University,
Scotland, with a BSC degree in 1976. Upon joining the company as \
a sales representative in 1992, he spent 6 months in an orientation program \
at the Seattle office and then returned to his permanent \
post in London. He was promoted to sales manager in March 1993. Mr.
Buchanan has completed the courses \'Successful \
Telemarketing\' and \'International Sales Management.\' He is fluent in
French.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/employees/buchanan.bmp'
    },
    {
      'EmployeeID': 6,
      'LastName': 'Suyama',
      'FirstName': 'Michael',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-205185600000),
      'HireDate': new Date(750830400000),
      'Address': 'Coventry House\r\nMiner Rd.',
      'City': 'London',
      'Region': null,
      'PostalCode': 'EC2 7JR',
      'Country': 'UK',
      'HomePhone': '(71) 555-7773',
      'Extension': '428',
      'Photo': { 'Length': 21626 },
      'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese, and
Spanish.',
      'ReportsTo': 5,
      'PhotoPath': 'http://accweb/employees/davolio.bmp'
    },
    {
      'EmployeeID': 7,
      'LastName': 'King',
      'FirstName': 'Robert',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-302731200000),
      'HireDate': new Date(757486800000),
      'Address': 'Edgeham Hollow\r\nWinchester Way',
      'City': 'London',
      'Region': null,
      'PostalCode': 'RG1 9SP',
      'Country': 'UK',
      'HomePhone': '(71) 555-5598',
      'Extension': '465',

```

```

    'Photo': { 'Length': 21626 },
    'Notes': 'Robert King served in the Peace Corps and traveled extensively
before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 8,
    'LastName': 'Callahan',
    'FirstName': 'Laura',
    'Title': 'Inside Sales Coordinator',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-377982000000),
    'HireDate': new Date(762843600000),
    'Address': '4726 - 11th Ave. N.E.',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98105',
    'Country': 'USA',
    'HomePhone': '(206) 555-1189',
    'Extension': '2344',
    'Photo': { 'Length': 21626 },
    'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 9,
    'LastName': 'Dodsworth',
    'FirstName': 'Anne',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-123966000000),
    'HireDate': new Date(784875600000),
    'Address': '7 Houndstooth Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'WG2 7LT',
    'Country': 'UK',
    'HomePhone': '(71) 555-4444',
    'Extension': '452',
    'Photo': { 'Length': 21626 },
    'Notes': 'Anne has a BA degree in English from St. Lawrence College. She
is fluent in French and German.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  }
];
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),

```



```

    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims', ShipAddress:
    '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua
    do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2, rue
    du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua
    do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress: 'Hauptstr.
    31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
    Date(8371098e5),

```

```

    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
},
{
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
},
{
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry: 'Venezuela',
Freight: 81.91, Verified: !0
},
{
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse 6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
},
{
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
},
{
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
},
{
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua da
Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
},
{
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',

```

```

    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA', Freight:
48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let employeeData: Object[] = [{
  'EmployeeID': 1,
  'LastName': 'Davolio',
  'FirstName': 'Nancy',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-664743600000),
  'HireDate': new Date(704692800000),
  'Address': '507 - 20th Ave. E.\r\nApt. 2A',
  'City': 'Seattle',
  'Region': 'WA',
  'PostalCode': '98122',
  'Country': 'USA',
  'HomePhone': '(206) 555-9857',
  'Extension': '5467',
  'Photo': { 'Length': 21626 },
  'Notes': 'Education includes a BA in psychology from Colorado State
University in 1970. She also completed\
\'The Art of the Cold Call.\' Nancy is a member of Toastmasters
International.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
  'EmployeeID': 2,
  'LastName': 'Fuller',
  'FirstName': 'Andrew',
  'Title': 'Vice President, Sales',
  'TitleOfCourtesy': 'Dr.',
  'BirthDate': new Date(-563828400000),
  'HireDate': new Date(713764800000),
  'Address': '908 W. Capital Way',
  'City': 'Tacoma',
  'Region': 'WA',
  'PostalCode': '98401',
  'Country': 'USA',
  'HomePhone': '(206) 555-9482',
  'Extension': '3457',
  'Photo': { 'Length': 21626 },
  'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
Dallas in 1981. He is fluent in French and Italian and reads German. He
joined the company as a sales representative, \
was promoted to sales manager in January 1992 and to vice president of
sales in March 1993. Andrew is a member of the \
Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.',
  'ReportsTo': 0,
  'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
}
]

```

```

},
{
  'EmployeeID': 3,
  'LastName': 'Leverling',
  'FirstName': 'Janet',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-200088000000),
  'HireDate': new Date(702104400000),
  'Address': '722 Moss Bay Blvd.',
  'City': 'Kirkland',
  'Region': 'WA',
  'PostalCode': '98033',
  'Country': 'USA',
  'HomePhone': '(206) 555-3412',
  'Extension': '3355',
  'Photo': { 'Length': 21722 },
  'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
\
  She has also completed a certificate program in food retailing
management.\
  Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
},
{
  'EmployeeID': 4,
  'LastName': 'Peacock',
  'FirstName': 'Margaret',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Mrs.',
  'BirthDate': new Date(-1018814400000),
  'HireDate': new Date(736401600000),
  'Address': '4110 Old Redmond Rd.',
  'City': 'Redmond',
  'Region': 'WA',
  'PostalCode': '98052',
  'Country': 'USA',
  'HomePhone': '(206) 555-8122',
  'Extension': '5176',
  'Photo': { 'Length': 21626 },
  'Notes': 'Margaret holds a BA in English literature from Concordia
College (1958) and an MA from the American \
Institute of Culinary Arts (1966). She was assigned to the London office
temporarily from July through November 1992.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
},
{
  'EmployeeID': 5,
  'LastName': 'Buchanan',
  'FirstName': 'Steven',
  'Title': 'Sales Manager',
  'TitleOfCourtesy': 'Mr.',
  'BirthDate': new Date(-468010800000),
  'HireDate': new Date(750830400000),

```

```

    'Address': '14 Garrett Hill',
    'City': 'London',
    'Region': null,
    'PostalCode':
    'SW1 8JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-4848',
    'Extension': '3453',
    'Photo': { 'Length': 21626 },
    'Notes': 'Steven Buchanan graduated from St. Andrews University,
Scotland, with a BSC degree in 1976. Upon joining the company as \
a sales representative in 1992, he spent 6 months in an orientation
program at the Seattle office and then returned to his permanent \
post in London. He was promoted to sales manager in March 1993. Mr.
Buchanan has completed the courses \'Successful \
Telemarketing\' and \'International Sales Management.\' He is fluent in
French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
  },
  {
    'EmployeeID': 6,
    'LastName': 'Suyama',
    'FirstName': 'Michael',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-205185600000),
    'HireDate': new Date(750830400000),
    'Address': 'Coventry House\r\nMiner Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'EC2 7JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-7773',
    'Extension': '428',
    'Photo': { 'Length': 21626 },
    'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese, and
Spanish.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 7,
    'LastName': 'King',
    'FirstName': 'Robert',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-302731200000),
    'HireDate': new Date(757486800000),
    'Address': 'Edgeham Hollow\r\nWinchester Way',
    'City': 'London',
    'Region': null,
    'PostalCode': 'RG1 9SP',

```

```

    'Country': 'UK',
    'HomePhone': '(71) 555-5598',
    'Extension': '465',
    'Photo': { 'Length': 21626 },
    'Notes': 'Robert King served in the Peace Corps and traveled extensively
before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 8,
    'LastName': 'Callahan',
    'FirstName': 'Laura',
    'Title': 'Inside Sales Coordinator',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-377982000000),
    'HireDate': new Date(762843600000),
    'Address': '4726 - 11th Ave. N.E.',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98105',
    'Country': 'USA',
    'HomePhone': '(206) 555-1189',
    'Extension': '2344',
    'Photo': { 'Length': 21626 },
    'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 9,
    'LastName': 'Dodsworth',
    'FirstName': 'Anne',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-123966000000),
    'HireDate': new Date(784875600000),
    'Address': '7 Houndstooth Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'WG2 7LT',
    'Country': 'UK',
    'HomePhone': '(71) 555-4444',
    'Extension': '452',
    'Photo': { 'Length': 21626 },
    'Notes': 'Anne has a BA degree in English from St. Lawrence College. She
is fluent in French and German.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  }
];
export let data: Object[] = [
  {

```

```

    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {

```

```

    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
        },
        {
            OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
            ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
            ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
            },
            {
                OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
                ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
                ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
                },
                {
                    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
                    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
                    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
                    },
                    {
                        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
                        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
                        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
                        },
                        {
                            OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
                            ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
                            ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
                            },
                            {

```



```

      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }];

```

Index values begin with “0”, allowing you to provide the desired target index to expand a specific child grid initially.

Dynamically load child grid data

Dynamically load child grid data in Syncfusion React Grid helps improve performance, optimize data transmission, and enhance the your experience by providing on-demand access to relevant information. Additionally, it offers flexibility in data presentation, which helps improve the overall efficiency of your application.

To dynamically load the `dataSource` of a child grid in the Grid, you can utilize the `load` event of parent grid. This event allows you to customize the loading behavior of the child grid based on the data of parent grid.

The following example demonstrates how to dynamically load child grid data using the `load` event.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { DetailRow, Inject } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data, employeeData } from './datasource';
function App() {
  let grid;
  let childGridOptions = {
    columns: [
      { field: 'OrderID', headerText: 'Order ID', textAlign: 'Right',
width: 120 },
      { field: 'CustomerID', headerText: 'Customer ID', width: 150 },
      { field: 'ShipCity', headerText: 'Ship City', width: 150 },
      { field: 'ShipName', headerText: 'Ship Name', width: 150 }
    ],
    queryString: 'EmployeeID'
  };
  const onLoad = () => {
    /** Assigning data source for child Grid */
    childGridOptions.dataSource = data;
  };
  return (<div>
    <GridComponent dataSource={employeeData} childGrid={childGridOptions}
height={265} ref={g => grid = g} load={onLoad}>
      <ColumnsDirective>
        <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='120' textAlign='Right' />
        <ColumnDirective field='FirstName' headerText='First Name'
width='150' />
        <ColumnDirective field='City' headerText='City' width='150' />
        <ColumnDirective field='Country' headerText='Country' width='150' />

```

```

        </ColumnsDirective>
        <Inject services={[DetailRow]}/>
    </GridComponent></div>;
}
;
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { DetailRow, Grid, GridModel, Inject } from '@syncfusion/ej2-react-
 grids';
import * as React from 'react';
import { data, employeeData } from './datasource';
function App() {
    let grid: Grid | null;
    let childGridOptions : GridModel = {
        columns: [
            { field: 'OrderID', headerText: 'Order ID', textAlign: 'Right',
width: 120 },
            { field: 'CustomerID', headerText: 'Customer ID', width: 150 },
            { field: 'ShipCity', headerText: 'Ship City', width: 150 },
            { field: 'ShipName', headerText: 'Ship Name', width: 150 }
        ],
        queryString: 'EmployeeID'
    };

    const onLoad = () => {
        /** Assigning data source for child Grid */
        childGridOptions.dataSource = data;
    }

    return (<div>
        <GridComponent dataSource={employeeData} childGrid={childGridOptions}
height={265}
        ref={g => grid = g} load={onLoad}>
            <ColumnsDirective>
                <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='120' textAlign="Right"/>
                <ColumnDirective field='FirstName' headerText='First Name'
width='150'/>
                <ColumnDirective field='City' headerText='City' width='150'/>
                <ColumnDirective field='Country' headerText='Country' width='150'/>
            </ColumnsDirective>
            <Inject services={[DetailRow]}/>
        </GridComponent></div>)
    );
}
export default App;

```

DATASOURCE.JSX

```

export let employeeData = [{
    'EmployeeID': 1,
    'LastName': 'Davolio',
    'FirstName': 'Nancy',
    'Title': 'Sales Representative',

```

```

    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-664743600000),
    'HireDate': new Date(704692800000),
    'Address': '507 - 20th Ave. E.\r\nApt. 2A',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98122',
    'Country': 'USA',
    'HomePhone': '(206) 555-9857',
    'Extension': '5467',
    'Photo': { 'Length': 21626 },
    'Notes': 'Education includes a BA in psychology from Colorado State University in 1970. She also completed \
    \'The Art of the Cold Call.\' Nancy is a member of Toastmasters International.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 2,
    'LastName': 'Fuller',
    'FirstName': 'Andrew',
    'Title': 'Vice President, Sales',
    'TitleOfCourtesy': 'Dr.',
    'BirthDate': new Date(-563828400000),
    'HireDate': new Date(713764800000),
    'Address': '908 W. Capital Way',
    'City': 'Tacoma',
    'Region': 'WA',
    'PostalCode': '98401',
    'Country': 'USA',
    'HomePhone': '(206) 555-9482',
    'Extension': '3457',
    'Photo': { 'Length': 21626 },
    'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in international marketing from the University of \
    Dallas in 1981. He is fluent in French and Italian and reads German. He joined the company as a sales representative, \
    was promoted to sales manager in January 1992 and to vice president of sales in March 1993. Andrew is a member of the \
    Sales Management Roundtable, the Seattle Chamber of Commerce, and the Pacific Rim Importers Association.',
    'ReportsTo': 0,
    'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
  },
  {
    'EmployeeID': 3,
    'LastName': 'Leverling',
    'FirstName': 'Janet',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-200088000000),
    'HireDate': new Date(702104400000),
    'Address': '722 Moss Bay Blvd.',
    'City': 'Kirkland',
    'Region': 'WA',
    'PostalCode': '98033',

```

```

    'Country': 'USA',
    'HomePhone': '(206) 555-3412',
    'Extension': '3355',
    'Photo': { 'Length': 21722 },
    'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
\
  She has also completed a certificate program in food retailing management.\
  Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
  },
  {
    'EmployeeID': 4,
    'LastName': 'Peacock',
    'FirstName': 'Margaret',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mrs.',
    'BirthDate': new Date(-1018814400000),
    'HireDate': new Date(736401600000),
    'Address': '4110 Old Redmond Rd.',
    'City': 'Redmond',
    'Region': 'WA',
    'PostalCode': '98052',
    'Country': 'USA',
    'HomePhone': '(206) 555-8122',
    'Extension': '5176',
    'Photo': { 'Length': 21626 },
    'Notes': 'Margaret holds a BA in English literature from Concordia
College (1958) and an MA from the American \
Institute of Culinary Arts (1966). She was assigned to the London office
temporarily from July through November 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
  },
  {
    'EmployeeID': 5,
    'LastName': 'Buchanan',
    'FirstName': 'Steven',
    'Title': 'Sales Manager',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-468010800000),
    'HireDate': new Date(750830400000),
    'Address': '14 Garrett Hill',
    'City': 'London',
    'Region': null,
    'PostalCode': 'SW1 8JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-4848',
    'Extension': '3453',
    'Photo': { 'Length': 21626 },
    'Notes': 'Steven Buchanan graduated from St. Andrews University,
Scotland, with a BSC degree in 1976. Upon joining the company as \
a sales representative in 1992, he spent 6 months in an orientation program
at the Seattle office and then returned to his permanent \
post in London. He was promoted to sales manager in March 1993. Mr.
Buchanan has completed the courses \'Successful \

```

```

Telemarketing\' and \'International Sales Management.\' He is fluent in
French.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
},
{
  'EmployeeID': 6,
  'LastName': 'Suyama',
  'FirstName': 'Michael',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Mr.',
  'BirthDate': new Date(-205185600000),
  'HireDate': new Date(750830400000),
  'Address': 'Coventry House\r\nMiner Rd.',
  'City': 'London',
  'Region': null,
  'PostalCode': 'EC2 7JR',
  'Country': 'UK',
  'HomePhone': '(71) 555-7773',
  'Extension': '428',
  'Photo': { 'Length': 21626 },
  'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese, and
Spanish.',
  'ReportsTo': 5,
  'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
  'EmployeeID': 7,
  'LastName': 'King',
  'FirstName': 'Robert',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Mr.',
  'BirthDate': new Date(-302731200000),
  'HireDate': new Date(757486800000),
  'Address': 'Edgeham Hollow\r\nWinchester Way',
  'City': 'London',
  'Region': null,
  'PostalCode': 'RG1 9SP',
  'Country': 'UK',
  'HomePhone': '(71) 555-5598',
  'Extension': '465',
  'Photo': { 'Length': 21626 },
  'Notes': 'Robert King served in the Peace Corps and traveled extensively
before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
  'ReportsTo': 5,
  'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
  'EmployeeID': 8,
  'LastName': 'Callahan',

```

```

    'FirstName': 'Laura',
    'Title': 'Inside Sales Coordinator',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-377982000000),
    'HireDate': new Date(762843600000),
    'Address': '4726 - 11th Ave. N.E.',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98105',
    'Country': 'USA',
    'HomePhone': '(206) 555-1189',
    'Extension': '2344',
    'Photo': { 'Length': 21626 },
    'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 9,
    'LastName': 'Dodsworth',
    'FirstName': 'Anne',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-123966000000),
    'HireDate': new Date(784875600000),
    'Address': '7 Houndstooth Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'WG2 7LT',
    'Country': 'UK',
    'HomePhone': '(71) 555-4444',
    'Extension': '452',
    'Photo': { 'Length': 21626 },
    'Notes': 'Anne has a BA degree in English from St. Lawrence College. She
is fluent in French and German.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  }
];
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims', ShipAddress:
'59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },

```

```

{
  OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
  ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua
do Paço, 67',
  ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
},
{
  OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
  ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2, rue
du Commerce',
  ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
},
{
  OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
  ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
  ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
},
{
  OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
  ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua
do Paço, 67',
  ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
},
{
  OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
  ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress: 'Hauptstr.
31',
  ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
},
{
  OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
  ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
  ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
},
{
  OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
  ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
  ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
},
{

```

```

    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry: 'Venezuela',
Freight: 81.91, Verified: !0
},
{
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse 6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
},
{
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
},
{
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
},
{
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua da
Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
},
{
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA', Freight:
48.29, Verified: !0
}
];

```

DATASOURCE.TSX

```

export let employeeData: Object[] = [{
    'EmployeeID': 1,
    'LastName': 'Davolio',
    'FirstName': 'Nancy',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',

```



```

    'BirthDate': new Date(-664743600000),
    'HireDate': new Date(704692800000),
    'Address': '507 - 20th Ave. E.\r\nApt. 2A',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98122',
    'Country': 'USA',
    'HomePhone': '(206) 555-9857',
    'Extension': '5467',
    'Photo': { 'Length': 21626 },
    'Notes': 'Education includes a BA in psychology from Colorado State
University in 1970. She also completed\
\'The Art of the Cold Call.\' Nancy is a member of Toastmasters
International.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 2,
    'LastName': 'Fuller',
    'FirstName': 'Andrew',
    'Title': 'Vice President, Sales',
    'TitleOfCourtesy': 'Dr.',
    'BirthDate': new Date(-563828400000),
    'HireDate': new Date(713764800000),
    'Address': '908 W. Capital Way',
    'City': 'Tacoma',
    'Region': 'WA',
    'PostalCode': '98401',
    'Country': 'USA',
    'HomePhone': '(206) 555-9482',
    'Extension': '3457',
    'Photo': { 'Length': 21626 },
    'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
Dallas in 1981. He is fluent in French and Italian and reads German. He
joined the company as a sales representative, \
was promoted to sales manager in January 1992 and to vice president of
sales in March 1993. Andrew is a member of the \
Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.',
    'ReportsTo': 0,
    'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
  },
  {
    'EmployeeID': 3,
    'LastName': 'Leverling',
    'FirstName': 'Janet',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-200088000000),
    'HireDate': new Date(702104400000),
    'Address': '722 Moss Bay Blvd.',
    'City': 'Kirkland',
    'Region': 'WA',
    'PostalCode': '98033',
    'Country': 'USA',

```

```

      'HomePhone': '(206) 555-3412',
      'Extension': '3355',
      'Photo': { 'Length': 21722 },
      'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
\
      She has also completed a certificate program in food retailing
management.\
      Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
    },
    {
      'EmployeeID': 4,
      'LastName': 'Peacock',
      'FirstName': 'Margaret',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mrs.',
      'BirthDate': new Date(-1018814400000),
      'HireDate': new Date(736401600000),
      'Address': '4110 Old Redmond Rd.',
      'City': 'Redmond',
      'Region': 'WA',
      'PostalCode': '98052',
      'Country': 'USA',
      'HomePhone': '(206) 555-8122',
      'Extension': '5176',
      'Photo': { 'Length': 21626 },
      'Notes': 'Margaret holds a BA in English literature from Concordia
College (1958) and an MA from the American \
      Institute of Culinary Arts (1966). She was assigned to the London office
temporarily from July through November 1992.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
    },
    {
      'EmployeeID': 5,
      'LastName': 'Buchanan',
      'FirstName': 'Steven',
      'Title': 'Sales Manager',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-468010800000),
      'HireDate': new Date(750830400000),
      'Address': '14 Garrett Hill',
      'City': 'London',
      'Region': null,
      'PostalCode':
      'SW1 8JR',
      'Country': 'UK',
      'HomePhone': '(71) 555-4848',
      'Extension': '3453',
      'Photo': { 'Length': 21626 },
      'Notes': 'Steven Buchanan graduated from St. Andrews University,
Scotland, with a BSC degree in 1976. Upon joining the company as \
      a sales representative in 1992, he spent 6 months in an orientation
program at the Seattle office and then returned to his permanent \

```

```

    post in London. He was promoted to sales manager in March 1993. Mr.
    Buchanan has completed the courses \'Successful \'
    Telemarketing\' and \'International Sales Management.\' He is fluent in
    French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
  },
  {
    'EmployeeID': 6,
    'LastName': 'Suyama',
    'FirstName': 'Michael',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-205185600000),
    'HireDate': new Date(750830400000),
    'Address': 'Coventry House\r\nMiner Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'EC2 7JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-7773',
    'Extension': '428',
    'Photo': { 'Length': 21626 },
    'Notes': 'Michael is a graduate of Sussex University (MA, economics,
    1983) and the University of California at Los Angeles \'
    (MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
    Selling\' and \'Time Management for the Sales Professional.\' \'
    He is fluent in Japanese and can read and write French, Portuguese, and
    Spanish.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 7,
    'LastName': 'King',
    'FirstName': 'Robert',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-302731200000),
    'HireDate': new Date(757486800000),
    'Address': 'Edgeham Hollow\r\nWinchester Way',
    'City': 'London',
    'Region': null,
    'PostalCode': 'RG1 9SP',
    'Country': 'UK',
    'HomePhone': '(71) 555-5598',
    'Extension': '465',
    'Photo': { 'Length': 21626 },
    'Notes': 'Robert King served in the Peace Corps and traveled extensively
    before completing his degree in English at the \'
    University of Michigan in 1992, the year he joined the company. After
    completing a course entitled \'Selling in Europe,\' \'
    he was transferred to the London office in March 1993.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {

```

```

      'EmployeeID': 8,
      'LastName': 'Callahan',
      'FirstName': 'Laura',
      'Title': 'Inside Sales Coordinator',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-377982000000),
      'HireDate': new Date(762843600000),
      'Address': '4726 - 11th Ave. N.E.',
      'City': 'Seattle',
      'Region': 'WA',
      'PostalCode': '98105',
      'Country': 'USA',
      'HomePhone': '(206) 555-1189',
      'Extension': '2344',
      'Photo': { 'Length': 21626 },
      'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 9,
      'LastName': 'Dodsworth',
      'FirstName': 'Anne',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-123966000000),
      'HireDate': new Date(784875600000),
      'Address': '7 Houndstooth Rd.',
      'City': 'London',
      'Region': null,
      'PostalCode': 'WG2 7LT',
      'Country': 'UK',
      'HomePhone': '(71) 555-4444',
      'Extension': '452',
      'Photo': { 'Length': 21626 },
      'Notes': 'Anne has a BA degree in English from St. Lawrence College. She
is fluent in French and German.',
      'ReportsTo': 5,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    }
  ]];
export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
      },
      {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',

```

```

    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
    Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
    'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
    'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
    Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
    6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
    Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
    Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
    ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
    Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
    Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
    'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
    Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
    Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
    Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
    Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
    ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
    Freight: 48.29, Verified: !0
  }
];

```

Dynamically bind data to child grid based on parent row data

Dynamically binding data to a child grid based on the parent row data in the Syncfusion React Grid component is useful when you want to display child grid data that is specific to each parent row. This feature allows for a dynamic and contextual representation of data within the child grid.

To dynamically bind data to the child grid based on the parent row data instead of using the [queryString](#) property, you can utilize the [detailDataBound](#) event of the grid. This event is triggered when expanding the child grid.

In the `detailDataBound` event handler, you can filter the child grid's `dataSource` based on the `EmployeeID` column value of the parent row data. This can be achieved by using the `DataManager` plugin and applying a filter to the child grid's `dataSource`. The filtered data can be assigned as the new `dataSource` for the child grid. This can be demonstrated by the following sample.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { DetailRow, Inject } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data, employeeData } from './datasource';
import { DataManager, Query } from '@syncfusion/ej2-data';
function App() {
  let grid;
  let childGridOptions = {
    columns: [
      { field: 'OrderID', headerText: 'Order ID', textAlign: 'Right',
width: 120 },
      { field: 'CustomerID', headerText: 'Customer ID', width: 150 },
      { field: 'ShipCity', headerText: 'Ship City', width: 150 },
      { field: 'ShipName', headerText: 'Ship Name', width: 150 }
    ],
  };
  const detailDataBound = (args) => {
    let orderData = data;
    let empIdValue =
args.childGrid.parentDetails.parentRowData.EmployeeID;
    let matchedData = new DataManager(orderData).executeLocal(new
Query().where('EmployeeID', 'equal', empIdValue, true));
    args.childGrid.query = new Query();
    args.childGrid.dataSource = matchedData;
  };
  return (<div>
    <GridComponent dataSource={employeeData} childGrid={childGridOptions}
height={265} ref={g => grid = g} detailDataBound={detailDataBound}>
      <ColumnsDirective>
        <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='120' textAlign='Right' />
        <ColumnDirective field='FirstName' headerText='First Name'
width='150' />
        <ColumnDirective field='City' headerText='City' width='150' />
        <ColumnDirective field='Country' headerText='Country' width='150' />
      </ColumnsDirective>
      <Inject services={[DetailRow]} />
    </GridComponent></div>);
}
```

```
;
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { DetailRow, Grid, GridModel, Inject } from '@syncfusion/ej2-react-
grids';
import * as React from 'react';
import { data, employeeData } from './datasource';
import { DataManager, Query } from '@syncfusion/ej2-data';
function App() {
  let grid: Grid | null;
  let childGridOptions : GridModel = {
    columns: [
      { field: 'OrderID', headerText: 'Order ID', textAlign: 'Right',
width: 120 },
      { field: 'CustomerID', headerText: 'Customer ID', width: 150 },
      { field: 'ShipCity', headerText: 'Ship City', width: 150 },
      { field: 'ShipName', headerText: 'Ship Name', width: 150 }
    ],
  };

  const detailDataBound = (args) => {
    let orderData = data;
    let empIdValue = args.childGrid.parentDetails.parentRowData.EmployeeID;
    let matchedData = new DataManager(orderData).executeLocal(
      new Query().where('EmployeeID', 'equal', empIdValue, true)
    );
    args.childGrid.query = new Query();
    args.childGrid.dataSource = matchedData;
  };

  return (<div>
    <GridComponent dataSource={employeeData} childGrid={childGridOptions}
height={265}
      ref={g => grid = g} detailDataBound={detailDataBound}>
        <ColumnsDirective>
          <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='120' textAlign="Right"/>
          <ColumnDirective field='FirstName' headerText='First Name'
width='150'/>
          <ColumnDirective field='City' headerText='City' width='150'/>
          <ColumnDirective field='Country' headerText='Country' width='150'/>
        </ColumnsDirective>
        <Inject services={[DetailRow]}/>
      </GridComponent></div>)
};
export default App;
```

DATASOURCE.JSX

```
export let employeeData = [{
  'EmployeeID': 1,
  'LastName': 'Davolio',
  'FirstName': 'Nancy',
```



```

    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-664743600000),
    'HireDate': new Date(704692800000),
    'Address': '507 - 20th Ave. E.\r\nApt. 2A',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98122',
    'Country': 'USA',
    'HomePhone': '(206) 555-9857',
    'Extension': '5467',
    'Photo': { 'Length': 21626 },
    'Notes': 'Education includes a BA in psychology from Colorado State University in 1970. She also completed\'
\'The Art of the Cold Call.\' Nancy is a member of Toastmasters International.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 2,
    'LastName': 'Fuller',
    'FirstName': 'Andrew',
    'Title': 'Vice President, Sales',
    'TitleOfCourtesy': 'Dr.',
    'BirthDate': new Date(-563828400000),
    'HireDate': new Date(713764800000),
    'Address': '908 W. Capital Way',
    'City': 'Tacoma',
    'Region': 'WA',
    'PostalCode': '98401',
    'Country': 'USA',
    'HomePhone': '(206) 555-9482',
    'Extension': '3457',
    'Photo': { 'Length': 21626 },
    'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in international marketing from the University of \
Dallas in 1981. He is fluent in French and Italian and reads German. He joined the company as a sales representative, \
was promoted to sales manager in January 1992 and to vice president of sales in March 1993. Andrew is a member of the \
Sales Management Roundtable, the Seattle Chamber of Commerce, and the Pacific Rim Importers Association.',
    'ReportsTo': 0,
    'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
  },
  {
    'EmployeeID': 3,
    'LastName': 'Leverling',
    'FirstName': 'Janet',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-200088000000),
    'HireDate': new Date(702104400000),
    'Address': '722 Moss Bay Blvd.',
    'City': 'Kirkland',
    'Region': 'WA',

```

```

      'PostalCode': '98033',
      'Country': 'USA',
      'HomePhone': '(206) 555-3412',
      'Extension': '3355',
      'Photo': { 'Length': 21722 },
      'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
\
  She has also completed a certificate program in food retailing management.\
  Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
    },
    {
      'EmployeeID': 4,
      'LastName': 'Peacock',
      'FirstName': 'Margaret',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mrs.',
      'BirthDate': new Date(-1018814400000),
      'HireDate': new Date(736401600000),
      'Address': '4110 Old Redmond Rd.',
      'City': 'Redmond',
      'Region': 'WA',
      'PostalCode': '98052',
      'Country': 'USA',
      'HomePhone': '(206) 555-8122',
      'Extension': '5176',
      'Photo': { 'Length': 21626 },
      'Notes': 'Margaret holds a BA in English literature from Concordia
College (1958) and an MA from the American \
Institute of Culinary Arts (1966). She was assigned to the London office
temporarily from July through November 1992.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
    },
    {
      'EmployeeID': 5,
      'LastName': 'Buchanan',
      'FirstName': 'Steven',
      'Title': 'Sales Manager',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-468010800000),
      'HireDate': new Date(750830400000),
      'Address': '14 Garrett Hill',
      'City': 'London',
      'Region': null,
      'PostalCode': 'SW1 8JR',
      'Country': 'UK',
      'HomePhone': '(71) 555-4848',
      'Extension': '3453',
      'Photo': { 'Length': 21626 },
      'Notes': 'Steven Buchanan graduated from St. Andrews University,
Scotland, with a BSC degree in 1976. Upon joining the company as \
a sales representative in 1992, he spent 6 months in an orientation program
at the Seattle office and then returned to his permanent \

```

```

post in London. He was promoted to sales manager in March 1993. Mr.
Buchanan has completed the courses \'Successful \
Telemarketing\' and \'International Sales Management.\' He is fluent in
French.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
},
{
  'EmployeeID': 6,
  'LastName': 'Suyama',
  'FirstName': 'Michael',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Mr.',
  'BirthDate': new Date(-205185600000),
  'HireDate': new Date(750830400000),
  'Address': 'Coventry House\r\nMiner Rd.',
  'City': 'London',
  'Region': null,
  'PostalCode': 'EC2 7JR',
  'Country': 'UK',
  'HomePhone': '(71) 555-7773',
  'Extension': '428',
  'Photo': { 'Length': 21626 },
  'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese, and
Spanish.',
  'ReportsTo': 5,
  'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
  'EmployeeID': 7,
  'LastName': 'King',
  'FirstName': 'Robert',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Mr.',
  'BirthDate': new Date(-302731200000),
  'HireDate': new Date(757486800000),
  'Address': 'Edgeham Hollow\r\nWinchester Way',
  'City': 'London',
  'Region': null,
  'PostalCode': 'RG1 9SP',
  'Country': 'UK',
  'HomePhone': '(71) 555-5598',
  'Extension': '465',
  'Photo': { 'Length': 21626 },
  'Notes': 'Robert King served in the Peace Corps and traveled extensively
before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
  'ReportsTo': 5,
  'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{

```

```

    'EmployeeID': 8,
    'LastName': 'Callahan',
    'FirstName': 'Laura',
    'Title': 'Inside Sales Coordinator',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-377982000000),
    'HireDate': new Date(762843600000),
    'Address': '4726 - 11th Ave. N.E.',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98105',
    'Country': 'USA',
    'HomePhone': '(206) 555-1189',
    'Extension': '2344',
    'Photo': { 'Length': 21626 },
    'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 9,
    'LastName': 'Dodsworth',
    'FirstName': 'Anne',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-123966000000),
    'HireDate': new Date(784875600000),
    'Address': '7 Houndstooth Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'WG2 7LT',
    'Country': 'UK',
    'HomePhone': '(71) 555-4444',
    'Extension': '452',
    'Photo': { 'Length': 21626 },
    'Notes': 'Anne has a BA degree in English from St. Lawrence College. She
is fluent in French and German.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  }
];
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims', ShipAddress:
'59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',

```

```

    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua
    do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2, rue
    du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua
    do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress: 'Hauptstr.
    31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
    Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
    Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',

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```

    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
    Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
    'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry: 'Venezuela',
    Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
    Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse 6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
    Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
    Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
    ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
    Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
    Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
    'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
    Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
    Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua da
    Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
    Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
    Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
    ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA', Freight:
    48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let employeeData: Object[] = [{
  'EmployeeID': 1,

```

```

      'LastName': 'Davolio',
      'FirstName': 'Nancy',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-664743600000),
      'HireDate': new Date(704692800000),
      'Address': '507 - 20th Ave. E.\r\nApt. 2A',
      'City': 'Seattle',
      'Region': 'WA',
      'PostalCode': '98122',
      'Country': 'USA',
      'HomePhone': '(206) 555-9857',
      'Extension': '5467',
      'Photo': { 'Length': 21626 },
      'Notes': 'Education includes a BA in psychology from Colorado State University in 1970. She also completed \
        \'The Art of the Cold Call.\' Nancy is a member of Toastmasters International.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 2,
      'LastName': 'Fuller',
      'FirstName': 'Andrew',
      'Title': 'Vice President, Sales',
      'TitleOfCourtesy': 'Dr.',
      'BirthDate': new Date(-563828400000),
      'HireDate': new Date(713764800000),
      'Address': '908 W. Capital Way',
      'City': 'Tacoma',
      'Region': 'WA',
      'PostalCode': '98401',
      'Country': 'USA',
      'HomePhone': '(206) 555-9482',
      'Extension': '3457',
      'Photo': { 'Length': 21626 },
      'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in international marketing from the University of \
        Dallas in 1981. He is fluent in French and Italian and reads German. He joined the company as a sales representative, \
        was promoted to sales manager in January 1992 and to vice president of sales in March 1993. Andrew is a member of the \
        Sales Management Roundtable, the Seattle Chamber of Commerce, and the Pacific Rim Importers Association.',
      'ReportsTo': 0,
      'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
    },
    {
      'EmployeeID': 3,
      'LastName': 'Leverling',
      'FirstName': 'Janet',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-200088000000),
      'HireDate': new Date(702104400000),
      'Address': '722 Moss Bay Blvd.',

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    'City': 'Kirkland',
    'Region': 'WA',
    'PostalCode': '98033',
    'Country': 'USA',
    'HomePhone': '(206) 555-3412',
    'Extension': '3355',
    'Photo': { 'Length': 21722 },
    'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
\
    She has also completed a certificate program in food retailing
management.\
    Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
},
{
    'EmployeeID': 4,
    'LastName': 'Peacock',
    'FirstName': 'Margaret',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mrs.',
    'BirthDate': new Date(-1018814400000),
    'HireDate': new Date(736401600000),
    'Address': '4110 Old Redmond Rd.',
    'City': 'Redmond',
    'Region': 'WA',
    'PostalCode': '98052',
    'Country': 'USA',
    'HomePhone': '(206) 555-8122',
    'Extension': '5176',
    'Photo': { 'Length': 21626 },
    'Notes': 'Margaret holds a BA in English literature from Concordia
College (1958) and an MA from the American \
    Institute of Culinary Arts (1966). She was assigned to the London office
temporarily from July through November 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
},
{
    'EmployeeID': 5,
    'LastName': 'Buchanan',
    'FirstName': 'Steven',
    'Title': 'Sales Manager',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-468010800000),
    'HireDate': new Date(750830400000),
    'Address': '14 Garrett Hill',
    'City': 'London',
    'Region': null,
    'PostalCode':
    'SW1 8JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-4848',
    'Extension': '3453',
    'Photo': { 'Length': 21626 },

```



```

      'Notes': 'Steven Buchanan graduated from St. Andrews University,
      Scotland, with a BSC degree in 1976. Upon joining the company as \
      a sales representative in 1992, he spent 6 months in an orientation
      program at the Seattle office and then returned to his permanent \
      post in London. He was promoted to sales manager in March 1993. Mr.
      Buchanan has completed the courses \'Successful \
      Telemarketing\' and \'International Sales Management.\' He is fluent in
      French.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
    },
    {
      'EmployeeID': 6,
      'LastName': 'Suyama',
      'FirstName': 'Michael',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-205185600000),
      'HireDate': new Date(750830400000),
      'Address': 'Coventry House\r\nMiner Rd.',
      'City': 'London',
      'Region': null,
      'PostalCode': 'EC2 7JR',
      'Country': 'UK',
      'HomePhone': '(71) 555-7773',
      'Extension': '428',
      'Photo': { 'Length': 21626 },
      'Notes': 'Michael is a graduate of Sussex University (MA, economics,
      1983) and the University of California at Los Angeles \
      (MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
      Selling\' and \'Time Management for the Sales Professional.\' \
      He is fluent in Japanese and can read and write French, Portuguese, and
      Spanish.',
      'ReportsTo': 5,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 7,
      'LastName': 'King',
      'FirstName': 'Robert',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-302731200000),
      'HireDate': new Date(757486800000),
      'Address': 'Edgeham Hollow\r\nWinchester Way',
      'City': 'London',
      'Region': null,
      'PostalCode': 'RG1 9SP',
      'Country': 'UK',
      'HomePhone': '(71) 555-5598',
      'Extension': '465',
      'Photo': { 'Length': 21626 },
      'Notes': 'Robert King served in the Peace Corps and traveled extensively
      before completing his degree in English at the \
      University of Michigan in 1992, the year he joined the company. After
      completing a course entitled \'Selling in Europe,\' \
      he was transferred to the London office in March 1993.',
    }
  ]

```

```

    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 8,
    'LastName': 'Callahan',
    'FirstName': 'Laura',
    'Title': 'Inside Sales Coordinator',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-377982000000),
    'HireDate': new Date(762843600000),
    'Address': '4726 - 11th Ave. N.E.',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98105',
    'Country': 'USA',
    'HomePhone': '(206) 555-1189',
    'Extension': '2344',
    'Photo': { 'Length': 21626 },
    'Notes': 'Laura received a BA in psychology from the University of Washington. She has also completed a course in business \ French. She reads and writes French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 9,
    'LastName': 'Dodsworth',
    'FirstName': 'Anne',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-123966000000),
    'HireDate': new Date(784875600000),
    'Address': '7 Houndstooth Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'WG2 7LT',
    'Country': 'UK',
    'HomePhone': '(71) 555-4444',
    'Extension': '452',
    'Photo': { 'Length': 21626 },
    'Notes': 'Anne has a BA degree in English from St. Lawrence College. She is fluent in French and German.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  }
];
export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {

```

```

    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {

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    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
    ]];

```

Adding record in child grid

Adding a record in a child grid within the Syncfusion React Grid component is useful when you want to provide the ability to add new records to the child grid. This feature allows you to input and save additional data specific to each parent row.

To maintain the parent-child relationship in the Grid when adding a record to the child grid, you need to set the value for the `queryString` in the added data. This can be done using the `actionBegin` event.

In the following example, the parent and child grids are related by the **EmployeeID** field. To add a new record in the child grid, the **EmployeeID** field needs to be set with the value of the parent record's `queryString` in the `actionBegin` event.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { DetailRow, Edit, Inject, Toolbar } from '@syncfusion/ej2-react-
 grids';
import * as React from 'react';
import { data, employeeData } from './datasource';
function App() {
  let childGridOptions = {
    actionBegin(args) {
      if (args.requestType === "add") {
        /** parentKeyFieldValue refers to the queryString field value
 of the parent record. */
        args.data['EmployeeID'] =
 this.parentDetails.parentKeyFieldValue; // 'this' refers to the instance of
 the child grid.
      }
    },
    columns: [
      { field: 'OrderID', headerText: 'Order ID', isPrimaryKey: true,
        textAlign: 'Right', width: 120 },
      { field: 'EmployeeID', headerText: 'Employee ID', textAlign:
        'Right', allowEditing: false, width: 120 },
      { field: 'ShipCity', headerText: 'Ship City', width: 150 },
      { field: 'ShipName', headerText: 'Ship Name', width: 150 }
    ],
    dataSource: data,
    editSettings: { allowEditing: true, allowAdding: true, allowDeleting:
      true },
    queryString: 'EmployeeID',
    toolbar: ['Add', 'Edit', 'Delete', 'Update', 'Cancel'],
  };
  return (<GridComponent dataSource={employeeData}
    childGrid={childGridOptions} height={315}>
    <ColumnsDirective>
      <ColumnDirective field='EmployeeID' headerText='Employee ID'
        width='120' textAlign="Right"/>
      <ColumnDirective field='FirstName' headerText='First Name'
        width='150'/>
      <ColumnDirective field='City' headerText='City' width='150'/>
      <ColumnDirective field='Country' headerText='Country'
        width='150'/>
    </ColumnsDirective>
```

```

        <Inject services={[DetailRow, Edit, Toolbar]}/>
    </GridComponent>);
}
;
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { AddEventArgs, DetailRow, Edit, GridModel, Inject, Toolbar } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data, employeeData } from './datasource';
function App() {
    let childGridOptions : GridModel = {
        actionBegin(args: AddEventArgs) {
            if (args.requestType === "add") {
                /** parentKeyFieldValue refers to the queryString field value of the
                parent record. */
                args.data['EmployeeID'] = this.parentDetails.parentKeyFieldValue; //
                'this' refers to the instance of the child grid.
            }
        },
        columns: [
            { field: 'OrderID', headerText: 'Order ID', isPrimaryKey:true,
            textAlign: 'Right', width: 120 },
            { field: 'EmployeeID', headerText: 'Employee ID', textAlign: 'Right',
            allowEditing:false, width: 120 },
            { field: 'ShipCity', headerText: 'Ship City', width: 150 },
            { field: 'ShipName', headerText: 'Ship Name', width: 150 }
        ],
        dataSource: data,
        editSettings: { allowEditing: true, allowAdding: true, allowDeleting:
        true },
        queryString: 'EmployeeID',
        toolbar: ['Add', 'Edit', 'Delete', 'Update', 'Cancel'],
    };
    return (<GridComponent dataSource={employeeData}
    childGrid={childGridOptions} height={315}>
        <ColumnsDirective>
            <ColumnDirective field='EmployeeID' headerText='Employee ID'
            width='120' textAlign="Right"/>
            <ColumnDirective field='FirstName' headerText='First Name'
            width='150' />
            <ColumnDirective field='City' headerText='City' width='150' />
            <ColumnDirective field='Country' headerText='Country'
            width='150' />
        </ColumnsDirective>
        <Inject services={[DetailRow, Edit, Toolbar]}/>
    </GridComponent >)
};
export default App;

```

DATASOURCE.JSX

```

export let employeeData = [{
  'EmployeeID': 1,
  'LastName': 'Davolio',
  'FirstName': 'Nancy',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-664743600000),
  'HireDate': new Date(704692800000),
  'Address': '507 - 20th Ave. E.\r\nApt. 2A',
  'City': 'Seattle',
  'Region': 'WA',
  'PostalCode': '98122',
  'Country': 'USA',
  'HomePhone': '(206) 555-9857',
  'Extension': '5467',
  'Photo': { 'Length': 21626 },
  'Notes': 'Education includes a BA in psychology from Colorado State University in 1970. She also completed\'
\'The Art of the Cold Call.\' Nancy is a member of Toastmasters International.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
  'EmployeeID': 2,
  'LastName': 'Fuller',
  'FirstName': 'Andrew',
  'Title': 'Vice President, Sales',
  'TitleOfCourtesy': 'Dr.',
  'BirthDate': new Date(-563828400000),
  'HireDate': new Date(713764800000),
  'Address': '908 W. Capital Way',
  'City': 'Tacoma',
  'Region': 'WA',
  'PostalCode': '98401',
  'Country': 'USA',
  'HomePhone': '(206) 555-9482',
  'Extension': '3457',
  'Photo': { 'Length': 21626 },
  'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in international marketing from the University of \
Dallas in 1981. He is fluent in French and Italian and reads German. He joined the company as a sales representative, \
was promoted to sales manager in January 1992 and to vice president of sales in March 1993. Andrew is a member of the \
Sales Management Roundtable, the Seattle Chamber of Commerce, and the Pacific Rim Importers Association.',
  'ReportsTo': 0,
  'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
},
{
  'EmployeeID': 3,
  'LastName': 'Leverling',
  'FirstName': 'Janet',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-200088000000),

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    'HireDate': new Date(702104400000),
    'Address': '722 Moss Bay Blvd.',
    'City': 'Kirkland',
    'Region': 'WA',
    'PostalCode': '98033',
    'Country': 'USA',
    'HomePhone': '(206) 555-3412',
    'Extension': '3355',
    'Photo': { 'Length': 21722 },
    'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
\
  She has also completed a certificate program in food retailing management.\
  Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
  },
  {
    'EmployeeID': 4,
    'LastName': 'Peacock',
    'FirstName': 'Margaret',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mrs.',
    'BirthDate': new Date(-1018814400000),
    'HireDate': new Date(736401600000),
    'Address': '4110 Old Redmond Rd.',
    'City': 'Redmond',
    'Region': 'WA',
    'PostalCode': '98052',
    'Country': 'USA',
    'HomePhone': '(206) 555-8122',
    'Extension': '5176',
    'Photo': { 'Length': 21626 },
    'Notes': 'Margaret holds a BA in English literature from Concordia
College (1958) and an MA from the American \
Institute of Culinary Arts (1966). She was assigned to the London office
temporarily from July through November 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
  },
  {
    'EmployeeID': 5,
    'LastName': 'Buchanan',
    'FirstName': 'Steven',
    'Title': 'Sales Manager',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-468010800000),
    'HireDate': new Date(750830400000),
    'Address': '14 Garrett Hill',
    'City': 'London',
    'Region': null,
    'PostalCode': 'SW1 8JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-4848',
    'Extension': '3453',
    'Photo': { 'Length': 21626 },

```



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      'Notes': 'Steven Buchanan graduated from St. Andrews University,
Scotland, with a BSC degree in 1976. Upon joining the company as \
a sales representative in 1992, he spent 6 months in an orientation program
at the Seattle office and then returned to his permanent \
post in London. He was promoted to sales manager in March 1993. Mr.
Buchanan has completed the courses \'Successful \
Telemarketing\' and \'International Sales Management.\' He is fluent in
French.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
    },
    {
      'EmployeeID': 6,
      'LastName': 'Suyama',
      'FirstName': 'Michael',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-205185600000),
      'HireDate': new Date(750830400000),
      'Address': 'Coventry House\r\nMiner Rd.',
      'City': 'London',
      'Region': null,
      'PostalCode': 'EC2 7JR',
      'Country': 'UK',
      'HomePhone': '(71) 555-7773',
      'Extension': '428',
      'Photo': { 'Length': 21626 },
      'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese, and
Spanish.',
      'ReportsTo': 5,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 7,
      'LastName': 'King',
      'FirstName': 'Robert',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-302731200000),
      'HireDate': new Date(757486800000),
      'Address': 'Edgeham Hollow\r\nWinchester Way',
      'City': 'London',
      'Region': null,
      'PostalCode': 'RG1 9SP',
      'Country': 'UK',
      'HomePhone': '(71) 555-5598',
      'Extension': '465',
      'Photo': { 'Length': 21626 },
      'Notes': 'Robert King served in the Peace Corps and traveled extensively
before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.'
    }
  ]
}

```

```

    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 8,
    'LastName': 'Callahan',
    'FirstName': 'Laura',
    'Title': 'Inside Sales Coordinator',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-377982000000),
    'HireDate': new Date(762843600000),
    'Address': '4726 - 11th Ave. N.E.',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98105',
    'Country': 'USA',
    'HomePhone': '(206) 555-1189',
    'Extension': '2344',
    'Photo': { 'Length': 21626 },
    'Notes': 'Laura received a BA in psychology from the University of Washington. She has also completed a course in business \ French. She reads and writes French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 9,
    'LastName': 'Dodsworth',
    'FirstName': 'Anne',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-123966000000),
    'HireDate': new Date(784875600000),
    'Address': '7 Houndstooth Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'WG2 7LT',
    'Country': 'UK',
    'HomePhone': '(71) 555-4444',
    'Extension': '452',
    'Photo': { 'Length': 21626 },
    'Notes': 'Anne has a BA degree in English from St. Lawrence College. She is fluent in French and German.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  }
];
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims', ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France', Freight: 32.38, Verified: !0
  },
  {

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    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
},
{
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua
do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
},
{
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2, rue
du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
},
{
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
},
{
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua
do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
},
{
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress: 'Hauptstr.
31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
},
{
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
},
{

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```
OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
  ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
  'Rua do Mercado, 12',
  ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
  Freight: 13.97, Verified: !1
},
{
  OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
  ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
  'Carrera 22 con Ave. Carlos Soublette #8-35',
  ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry: 'Venezuela',
  Freight: 81.91, Verified: !0
},
{
  OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
  ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse 6',
  ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
  Freight: 140.51, Verified: !0
},
{
  OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
  ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
  ShipAddress: 'Sierras de Granada 9993',
  ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
  Freight: 3.25, Verified: !1
},
{
  OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
  ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
  'Mehrheimerstr. 369',
  ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
  Freight: 55.09, Verified: !0
},
{
  OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
  ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua da
  Panificadora, 12',
  ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
  Freight: 3.05, Verified: !1
},
{
  OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
  ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
  ShipAddress: '2817 Milton Dr.',
  ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA', Freight:
  48.29, Verified: !0
}
];
```

DATASOURCE.TSX

```

export let employeeData: Object[] = [{
  'EmployeeID': 1,
  'LastName': 'Davolio',
  'FirstName': 'Nancy',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-664743600000),
  'HireDate': new Date(704692800000),
  'Address': '507 - 20th Ave. E.\r\nApt. 2A',
  'City': 'Seattle',
  'Region': 'WA',
  'PostalCode': '98122',
  'Country': 'USA',
  'HomePhone': '(206) 555-9857',
  'Extension': '5467',
  'Photo': { 'Length': 21626 },
  'Notes': 'Education includes a BA in psychology from Colorado State University in 1970. She also completed \
    \'The Art of the Cold Call.\' Nancy is a member of Toastmasters International.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
  'EmployeeID': 2,
  'LastName': 'Fuller',
  'FirstName': 'Andrew',
  'Title': 'Vice President, Sales',
  'TitleOfCourtesy': 'Dr.',
  'BirthDate': new Date(-563828400000),
  'HireDate': new Date(713764800000),
  'Address': '908 W. Capital Way',
  'City': 'Tacoma',
  'Region': 'WA',
  'PostalCode': '98401',
  'Country': 'USA',
  'HomePhone': '(206) 555-9482',
  'Extension': '3457',
  'Photo': { 'Length': 21626 },
  'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in international marketing from the University of \
    Dallas in 1981. He is fluent in French and Italian and reads German. He joined the company as a sales representative, \
    was promoted to sales manager in January 1992 and to vice president of sales in March 1993. Andrew is a member of the \
    Sales Management Roundtable, the Seattle Chamber of Commerce, and the Pacific Rim Importers Association.',
  'ReportsTo': 0,
  'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
},
{
  'EmployeeID': 3,
  'LastName': 'Leverling',
  'FirstName': 'Janet',
  'Title': 'Sales Representative',

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    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-200088000000),
    'HireDate': new Date(702104400000),
    'Address': '722 Moss Bay Blvd.',
    'City': 'Kirkland',
    'Region': 'WA',
    'PostalCode': '98033',
    'Country': 'USA',
    'HomePhone': '(206) 555-3412',
    'Extension': '3355',
    'Photo': { 'Length': 21722 },
    'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
\
    She has also completed a certificate program in food retailing
management.\
    Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
},
{
    'EmployeeID': 4,
    'LastName': 'Peacock',
    'FirstName': 'Margaret',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mrs.',
    'BirthDate': new Date(-1018814400000),
    'HireDate': new Date(736401600000),
    'Address': '4110 Old Redmond Rd.',
    'City': 'Redmond',
    'Region': 'WA',
    'PostalCode': '98052',
    'Country': 'USA',
    'HomePhone': '(206) 555-8122',
    'Extension': '5176',
    'Photo': { 'Length': 21626 },
    'Notes': 'Margaret holds a BA in English literature from Concordia
College (1958) and an MA from the American \
    Institute of Culinary Arts (1966). She was assigned to the London office
temporarily from July through November 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
},
{
    'EmployeeID': 5,
    'LastName': 'Buchanan',
    'FirstName': 'Steven',
    'Title': 'Sales Manager',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-468010800000),
    'HireDate': new Date(750830400000),
    'Address': '14 Garrett Hill',
    'City': 'London',
    'Region': null,
    'PostalCode':
    'SW1 8JR',
    'Country': 'UK',

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      'HomePhone': '(71) 555-4848',
      'Extension': '3453',
      'Photo': { 'Length': 21626 },
      'Notes': 'Steven Buchanan graduated from St. Andrews University,
Scotland, with a BSC degree in 1976. Upon joining the company as \
a sales representative in 1992, he spent 6 months in an orientation
program at the Seattle office and then returned to his permanent \
post in London. He was promoted to sales manager in March 1993. Mr.
Buchanan has completed the courses \'Successful \
Telemarketing\' and \'International Sales Management.\' He is fluent in
French.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
    },
    {
      'EmployeeID': 6,
      'LastName': 'Suyama',
      'FirstName': 'Michael',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-205185600000),
      'HireDate': new Date(750830400000),
      'Address': 'Coventry House\r\nMiner Rd.',
      'City': 'London',
      'Region': null,
      'PostalCode': 'EC2 7JR',
      'Country': 'UK',
      'HomePhone': '(71) 555-7773',
      'Extension': '428',
      'Photo': { 'Length': 21626 },
      'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese, and
Spanish.',
      'ReportsTo': 5,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 7,
      'LastName': 'King',
      'FirstName': 'Robert',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-302731200000),
      'HireDate': new Date(757486800000),
      'Address': 'Edgeham Hollow\r\nWinchester Way',
      'City': 'London',
      'Region': null,
      'PostalCode': 'RG1 9SP',
      'Country': 'UK',
      'HomePhone': '(71) 555-5598',
      'Extension': '465',
      'Photo': { 'Length': 21626 },
      'Notes': 'Robert King served in the Peace Corps and traveled extensively
before completing his degree in English at the \

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    University of Michigan in 1992, the year he joined the company. After
    completing a course entitled \'Selling in Europe,\' \
    he was transferred to the London office in March 1993.\',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 8,
    'LastName': 'Callahan',
    'FirstName': 'Laura',
    'Title': 'Inside Sales Coordinator',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-377982000000),
    'HireDate': new Date(762843600000),
    'Address': '4726 - 11th Ave. N.E.',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98105',
    'Country': 'USA',
    'HomePhone': '(206) 555-1189',
    'Extension': '2344',
    'Photo': { 'Length': 21626 },
    'Notes': 'Laura received a BA in psychology from the University of
    Washington. She has also completed a course in business \
    French. She reads and writes French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 9,
    'LastName': 'Dodsworth',
    'FirstName': 'Anne',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-123966000000),
    'HireDate': new Date(784875600000),
    'Address': '7 Houndstooth Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'WG2 7LT',
    'Country': 'UK',
    'HomePhone': '(71) 555-4444',
    'Extension': '452',
    'Photo': { 'Length': 21626 },
    'Notes': 'Anne has a BA degree in English from St. Lawrence College. She
is fluent in French and German.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  }
];
export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  }
];

```



```

    },
    {
      OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
      ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
  ],

```

```

{
  OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
  ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
  ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
},
{
  OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
  ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
  ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
},
{
  OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
  ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
  ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
},
{
  OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
  ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
  ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
},
{
  OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
  ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
  ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
},
{
  OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
  ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
  ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
},
{
  OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
  ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
  ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
}
}];

```

Template column in child grid

A template column in a child grid within the Syncfusion React Grid component is valuable when you want to customize the appearance and functionality of specific columns in the child grid. It is useful for incorporating interactive elements, custom formatting, or complex data representation within specific columns of the child grid.

To achieve this, you can utilize the [template](#) property of a column to display a custom element instead of a field value in the Grid. Template columns defined in the child grid will be null in the **ngOnInit** method, which means they will not be shown in the UI. They will be rendered after the entire HTML view rendering process, and you can access and utilize them in the **ngAfterViewInit** method to display the template columns in the child grid.

During the [load](#) event of the child grid, it is necessary to set the 'registeredTemplate' to empty. This action will remove any previously existing templates. By doing so, you gain the flexibility to dynamically apply templates to the grid's cells based on different conditions or requirements.

The following example demonstrates, how to show a custom image in the **Employee Image** column of the child grid by utilizing the [template](#) property of the column.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { DetailRow, Edit, Inject, Toolbar } from '@syncfusion/ej2-react-
 grids';
import * as React from 'react';
import { data, employeeData } from './datasource';
function App() {
  const childTemplate = (props) => {
    const src = props.EmployeeID + '.png';
    return (<div className='image'>
      <img src={src} alt={props.EmployeeID} />
    </div>);
  };
  let childGridOptions = {
    columns: [
      { headerText: 'Employee Image', textAlign: 'Center', template:
childTemplate, width: 120 },
      { field: 'OrderID', headerText: 'Order ID', isPrimaryKey: true,
textAlign: 'Right', width: 120 },
      { field: 'EmployeeID', headerText: 'Employee ID', textAlign:
'Right', allowEditing: false, width: 120 },
      { field: 'ShipCity', headerText: 'Ship City', width: 150 },
      { field: 'ShipName', headerText: 'Ship Name', width: 150 }
    ],
    dataSource: data,
    editSettings: { allowEditing: true, allowAdding: true, allowDeleting:
true },
    queryString: 'EmployeeID',
    toolbar: ['Add', 'Edit', 'Delete', 'Update', 'Cancel'],
  };
  return (<GridComponent dataSource={employeeData}
childGrid={childGridOptions} height={315}>
  <ColumnsDirective>
```

```

        <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='120' textAlign="Right" />
        <ColumnDirective field='FirstName' headerText='First Name'
width='150' />
        <ColumnDirective field='City' headerText='City' width='150' />
        <ColumnDirective field='Country' headerText='Country' width='150'
/>
    </ColumnsDirective>
    <Inject services={[DetailRow, Edit, Toolbar]} />
  </GridComponent >
};
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { DetailRow, Edit, GridModel, Inject, Toolbar } from '@syncfusion/ej2-
react-grids';
import * as React from 'react';
import { data, employeeData } from './datasource';
function App() {
  const childTemplate = (props) => {
    const src = props.EmployeeID + '.png';
    return (<div className='image'>
      <img src={src} alt={props.EmployeeID} />
    </div>);
  };
  let childGridOptions: GridModel = {
    columns: [
      { headerText: 'Employee Image', textAlign: 'Center', template:
childTemplate, width: 120 },
      { field: 'OrderID', headerText: 'Order ID', isPrimaryKey: true,
textAlign: 'Right', width: 120 },
      { field: 'EmployeeID', headerText: 'Employee ID', textAlign:
'Right', allowEditing: false, width: 120 },
      { field: 'ShipCity', headerText: 'Ship City', width: 150 },
      { field: 'ShipName', headerText: 'Ship Name', width: 150 }
    ],
    dataSource: data,
    editSettings: { allowEditing: true, allowAdding: true, allowDeleting:
true },
    queryString: 'EmployeeID',
    toolbar: ['Add', 'Edit', 'Delete', 'Update', 'Cancel'],
  };
  return (<GridComponent dataSource={employeeData}
childGrid={childGridOptions} height={315}>
    <ColumnsDirective>
      <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='120' textAlign="Right" />
      <ColumnDirective field='FirstName' headerText='First Name'
width='150' />
      <ColumnDirective field='City' headerText='City' width='150' />
      <ColumnDirective field='Country' headerText='Country' width='150'
/>
    </ColumnsDirective>

```

```

    <Inject services={[DetailRow, Edit, Toolbar]} />
  </GridComponent >
};
export default App;

```

DATASOURCE.JSX

```

export let employeeData = [{
  'EmployeeID': 1,
  'LastName': 'Davolio',
  'FirstName': 'Nancy',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-664743600000),
  'HireDate': new Date(704692800000),
  'Address': '507 - 20th Ave. E.\r\nApt. 2A',
  'City': 'Seattle',
  'Region': 'WA',
  'PostalCode': '98122',
  'Country': 'USA',
  'HomePhone': '(206) 555-9857',
  'Extension': '5467',
  'Photo': { 'Length': 21626 },
  'Notes': 'Education includes a BA in psychology from Colorado State University in 1970. She also completed\'
\'The Art of the Cold Call.\' Nancy is a member of Toastmasters International.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
  'EmployeeID': 2,
  'LastName': 'Fuller',
  'FirstName': 'Andrew',
  'Title': 'Vice President, Sales',
  'TitleOfCourtesy': 'Dr.',
  'BirthDate': new Date(-563828400000),
  'HireDate': new Date(713764800000),
  'Address': '908 W. Capital Way',
  'City': 'Tacoma',
  'Region': 'WA',
  'PostalCode': '98401',
  'Country': 'USA',
  'HomePhone': '(206) 555-9482',
  'Extension': '3457',
  'Photo': { 'Length': 21626 },
  'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in international marketing from the University of \
Dallas in 1981. He is fluent in French and Italian and reads German. He joined the company as a sales representative, \
was promoted to sales manager in January 1992 and to vice president of sales in March 1993. Andrew is a member of the \
Sales Management Roundtable, the Seattle Chamber of Commerce, and the Pacific Rim Importers Association.',
  'ReportsTo': 0,
  'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
}
]

```

```

},
{
  'EmployeeID': 3,
  'LastName': 'Leverling',
  'FirstName': 'Janet',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-200088000000),
  'HireDate': new Date(702104400000),
  'Address': '722 Moss Bay Blvd.',
  'City': 'Kirkland',
  'Region': 'WA',
  'PostalCode': '98033',
  'Country': 'USA',
  'HomePhone': '(206) 555-3412',
  'Extension': '3355',
  'Photo': { 'Length': 21722 },
  'Notes': 'Janet has a BS degree in chemistry from Boston College (1984). \
    She has also completed a certificate program in food retailing \
    management.\
    Janet was hired as a sales associate in 1991 and promoted to sales \
    representative in February 1992.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
},
{
  'EmployeeID': 4,
  'LastName': 'Peacock',
  'FirstName': 'Margaret',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Mrs.',
  'BirthDate': new Date(-1018814400000),
  'HireDate': new Date(736401600000),
  'Address': '4110 Old Redmond Rd.',
  'City': 'Redmond',
  'Region': 'WA',
  'PostalCode': '98052',
  'Country': 'USA',
  'HomePhone': '(206) 555-8122',
  'Extension': '5176',
  'Photo': { 'Length': 21626 },
  'Notes': 'Margaret holds a BA in English literature from Concordia College \
    (1958) and an MA from the American \
    Institute of Culinary Arts (1966). She was assigned to the London office \
    temporarily from July through November 1992.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
},
{
  'EmployeeID': 5,
  'LastName': 'Buchanan',
  'FirstName': 'Steven',
  'Title': 'Sales Manager',
  'TitleOfCourtesy': 'Mr.',
  'BirthDate': new Date(-468010800000),
  'HireDate': new Date(750830400000),
  'Address': '14 Garrett Hill',

```

```

'City': 'London',
'Region': null,
'PostalCode': 'SW1 8JR',
'Country': 'UK',
'HomePhone': '(71) 555-4848',
'Extension': '3453',
'Photo': { 'Length': 21626 },
'Notes': 'Steven Buchanan graduated from St. Andrews University, Scotland,
with a BSC degree in 1976. Upon joining the company as \
a sales representative in 1992, he spent 6 months in an orientation program \
at the Seattle office and then returned to his permanent \
post in London. He was promoted to sales manager in March 1993. Mr.
Buchanan has completed the courses \'Successful \
Telemarketing\' and \'International Sales Management.\' He is fluent in
French.',
'ReportsTo': 2,
'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
},
{
'EmployeeID': 6,
'LastName': 'Suyama',
'FirstName': 'Michael',
'Title': 'Sales Representative',
'TitleOfCourtesy': 'Mr.',
'BirthDate': new Date(-205185600000),
'HireDate': new Date(750830400000),
'Address': 'Coventry House\r\nMiner Rd.',
'City': 'London',
'Region': null,
'PostalCode': 'EC2 7JR',
'Country': 'UK',
'HomePhone': '(71) 555-7773',
'Extension': '428',
'Photo': { 'Length': 21626 },
'Notes': 'Michael is a graduate of Sussex University (MA, economics, 1983)
and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese, and
Spanish.',
'ReportsTo': 5,
'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
'EmployeeID': 7,
'LastName': 'King',
'FirstName': 'Robert',
'Title': 'Sales Representative',
'TitleOfCourtesy': 'Mr.',
'BirthDate': new Date(-302731200000),
'HireDate': new Date(757486800000),
'Address': 'Edgeham Hollow\r\nWinchester Way',
'City': 'London',
'Region': null,
'PostalCode': 'RG1 9SP',
'Country': 'UK',
'HomePhone': '(71) 555-5598',

```

```

'Extension': '465',
'Photo': { 'Length': 21626 },
'Notes': 'Robert King served in the Peace Corps and traveled extensively
before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
'ReportsTo': 5,
'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
'EmployeeID': 8,
'LastName': 'Callahan',
'FirstName': 'Laura',
'Title': 'Inside Sales Coordinator',
'TitleOfCourtesy': 'Ms.',
'BirthDate': new Date(-377982000000),
'HireDate': new Date(762843600000),
'Address': '4726 - 11th Ave. N.E.',
'City': 'Seattle',
'Region': 'WA',
'PostalCode': '98105',
'Country': 'USA',
'HomePhone': '(206) 555-1189',
'Extension': '2344',
'Photo': { 'Length': 21626 },
'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
'ReportsTo': 2,
'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
'EmployeeID': 9,
'LastName': 'Dodsworth',
'FirstName': 'Anne',
'Title': 'Sales Representative',
'TitleOfCourtesy': 'Ms.',
'BirthDate': new Date(-123966000000),
'HireDate': new Date(784875600000),
'Address': '7 Houndstooth Rd.',
'City': 'London',
'Region': null,
'PostalCode': 'WG2 7LT',
'Country': 'UK',
'HomePhone': '(71) 555-4444',
'Extension': '452',
'Photo': { 'Length': 21626 },
'Notes': 'Anne has a BA degree in English from St. Lawrence College. She is
fluent in French and German.',
'ReportsTo': 5,
'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
}];
export let data = [
{
  OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),

```



```

    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims', ShipAddress:
    '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0,
    Employee: {
      EmployeeID: 1
    },
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1,
    Employee: {
      EmployeeID: 2
    },
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua
    do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0,
    Employee: {
      EmployeeID: 3
    },
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2, rue
    du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0,
    Employee: {
      EmployeeID: 4
    },
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0,
    Employee: {
      EmployeeID: 5
    }
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua
    do Paço, 67',

```

```

    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
    , Employee: {
      EmployeeID: 6
    }
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress: 'Hauptstr.
    31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
    , Employee: {
      EmployeeID: 7
    }
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
    Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
    , Employee: {
      EmployeeID: 8
    }
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
    Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
    , Employee: {
      EmployeeID: 9
    }
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
    Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
    'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry: 'Venezuela',
    Freight: 81.91, Verified: !0
    , Employee: {
      EmployeeID: 9
    }
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
    Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse 6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
    Freight: 140.51, Verified: !0
    , Employee: {

```

```

        EmployeeID: 6
      },
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
      , Employee: {
        EmployeeID: 2
      }
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
      Freight: 55.09, Verified: !0
      , Employee: {
        EmployeeID: 3
      }
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua da
Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
      , Employee: {
        EmployeeID: 4
      }
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA', Freight:
48.29, Verified: !0
      , Employee: {
        EmployeeID: 3
      }
    }
  ]];

```

DATASOURCE.TSX

```

export let employeeData: Object[] = [{
  'EmployeeID': 1,
  'LastName': 'Davolio',
  'FirstName': 'Nancy',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',

```

```

'BirthDate': new Date(-664743600000),
'HireDate': new Date(704692800000),
'Address': '507 - 20th Ave. E.\r\nApt. 2A',
'City': 'Seattle',
'Region': 'WA',
'PostalCode': '98122',
'Country': 'USA',
'HomePhone': '(206) 555-9857',
'Extension': '5467',
'Photo': { 'Length': 21626 },
'Notes': 'Education includes a BA in psychology from Colorado State University in 1970. She also completed\r\nThe Art of the Cold Call.\r\n Nancy is a member of Toastmasters International.',
'ReportsTo': 2,
'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
'EmployeeID': 2,
'LastName': 'Fuller',
'FirstName': 'Andrew',
'Title': 'Vice President, Sales',
'TitleOfCourtesy': 'Dr.',
'BirthDate': new Date(-563828400000),
'HireDate': new Date(713764800000),
'Address': '908 W. Capital Way',
'City': 'Tacoma',
'Region': 'WA',
'PostalCode': '98401',
'Country': 'USA',
'HomePhone': '(206) 555-9482',
'Extension': '3457',
'Photo': { 'Length': 21626 },
'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in international marketing from the University of \ Dallas in 1981. He is fluent in French and Italian and reads German. He joined the company as a sales representative, \ was promoted to sales manager in January 1992 and to vice president of sales in March 1993. Andrew is a member of the \ Sales Management Roundtable, the Seattle Chamber of Commerce, and the Pacific Rim Importers Association.',
'ReportsTo': 0,
'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
},
{
'EmployeeID': 3,
'LastName': 'Leverling',
'FirstName': 'Janet',
'Title': 'Sales Representative',
'TitleOfCourtesy': 'Ms.',
'BirthDate': new Date(-200088000000),
'HireDate': new Date(702104400000),
'Address': '722 Moss Bay Blvd.',
'City': 'Kirkland',
'Region': 'WA',
'PostalCode': '98033',
'Country': 'USA',

```

```

'HomePhone': '(206) 555-3412',
'Extension': '3355',
'Photo': { 'Length': 21722 },
'Notes': 'Janet has a BS degree in chemistry from Boston College (1984). \
  She has also completed a certificate program in food retailing
management.\
  Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
'ReportsTo': 2,
'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
},
{
  'EmployeeID': 4,
  'LastName': 'Peacock',
  'FirstName': 'Margaret',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Mrs.',
  'BirthDate': new Date(-1018814400000),
  'HireDate': new Date(736401600000),
  'Address': '4110 Old Redmond Rd.',
  'City': 'Redmond',
  'Region': 'WA',
  'PostalCode': '98052',
  'Country': 'USA',
  'HomePhone': '(206) 555-8122',
  'Extension': '5176',
  'Photo': { 'Length': 21626 },
  'Notes': 'Margaret holds a BA in English literature from Concordia College
(1958) and an MA from the American \
Institute of Culinary Arts (1966). She was assigned to the London office
temporarily from July through November 1992.',
'ReportsTo': 2,
'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
},
{
  'EmployeeID': 5,
  'LastName': 'Buchanan',
  'FirstName': 'Steven',
  'Title': 'Sales Manager',
  'TitleOfCourtesy': 'Mr.',
  'BirthDate': new Date(-468010800000),
  'HireDate': new Date(750830400000),
  'Address': '14 Garrett Hill',
  'City': 'London',
  'Region': null,
  'PostalCode':
'SW1 8JR',
  'Country': 'UK',
  'HomePhone': '(71) 555-4848',
  'Extension': '3453',
  'Photo': { 'Length': 21626 },
  'Notes': 'Steven Buchanan graduated from St. Andrews University, Scotland,
with a BSC degree in 1976. Upon joining the company as \
a sales representative in 1992, he spent 6 months in an orientation program
at the Seattle office and then returned to his permanent \
post in London. He was promoted to sales manager in March 1993. Mr.
Buchanan has completed the courses \'Successful \

```

```

Telemarketing\' and \'International Sales Management.\' He is fluent in
French.',
'ReportsTo': 2,
'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
},
{
'EmployeeID': 6,
'LastName': 'Suyama',
'FirstName': 'Michael',
'Title': 'Sales Representative',
'TitleOfCourtesy': 'Mr.',
'BirthDate': new Date(-205185600000),
'HireDate': new Date(750830400000),
'Address': 'Coventry House\r\nMiner Rd.',
'City': 'London',
'Region': null,
'PostalCode': 'EC2 7JR',
'Country': 'UK',
'HomePhone': '(71) 555-7773',
'Extension': '428',
'Photo': { 'Length': 21626 },
'Notes': 'Michael is a graduate of Sussex University (MA, economics, 1983)
and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese, and
Spanish.',
'ReportsTo': 5,
'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
'EmployeeID': 7,
'LastName': 'King',
'FirstName': 'Robert',
'Title': 'Sales Representative',
'TitleOfCourtesy': 'Mr.',
'BirthDate': new Date(-302731200000),
'HireDate': new Date(757486800000),
'Address': 'Edgeham Hollow\r\nWinchester Way',
'City': 'London',
'Region': null,
'PostalCode': 'RG1 9SP',
'Country': 'UK',
'HomePhone': '(71) 555-5598',
'Extension': '465',
'Photo': { 'Length': 21626 },
'Notes': 'Robert King served in the Peace Corps and traveled extensively
before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
'ReportsTo': 5,
'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
'EmployeeID': 8,
'LastName': 'Callahan',

```

```

'FirstName': 'Laura',
'Title': 'Inside Sales Coordinator',
'TitleOfCourtesy': 'Ms.',
'BirthDate': new Date(-377982000000),
'HireDate': new Date(762843600000),
'Address': '4726 - 11th Ave. N.E.',
'City': 'Seattle',
'Region': 'WA',
'PostalCode': '98105',
'Country': 'USA',
'HomePhone': '(206) 555-1189',
'Extension': '2344',
'Photo': { 'Length': 21626 },
'Notes': 'Laura received a BA in psychology from the University of Washington. She has also completed a course in business \ French. She reads and writes French.',
'ReportsTo': 2,
'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
'EmployeeID': 9,
'LastName': 'Dodsworth',
'FirstName': 'Anne',
'Title': 'Sales Representative',
'TitleOfCourtesy': 'Ms.',
'BirthDate': new Date(-123966000000),
'HireDate': new Date(784875600000),
'Address': '7 Houndstooth Rd.',
'City': 'London',
'Region': null,
'PostalCode': 'WG2 7LT',
'Country': 'UK',
'HomePhone': '(71) 555-4444',
'Extension': '452',
'Photo': { 'Length': 21626 },
'Notes': 'Anne has a BA degree in English from St. Lawrence College. She is fluent in French and German.',
'ReportsTo': 5,
'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
}];
export let data: Object[] = [
{
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims', ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0,
    Employee: {
        EmployeeID: 1
    },
},
{
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress: 'Luisenstr. 48',

```

```

    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1,
    Employee: {
      EmployeeID: 2
    },
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua
    do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0,
    Employee: {
      EmployeeID: 3
    },
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2, rue
    du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0,
    Employee: {
      EmployeeID: 4
    },
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0,
    Employee: {
      EmployeeID: 5
    },
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua
    do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0,
    Employee: {
      EmployeeID: 6
    },
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress: 'Hauptstr.
    31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  }
}

```



```

    , Employee: {
      EmployeeID: 7
    }
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
    Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
    , Employee: {
      EmployeeID: 8
    }
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
    Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
    , Employee: {
      EmployeeID: 9
    }
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
    Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
    'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry: 'Venezuela',
    Freight: 81.91, Verified: !0
    , Employee: {
      EmployeeID: 9
    }
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
    Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse 6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
    Freight: 140.51, Verified: !0
    , Employee: {
      EmployeeID: 6
    }
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
    Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
    ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
    Freight: 3.25, Verified: !1
    , Employee: {
      EmployeeID: 2
    }
  }
}

```

```

},
{
  OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
  ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
  ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  , Employee: {
    EmployeeID: 3
  }
},
{
  OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
  ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua da
Panificadora, 12',
  ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  , Employee: {
    EmployeeID: 4
  }
},
{
  OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
  ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
  ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA', Freight:
48.29, Verified: !0
  , Employee: {
    EmployeeID: 3
  }
}
}];

```

How to get parent detail in child grid

Getting parent details in a child grid in an React Grid component is useful when you want to display and utilize information from the parent row within the child grid. This can be beneficial in scenarios where you need to provide additional context or perform calculations based on the parent row's data

To achieve this, you can utilize the [created](#) event. This event is triggered when the child grid is created and can be used to handle the child grid.

The following example demonstrates how to obtain parent details in a child grid using the `created` event. Within the `created` event, you can access the parent row data using `this.parentDetails.parentRowData` and display the desired details in the message.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
'@syncfusion/ej2-react-grids';
import { DetailRow, Edit, Inject, Toolbar } from '@syncfusion/ej2-react-
grids';
import * as React from 'react';
import { data, employeeData } from './datasource';

```

```

function App() {
  let childGridOptions = {
    created() {
      var parentRowData = this.parentDetails.parentRowData;
      document.getElementById('message').innerHTML = `EmployeeID:
${parentRowData.EmployeeID}, FirstName: ${parentRowData.FirstName}, Title:
${parentRowData.Title}`;
    },
    columns: [
      { field: 'OrderID', headerText: 'Order ID', isPrimaryKey: true,
textAlign: 'Right', width: 120 },
      { field: 'EmployeeID', headerText: 'Employee ID', textAlign: 'Right',
allowEditing: false, width: 120 },
      { field: 'ShipCity', headerText: 'Ship City', width: 150 },
      { field: 'ShipName', headerText: 'Ship Name', width: 150 }
    ],
    dataSource: data,
    editSettings: { allowEditing: true, allowAdding: true, allowDeleting:
true },
    queryString: 'EmployeeID',
    toolbar: ['Add', 'Edit', 'Delete', 'Update', 'Cancel'],
  };
  return (<div>
    <div style={{ marginLeft: "100px" }}>
      <p style={{ color: "black", fontSize: "large" }} id="message"></p>
    </div>
    <GridComponent dataSource={employeeData} childGrid={childGridOptions}
height={315}>
      <ColumnsDirective>
        <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='120' textAlign="Right" />
        <ColumnDirective field='FirstName' headerText='First Name'
width='150' />
        <ColumnDirective field='City' headerText='City' width='150' />
        <ColumnDirective field='Country' headerText='Country' width='150' />
      </ColumnsDirective>
      <Inject services={[DetailRow, Edit, Toolbar]} />
    </GridComponent ></div>
  </div>);
  export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, ParentDetails }
from '@syncfusion/ej2-react-grids';
import { DetailRow, Edit, GridModel, Inject, Toolbar } from '@syncfusion/ej2-
react-grids';
import * as React from 'react';
import { data, employeeData, ParentDetailsDataType } from '../datasource';
function App() {
  let childGridOptions: GridModel = {
    created() {
      var parentRowData = (this.parentDetails as
ParentDetails).parentRowData;
      (document.getElementById('message') as HTMLElement).innerHTML =
`EmployeeID: ${parentRowData as ParentDetailsDataType}.EmployeeID},

```

```

FirstName: ${ (parentRowData as ParentDetailsDataType).FirstName}, Title:
${ (parentRowData as ParentDetailsDataType).Title}`;
    },
    columns: [
        { field: 'OrderID', headerText: 'Order ID', isPrimaryKey: true,
textAlign: 'Right', width: 120 },
        { field: 'EmployeeID', headerText: 'Employee ID', textAlign: 'Right',
allowEditing: false, width: 120 },
        { field: 'ShipCity', headerText: 'Ship City', width: 150 },
        { field: 'ShipName', headerText: 'Ship Name', width: 150 }
    ],
    dataSource: data,
    editSettings: { allowEditing: true, allowAdding: true, allowDeleting:
true },
    queryString: 'EmployeeID',
    toolbar: ['Add', 'Edit', 'Delete', 'Update', 'Cancel'],
};
return (<div>
    <div style={{ marginLeft: "100px" }}>
        <p style={{ color: "black", fontSize: "large" }} id="message"></p>
    </div>
    <GridComponent dataSource={employeeData} childGrid={childGridOptions}
height={315}>
        <ColumnsDirective>
            <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='120' textAlign="Right" />
            <ColumnDirective field='FirstName' headerText='First Name'
width='150' />
            <ColumnDirective field='City' headerText='City' width='150' />
            <ColumnDirective field='Country' headerText='Country' width='150' />
        </ColumnsDirective>
        <Inject services={[DetailRow, Edit, Toolbar]} />
    </GridComponent ></div>)
);
export default App;

```

DATASOURCE.JSX

```

export let employeeData = [{
    'EmployeeID': 1,
    'LastName': 'Davolio',
    'FirstName': 'Nancy',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-664743600000),
    'HireDate': new Date(704692800000),
    'Address': '507 - 20th Ave. E.\r\nApt. 2A',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98122',
    'Country': 'USA',
    'HomePhone': '(206) 555-9857',
    'Extension': '5467',
    'Photo': { 'Length': 21626 },
    'Notes': 'Education includes a BA in psychology from Colorado State
University in 1970. She also completed\

```

```

\ 'The Art of the Cold Call.\' Nancy is a member of Toastmasters
International.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
  'EmployeeID': 2,
  'LastName': 'Fuller',
  'FirstName': 'Andrew',
  'Title': 'Vice President, Sales',
  'TitleOfCourtesy': 'Dr.',
  'BirthDate': new Date(-563828400000),
  'HireDate': new Date(713764800000),
  'Address': '908 W. Capital Way',
  'City': 'Tacoma',
  'Region': 'WA',
  'PostalCode': '98401',
  'Country': 'USA',
  'HomePhone': '(206) 555-9482',
  'Extension': '3457',
  'Photo': { 'Length': 21626 },
  'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
Dallas in 1981. He is fluent in French and Italian and reads German. He
joined the company as a sales representative, \
was promoted to sales manager in January 1992 and to vice president of sales
in March 1993. Andrew is a member of the \
Sales Management Roundtable, the Seattle Chamber of Commerce, and the Pacific
Rim Importers Association.',
  'ReportsTo': 0,
  'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
},
{
  'EmployeeID': 3,
  'LastName': 'Leverling',
  'FirstName': 'Janet',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-200088000000),
  'HireDate': new Date(702104400000),
  'Address': '722 Moss Bay Blvd.',
  'City': 'Kirkland',
  'Region': 'WA',
  'PostalCode': '98033',
  'Country': 'USA',
  'HomePhone': '(206) 555-3412',
  'Extension': '3355',
  'Photo': { 'Length': 21722 },
  'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
\
She has also completed a certificate program in food retailing management.\
Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
},
{

```

```

      'EmployeeID': 4,
      'LastName': 'Peacock',
      'FirstName': 'Margaret',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mrs.',
      'BirthDate': new Date(-1018814400000),
      'HireDate': new Date(736401600000),
      'Address': '4110 Old Redmond Rd.',
      'City': 'Redmond',
      'Region': 'WA',
      'PostalCode': '98052',
      'Country': 'USA',
      'HomePhone': '(206) 555-8122',
      'Extension': '5176',
      'Photo': { 'Length': 21626 },
      'Notes': 'Margaret holds a BA in English literature from Concordia College (1958) and an MA from the American \
Institute of Culinary Arts (1966). She was assigned to the London office temporarily from July through November 1992.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
    },
    {
      'EmployeeID': 5,
      'LastName': 'Buchanan',
      'FirstName': 'Steven',
      'Title': 'Sales Manager',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-468010800000),
      'HireDate': new Date(750830400000),
      'Address': '14 Garrett Hill',
      'City': 'London',
      'Region': null,
      'PostalCode': 'SW1 8JR',
      'Country': 'UK',
      'HomePhone': '(71) 555-4848',
      'Extension': '3453',
      'Photo': { 'Length': 21626 },
      'Notes': 'Steven Buchanan graduated from St. Andrews University, Scotland, with a BSC degree in 1976. Upon joining the company as \
a sales representative in 1992, he spent 6 months in an orientation program at the Seattle office and then returned to his permanent \
post in London. He was promoted to sales manager in March 1993. Mr. Buchanan has completed the courses \'Successful \
Telemarketing\' and \'International Sales Management.\' He is fluent in French.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
    },
    {
      'EmployeeID': 6,
      'LastName': 'Suyama',
      'FirstName': 'Michael',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-205185600000),
      'HireDate': new Date(750830400000),

```

```

      'Address': 'Coventry House\r\nMiner Rd.',
      'City': 'London',
      'Region': null,
      'PostalCode': 'EC2 7JR',
      'Country': 'UK',
      'HomePhone': '(71) 555-7773',
      'Extension': '428',
      'Photo': { 'Length': 21626 },
      'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese, and
Spanish.',
      'ReportsTo': 5,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 7,
      'LastName': 'King',
      'FirstName': 'Robert',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-302731200000),
      'HireDate': new Date(757486800000),
      'Address': 'Edgeham Hollow\r\nWinchester Way',
      'City': 'London',
      'Region': null,
      'PostalCode': 'RG1 9SP',
      'Country': 'UK',
      'HomePhone': '(71) 555-5598',
      'Extension': '465',
      'Photo': { 'Length': 21626 },
      'Notes': 'Robert King served in the Peace Corps and traveled extensively
before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
      'ReportsTo': 5,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 8,
      'LastName': 'Callahan',
      'FirstName': 'Laura',
      'Title': 'Inside Sales Coordinator',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-377982000000),
      'HireDate': new Date(762843600000),
      'Address': '4726 - 11th Ave. N.E.',
      'City': 'Seattle',
      'Region': 'WA',
      'PostalCode': '98105',
      'Country': 'USA',
      'HomePhone': '(206) 555-1189',
      'Extension': '2344',
      'Photo': { 'Length': 21626 },

```

```

    'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 9,
    'LastName': 'Dodsworth',
    'FirstName': 'Anne',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-12396600000),
    'HireDate': new Date(78487560000),
    'Address': '7 Houndstooth Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'WG2 7LT',
    'Country': 'UK',
    'HomePhone': '(71) 555-4444',
    'Extension': '452',
    'Photo': { 'Length': 21626 },
    'Notes': 'Anne has a BA degree in English from St. Lawrence College. She
is fluent in French and German.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  }
];
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims', ShipAddress:
'59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua
do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2, rue
du Commerce',

```



```

    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua
    do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress: 'Hauptstr.
    31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
    Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
    Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
    Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
    'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry: 'Venezuela',
    Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
    Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse 6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
    Freight: 140.51, Verified: !0
  }

```

```

},
{
  OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
  ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
  ShipAddress: 'Sierras de Granada 9993',
  ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
  Freight: 3.25, Verified: !1
},
{
  OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
  ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
  ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
  Freight: 55.09, Verified: !0
},
{
  OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
  ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua da
Panificadora, 12',
  ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
  Freight: 3.05, Verified: !1
},
{
  OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
  ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
  ShipAddress: '2817 Milton Dr.',
  ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA', Freight:
48.29, Verified: !0
}
];

```

DATASOURCE.TSX

```

export let employeeData: Object[] = [{
  'EmployeeID': 1,
  'LastName': 'Davolio',
  'FirstName': 'Nancy',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-664743600000),
  'HireDate': new Date(704692800000),
  'Address': '507 - 20th Ave. E.\r\nApt. 2A',
  'City': 'Seattle',
  'Region': 'WA',
  'PostalCode': '98122',
  'Country': 'USA',
  'HomePhone': '(206) 555-9857',
  'Extension': '5467',
  'Photo': { 'Length': 21626 },
  'Notes': 'Education includes a BA in psychology from Colorado State
University in 1970. She also completed\

```

```

    \'The Art of the Cold Call.\' Nancy is a member of Toastmasters
International.',
    \'ReportsTo': 2,
    \'PhotoPath': \'http://accweb/emmployees/davolio.bmp\'
  },
  {
    \'EmployeeID': 2,
    \'LastName': \'Fuller\',
    \'FirstName': \'Andrew\',
    \'Title': \'Vice President, Sales\',
    \'TitleOfCourtesy': \'Dr.\',
    \'BirthDate': new Date(-563828400000),
    \'HireDate': new Date(713764800000),
    \'Address': \'908 W. Capital Way\',
    \'City': \'Tacoma\',
    \'Region': \'WA\',
    \'PostalCode': \'98401\',
    \'Country': \'USA\',
    \'HomePhone': \'(206) 555-9482\',
    \'Extension': \'3457\',
    \'Photo': { \'Length': 21626 },
    \'Notes': \'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
    Dallas in 1981. He is fluent in French and Italian and reads German. He
joined the company as a sales representative, \
    was promoted to sales manager in January 1992 and to vice president of
sales in March 1993. Andrew is a member of the \
    Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.\',
    \'ReportsTo': 0,
    \'PhotoPath': \'http://accweb/emmployees/fuller.bmp\'
  },
  {
    \'EmployeeID': 3,
    \'LastName': \'Leverling\',
    \'FirstName': \'Janet\',
    \'Title': \'Sales Representative\',
    \'TitleOfCourtesy': \'Ms.\',
    \'BirthDate': new Date(-200088000000),
    \'HireDate': new Date(702104400000),
    \'Address': \'722 Moss Bay Blvd.\',
    \'City': \'Kirkland\',
    \'Region': \'WA\',
    \'PostalCode': \'98033\',
    \'Country': \'USA\',
    \'HomePhone': \'(206) 555-3412\',
    \'Extension': \'3355\',
    \'Photo': { \'Length': 21722 },
    \'Notes': \'Janet has a BS degree in chemistry from Boston College (1984).
\
    She has also completed a certificate program in food retailing
management.\
    Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.\',
    \'ReportsTo': 2,
    \'PhotoPath': \'http://accweb/emmployees/leverling.bmp\'
  },

```

```

{
  'EmployeeID': 4,
  'LastName': 'Peacock',
  'FirstName': 'Margaret',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Mrs.',
  'BirthDate': new Date(-1018814400000),
  'HireDate': new Date(736401600000),
  'Address': '4110 Old Redmond Rd.',
  'City': 'Redmond',
  'Region': 'WA',
  'PostalCode': '98052',
  'Country': 'USA',
  'HomePhone': '(206) 555-8122',
  'Extension': '5176',
  'Photo': { 'Length': 21626 },
  'Notes': 'Margaret holds a BA in English literature from Concordia College (1958) and an MA from the American \
    Institute of Culinary Arts (1966). She was assigned to the London office temporarily from July through November 1992.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
},
{
  'EmployeeID': 5,
  'LastName': 'Buchanan',
  'FirstName': 'Steven',
  'Title': 'Sales Manager',
  'TitleOfCourtesy': 'Mr.',
  'BirthDate': new Date(-468010800000),
  'HireDate': new Date(750830400000),
  'Address': '14 Garrett Hill',
  'City': 'London',
  'Region': null,
  'PostalCode': 'SW1 8JR',
  'Country': 'UK',
  'HomePhone': '(71) 555-4848',
  'Extension': '3453',
  'Photo': { 'Length': 21626 },
  'Notes': 'Steven Buchanan graduated from St. Andrews University, Scotland, with a BSC degree in 1976. Upon joining the company as \
    a sales representative in 1992, he spent 6 months in an orientation program at the Seattle office and then returned to his permanent \
    post in London. He was promoted to sales manager in March 1993. Mr. Buchanan has completed the courses \'Successful \
    Telemarketing\' and \'International Sales Management.\' He is fluent in French.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
},
{
  'EmployeeID': 6,
  'LastName': 'Suyama',
  'FirstName': 'Michael',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Mr.',

```

```

    'BirthDate': new Date(-205185600000),
    'HireDate': new Date(750830400000),
    'Address': 'Coventry House\r\nMiner Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'EC2 7JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-7773',
    'Extension': '428',
    'Photo': { 'Length': 21626 },
    'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese, and
Spanish.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 7,
    'LastName': 'King',
    'FirstName': 'Robert',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-302731200000),
    'HireDate': new Date(757486800000),
    'Address': 'Edgeham Hollow\r\nWinchester Way',
    'City': 'London',
    'Region': null,
    'PostalCode': 'RG1 9SP',
    'Country': 'UK',
    'HomePhone': '(71) 555-5598',
    'Extension': '465',
    'Photo': { 'Length': 21626 },
    'Notes': 'Robert King served in the Peace Corps and traveled extensively
before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 8,
    'LastName': 'Callahan',
    'FirstName': 'Laura',
    'Title': 'Inside Sales Coordinator',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-377982000000),
    'HireDate': new Date(762843600000),
    'Address': '4726 - 11th Ave. N.E.',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98105',
    'Country': 'USA',
    'HomePhone': '(206) 555-1189',

```

```

      'Extension': '2344',
      'Photo': { 'Length': 21626 },
      'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 9,
      'LastName': 'Dodsworth',
      'FirstName': 'Anne',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-123966000000),
      'HireDate': new Date(784875600000),
      'Address': '7 Houndstooth Rd.',
      'City': 'London',
      'Region': null,
      'PostalCode': 'WG2 7LT',
      'Country': 'UK',
      'HomePhone': '(71) 555-4444',
      'Extension': '452',
      'Photo': { 'Length': 21626 },
      'Notes': 'Anne has a BA degree in English from St. Lawrence College. She
is fluent in French and German.',
      'ReportsTo': 5,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    }
  ]];
export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),

```

```

      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),

```

```

        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]];
export interface ParentDetailsDataType {
    EmployeeID: number;
    FirstName: string;
    Title: string;
}

```

Expand all by external button

The Hierarchy Grid in the Syncfusion React Grid component allows you to expand all child grid rows using an external button. This feature provides you with a convenient overview of all the hierarchical data within the grid, eliminating the need to manually expand each row individually.

By default, Grid renders all child grid rows in collapsed state. To expand all child grid rows in the Grid using an external button, you can utilize the [expandAll](#) method provided by the DetailRow module. Similarly, to collapse all grid rows, you can use the [collapseAll](#) method.

The following example demonstrates how to expand and collapse the hierarchy grid using an external button click function.

APP.JSX

```

import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { DetailRow, Inject } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data, employeeData } from '../datasource';
function App() {
    let grid;
    const childGridOptions = {
        columns: [
            { field: 'OrderID', headerText: 'Order ID', textAlign: 'Right',
width: 120 },
            { field: 'CustomerID', headerText: 'Customer ID', width: 150 },
            { field: 'ShipCity', headerText: 'Ship City', width: 150 },
            { field: 'ShipName', headerText: 'Ship Name', width: 150 }
        ],
        dataSource: data,
        queryString: 'EmployeeID'
    };
    const collapseHandler = () => {
        if (grid) {
            grid.detailRowModule.collapseAll();
        }
    };
    const expandHandler = () => {
        if (grid) {
            grid.detailRowModule.expandAll();
        }
    };
    return (<div>
        <ButtonComponent onClick={expandHandler}>ExpandAll</ButtonComponent>
        <ButtonComponent
onClick={collapseHandler}>CollapseAll</ButtonComponent>
        <GridComponent dataSource={employeeData} childGrid={childGridOptions}
height={265} ref={g => grid = g}>
            <ColumnsDirective>
                <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='120' textAlign="Right" />
                <ColumnDirective field='FirstName' headerText='First Name'
width='150' />
                <ColumnDirective field='City' headerText='City' width='150'
/>
                <ColumnDirective field='Country' headerText='Country'
width='150' />
            </ColumnsDirective>
            <Inject services={[DetailRow]} />
        </GridComponent></div>);
};
export default App;

```

APP.TSX

```

import { ButtonComponent } from '@syncfusion/ej2-react-buttons';

```

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { DetailRow, GridModel, Inject } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data, employeeData } from './datasource';
function App() {
  let grid: GridComponent | null;
  const childGridOptions: GridModel = {
    columns: [
      { field: 'OrderID', headerText: 'Order ID', textAlign: 'Right', width:
120 },
      { field: 'CustomerID', headerText: 'Customer ID', width: 150 },
      { field: 'ShipCity', headerText: 'Ship City', width: 150 },
      { field: 'ShipName', headerText: 'Ship Name', width: 150 }
    ],
    dataSource: data,
    queryString: 'EmployeeID'
  };
  const collapseHandler = () => {
    if (grid) {
      grid.detailRowModule.collapseAll();
    }
  }
  const expandHandler = () => {
    if (grid) {
      grid.detailRowModule.expandAll();
    }
  }
  return (<div>
    <ButtonComponent onClick={expandHandler}>ExpandAll</ButtonComponent>
    <ButtonComponent onClick={collapseHandler}>CollapseAll</ButtonComponent>
    <GridComponent dataSource={employeeData} childGrid={childGridOptions}
height={265}
    ref={g => grid = g}>
    <ColumnsDirective>
      <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='120' textAlign="Right" />
      <ColumnDirective field='FirstName' headerText='First Name'
width='150' />
      <ColumnDirective field='City' headerText='City' width='150' />
      <ColumnDirective field='Country' headerText='Country' width='150' />
    </ColumnsDirective>
    <Inject services={[DetailRow]} />
    </GridComponent></div>
  );
}
export default App;

```

DATASOURCE.JSX

```

export let employeeData = [{
  'EmployeeID': 1,
  'LastName': 'Davolio',
  'FirstName': 'Nancy',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-664743600000),

```

```

    'HireDate': new Date(704692800000),
    'Address': '507 - 20th Ave. E.\r\nApt. 2A',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98122',
    'Country': 'USA',
    'HomePhone': '(206) 555-9857',
    'Extension': '5467',
    'Photo': { 'Length': 21626 },
    'Notes': 'Education includes a BA in psychology from Colorado State University in 1970. She also completed\r\nThe Art of the Cold Call.\r\nNancy is a member of Toastmasters International.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 2,
    'LastName': 'Fuller',
    'FirstName': 'Andrew',
    'Title': 'Vice President, Sales',
    'TitleOfCourtesy': 'Dr.',
    'BirthDate': new Date(-563828400000),
    'HireDate': new Date(713764800000),
    'Address': '908 W. Capital Way',
    'City': 'Tacoma',
    'Region': 'WA',
    'PostalCode': '98401',
    'Country': 'USA',
    'HomePhone': '(206) 555-9482',
    'Extension': '3457',
    'Photo': { 'Length': 21626 },
    'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in international marketing from the University of \r\nDallas in 1981. He is fluent in French and Italian and reads German. He joined the company as a sales representative, \r\nwas promoted to sales manager in January 1992 and to vice president of sales in March 1993. Andrew is a member of the \r\nSales Management Roundtable, the Seattle Chamber of Commerce, and the Pacific Rim Importers Association.',
    'ReportsTo': 0,
    'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
  },
  {
    'EmployeeID': 3,
    'LastName': 'Leverling',
    'FirstName': 'Janet',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-200088000000),
    'HireDate': new Date(702104400000),
    'Address': '722 Moss Bay Blvd.',
    'City': 'Kirkland',
    'Region': 'WA',
    'PostalCode': '98033',
    'Country': 'USA',
    'HomePhone': '(206) 555-3412',

```

```

      'Extension': '3355',
      'Photo': { 'Length': 21722 },
      'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
\
  She has also completed a certificate program in food retailing management.\
  Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
    },
    {
      'EmployeeID': 4,
      'LastName': 'Peacock',
      'FirstName': 'Margaret',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mrs.',
      'BirthDate': new Date(-1018814400000),
      'HireDate': new Date(736401600000),
      'Address': '4110 Old Redmond Rd.',
      'City': 'Redmond',
      'Region': 'WA',
      'PostalCode': '98052',
      'Country': 'USA',
      'HomePhone': '(206) 555-8122',
      'Extension': '5176',
      'Photo': { 'Length': 21626 },
      'Notes': 'Margaret holds a BA in English literature from Concordia
College (1958) and an MA from the American \
Institute of Culinary Arts (1966). She was assigned to the London office
temporarily from July through November 1992.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
    },
    {
      'EmployeeID': 5,
      'LastName': 'Buchanan',
      'FirstName': 'Steven',
      'Title': 'Sales Manager',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-468010800000),
      'HireDate': new Date(750830400000),
      'Address': '14 Garrett Hill',
      'City': 'London',
      'Region': null,
      'PostalCode': 'SW1 8JR',
      'Country': 'UK',
      'HomePhone': '(71) 555-4848',
      'Extension': '3453',
      'Photo': { 'Length': 21626 },
      'Notes': 'Steven Buchanan graduated from St. Andrews University,
Scotland, with a BSC degree in 1976. Upon joining the company as \
a sales representative in 1992, he spent 6 months in an orientation program
at the Seattle office and then returned to his permanent \
post in London. He was promoted to sales manager in March 1993. Mr.
Buchanan has completed the courses \'Successful \
Telemarketing\' and \'International Sales Management.\' He is fluent in
French.',

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```

    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
  },
  {
    'EmployeeID': 6,
    'LastName': 'Suyama',
    'FirstName': 'Michael',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-205185600000),
    'HireDate': new Date(750830400000),
    'Address': 'Coventry House\r\nMiner Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'EC2 7JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-7773',
    'Extension': '428',
    'Photo': { 'Length': 21626 },
    'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese, and
Spanish.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 7,
    'LastName': 'King',
    'FirstName': 'Robert',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-302731200000),
    'HireDate': new Date(757486800000),
    'Address': 'Edgeham Hollow\r\nWinchester Way',
    'City': 'London',
    'Region': null,
    'PostalCode': 'RG1 9SP',
    'Country': 'UK',
    'HomePhone': '(71) 555-5598',
    'Extension': '465',
    'Photo': { 'Length': 21626 },
    'Notes': 'Robert King served in the Peace Corps and traveled extensively
before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 8,
    'LastName': 'Callahan',
    'FirstName': 'Laura',
    'Title': 'Inside Sales Coordinator',

```

```

    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-377982000000),
    'HireDate': new Date(762843600000),
    'Address': '4726 - 11th Ave. N.E.',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98105',
    'Country': 'USA',
    'HomePhone': '(206) 555-1189',
    'Extension': '2344',
    'Photo': { 'Length': 21626 },
    'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 9,
    'LastName': 'Dodsworth',
    'FirstName': 'Anne',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-123966000000),
    'HireDate': new Date(784875600000),
    'Address': '7 Houndstooth Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'WG2 7LT',
    'Country': 'UK',
    'HomePhone': '(71) 555-4444',
    'Extension': '452',
    'Photo': { 'Length': 21626 },
    'Notes': 'Anne has a BA degree in English from St. Lawrence College. She
is fluent in French and German.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  }
];
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims', ShipAddress:
'59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {

```

```

    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua
do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2, rue
du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua
do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress: 'Hauptstr.
31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
    Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
    Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {

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```

    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry: 'Venezuela',
Freight: 81.91, Verified: !0
},
{
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse 6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
},
{
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
},
{
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
},
{
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua da
Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
},
{
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA', Freight:
48.29, Verified: !0
}
];

```

DATASOURCE.TSX

```

export let employeeData: Object[] = [{
    'EmployeeID': 1,
    'LastName': 'Davolio',
    'FirstName': 'Nancy',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',

```



```

    'BirthDate': new Date(-664743600000),
    'HireDate': new Date(704692800000),
    'Address': '507 - 20th Ave. E.\r\nApt. 2A',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98122',
    'Country': 'USA',
    'HomePhone': '(206) 555-9857',
    'Extension': '5467',
    'Photo': { 'Length': 21626 },
    'Notes': 'Education includes a BA in psychology from Colorado State
University in 1970. She also completed\
\'The Art of the Cold Call.\' Nancy is a member of Toastmasters
International.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 2,
    'LastName': 'Fuller',
    'FirstName': 'Andrew',
    'Title': 'Vice President, Sales',
    'TitleOfCourtesy': 'Dr.',
    'BirthDate': new Date(-563828400000),
    'HireDate': new Date(713764800000),
    'Address': '908 W. Capital Way',
    'City': 'Tacoma',
    'Region': 'WA',
    'PostalCode': '98401',
    'Country': 'USA',
    'HomePhone': '(206) 555-9482',
    'Extension': '3457',
    'Photo': { 'Length': 21626 },
    'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
Dallas in 1981. He is fluent in French and Italian and reads German. He
joined the company as a sales representative, \
was promoted to sales manager in January 1992 and to vice president of
sales in March 1993. Andrew is a member of the \
Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.',
    'ReportsTo': 0,
    'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
  },
  {
    'EmployeeID': 3,
    'LastName': 'Leverling',
    'FirstName': 'Janet',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-200088000000),
    'HireDate': new Date(702104400000),
    'Address': '722 Moss Bay Blvd.',
    'City': 'Kirkland',
    'Region': 'WA',
    'PostalCode': '98033',
    'Country': 'USA',

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      'HomePhone': '(206) 555-3412',
      'Extension': '3355',
      'Photo': { 'Length': 21722 },
      'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
\
      She has also completed a certificate program in food retailing
management.\
      Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
    },
    {
      'EmployeeID': 4,
      'LastName': 'Peacock',
      'FirstName': 'Margaret',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mrs.',
      'BirthDate': new Date(-1018814400000),
      'HireDate': new Date(736401600000),
      'Address': '4110 Old Redmond Rd.',
      'City': 'Redmond',
      'Region': 'WA',
      'PostalCode': '98052',
      'Country': 'USA',
      'HomePhone': '(206) 555-8122',
      'Extension': '5176',
      'Photo': { 'Length': 21626 },
      'Notes': 'Margaret holds a BA in English literature from Concordia
College (1958) and an MA from the American \
      Institute of Culinary Arts (1966). She was assigned to the London office
temporarily from July through November 1992.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
    },
    {
      'EmployeeID': 5,
      'LastName': 'Buchanan',
      'FirstName': 'Steven',
      'Title': 'Sales Manager',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-468010800000),
      'HireDate': new Date(750830400000),
      'Address': '14 Garrett Hill',
      'City': 'London',
      'Region': null,
      'PostalCode':
      'SW1 8JR',
      'Country': 'UK',
      'HomePhone': '(71) 555-4848',
      'Extension': '3453',
      'Photo': { 'Length': 21626 },
      'Notes': 'Steven Buchanan graduated from St. Andrews University,
Scotland, with a BSC degree in 1976. Upon joining the company as \
      a sales representative in 1992, he spent 6 months in an orientation
program at the Seattle office and then returned to his permanent \

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    post in London. He was promoted to sales manager in March 1993. Mr.
    Buchanan has completed the courses \'Successful \'
    Telemarketing\' and \'International Sales Management.\' He is fluent in
    French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
  },
  {
    'EmployeeID': 6,
    'LastName': 'Suyama',
    'FirstName': 'Michael',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-205185600000),
    'HireDate': new Date(750830400000),
    'Address': 'Coventry House\r\nMiner Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'EC2 7JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-7773',
    'Extension': '428',
    'Photo': { 'Length': 21626 },
    'Notes': 'Michael is a graduate of Sussex University (MA, economics,
    1983) and the University of California at Los Angeles \'
    (MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
    Selling\' and \'Time Management for the Sales Professional.\' \'
    He is fluent in Japanese and can read and write French, Portuguese, and
    Spanish.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 7,
    'LastName': 'King',
    'FirstName': 'Robert',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-302731200000),
    'HireDate': new Date(757486800000),
    'Address': 'Edgeham Hollow\r\nWinchester Way',
    'City': 'London',
    'Region': null,
    'PostalCode': 'RG1 9SP',
    'Country': 'UK',
    'HomePhone': '(71) 555-5598',
    'Extension': '465',
    'Photo': { 'Length': 21626 },
    'Notes': 'Robert King served in the Peace Corps and traveled extensively
    before completing his degree in English at the \'
    University of Michigan in 1992, the year he joined the company. After
    completing a course entitled \'Selling in Europe,\' \'
    he was transferred to the London office in March 1993.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {

```

```

      'EmployeeID': 8,
      'LastName': 'Callahan',
      'FirstName': 'Laura',
      'Title': 'Inside Sales Coordinator',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-377982000000),
      'HireDate': new Date(762843600000),
      'Address': '4726 - 11th Ave. N.E.',
      'City': 'Seattle',
      'Region': 'WA',
      'PostalCode': '98105',
      'Country': 'USA',
      'HomePhone': '(206) 555-1189',
      'Extension': '2344',
      'Photo': { 'Length': 21626 },
      'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 9,
      'LastName': 'Dodsworth',
      'FirstName': 'Anne',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-123966000000),
      'HireDate': new Date(784875600000),
      'Address': '7 Houndstooth Rd.',
      'City': 'London',
      'Region': null,
      'PostalCode': 'WG2 7LT',
      'Country': 'UK',
      'HomePhone': '(71) 555-4444',
      'Extension': '452',
      'Photo': { 'Length': 21626 },
      'Notes': 'Anne has a BA degree in English from St. Lawrence College. She
is fluent in French and German.',
      'ReportsTo': 5,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    }
  ]];
export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
      },
      {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',

```

```

        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ];

```

The `expandAll` and `collapseAll` methods are not recommended for large datasets due to the considerable time it takes to update the changes in the UI.

Hide the expand/collapse icon in parent row when no record in child grid

The Syncfusion React Grid allows you to hide the expand/collapse icon in the parent row when there are no records in the child grid. However, in certain scenarios, you may want to hide the expand/collapse icon for parent rows that do not have any child records, providing a cleaner and more intuitive interface by eliminating unnecessary icons in empty parent rows.

To achieve this, you can utilize the [rowDataBound](#) event to hide the icon when there are no records in the child grid.

To hide the expand/collapse icon in parent row when no records in child grid, follow the given steps:

1. **Create a CSS Class with Custom Style:** Define a CSS class that overrides the default appearance of the Grid. This class will be used to customize the background color of the parent row when it is selected and when hovering over rows.

```
`css
.e-row[aria-selected="true"] .e-customizedexpandcell {
background-color: #e0e0e0;
}
.e-grid.e-gridhover tr[role='row']:hover {
background-color: #eee;
}
`
```

2. **Implement the rowDataBound Event Handler:** This event is triggered for each row in the grid when data is bound, allowing you to customize the row's appearance and behavior. In the provided code, the handler checks if the current row has any child records associated with it. If not, it hides the content of the first element, which contains the expand/collapse icon, and applies a custom CSS class (e-customizedexpandcell) to modify its appearance.

```
`typescript
const rowDataBound = (args: RowDataBoundEventArgs) => {
const parentData: number = (args.data as Employee)['EmployeeID'];
const childrecord: object[] = new DataManager(childData as JSON[]).
executeLocal(new Query().where('EmployeeID', 'equal', parentData, true));
if (childrecord.length === 0) {
// Here hide which parent row has no child records
const rowElement = args.row as HTMLTableRowElement;
const cellElement= rowElement.querySelector('td') as HTMLTableCellElement
cellElement.innerHTML = ' ';
cellElement.className = 'e-customizedexpandcell';
}
```

```

}
}
`

```

The following example demonstrates how to hide the expand/collapse icon in the row with **EmployeeID** as **1**, which does not have record in child Grid.

APP.JSX

```

import { DataManager, Query } from '@syncfusion/ej2-data';
import { ColumnDirective, ColumnsDirective, GridComponent, Inject } from
 '@syncfusion/ej2-react-grids';
import { DetailRow } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { employeeData, childData } from './datasource';
function App() {
  let childGrid = {
    columns: [
      { field: 'Order', headerText: 'Order ID', textAlign: 'Right', width:
120 },
      { field: 'EmployeeID', headerText: 'EmployeeID', width: 150 },
      { field: 'ShipName', headerText: 'Ship Name', width: 150 }
    ],
    dataSource: childData,
    queryString: 'EmployeeID',
    allowPaging: true
  };
  const rowDataBound = (args) => {
    const filter = args.data.EmployeeID;
    const childrecord = new DataManager(childData)
      .executeLocal(new Query().where("EmployeeID", "equal", filter,
true));
    if (childrecord.length === 0) {
      // here hide which parent row has no child records
      const rowElement = args.row;
      const cellElement = rowElement.querySelector('td');
      cellElement.innerHTML = ' ';
      cellElement.className = 'e-customizedexpandcell';
    }
  }
  return <GridComponent dataSource={employeeData} childGrid={childGrid}
    rowDataBound={rowDataBound}>
    <ColumnsDirective>
      <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='100' textAlign="Right" />
      <ColumnDirective field='FirstName' headerText='First Name' width='100'
/>
      <ColumnDirective field='City' headerText='City' width='100' />
      <ColumnDirective field='Country' headerText='Country' width='100' />
    </ColumnsDirective>
    <Inject services={[DetailRow]} />
  </GridComponent>
};
export default App;

```



```

{Order: 104, ShipName: 'Pearl', EmployeeID: 6},
{Order: 105, ShipName: 'Noth bay', EmployeeID: 7},
{Order: 106, ShipName: 'baratna', EmployeeID: 8},
{Order: 107, ShipName: 'Charge', EmployeeID: 9}];
export let employeeData = [{
  'EmployeeID': 1,
  'LastName': 'Davolio',
  'FirstName': 'Nancy',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-664743600000),
  'HireDate': new Date(704692800000),
  'Address': '507 - 20th Ave. E.\r\nApt. 2A',
  'City': 'Seattle',
  'Region': 'WA',
  'PostalCode': '98122',
  'Country': 'USA',
  'HomePhone': '(206) 555-9857',
  'Extension': '5467',
  'Photo': { 'Length': 21626 },

  'Notes': 'Education includes a BA in psychology from Colorado State University in 1970. She also completed\'
    \'The Art of the Cold Call.\' Nancy is a member of Toastmasters International.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
  'EmployeeID': 2,
  'LastName': 'Fuller',
  'FirstName': 'Andrew',
  'Title': 'Vice President, Sales',
  'TitleOfCourtesy': 'Dr.',
  'BirthDate': new Date(-563828400000),
  'HireDate': new Date(713764800000),
  'Address': '908 W. Capital Way',
  'City': 'Tacoma',
  'Region': 'WA',
  'PostalCode': '98401',
  'Country': 'USA',
  'HomePhone': '(206) 555-9482',
  'Extension': '3457',
  'Photo': { 'Length': 21626 },

  'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in international marketing from the University of \
    Dallas in 1981. He is fluent in French and Italian and reads German. He joined the company as a sales representative, \
    was promoted to sales manager in January 1992 and to vice president of sales in March 1993. Andrew is a member of the \
    Sales Management Roundtable, the Seattle Chamber of Commerce, and the Pacific Rim Importers Association.',
  'ReportsTo': 0,
  'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
},
{

```

```

      'EmployeeID': 3,
      'LastName': 'Leverling',
      'FirstName': 'Janet',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-200088000000),
      'HireDate': new Date(702104400000),
      'Address': '722 Moss Bay Blvd.',
      'City': 'Kirkland',
      'Region': 'WA',
      'PostalCode': '98033',
      'Country': 'USA',
      'HomePhone': '(206) 555-3412',
      'Extension': '3355',
      'Photo': { 'Length': 21722 },

      'Notes': 'Janet has a BS degree in chemistry from Boston College
(1984). \
      She has also completed a certificate program in food retailing
management.\
      Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
    },
    {
      'EmployeeID': 4,
      'LastName': 'Peacock',
      'FirstName': 'Margaret',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mrs.',
      'BirthDate': new Date(-1018814400000),
      'HireDate': new Date(736401600000),
      'Address': '4110 Old Redmond Rd.',
      'City': 'Redmond',
      'Region': 'WA',
      'PostalCode': '98052',
      'Country': 'USA',
      'HomePhone': '(206) 555-8122',
      'Extension': '5176',
      'Photo': { 'Length': 21626 },

      'Notes': 'Margaret holds a BA in English literature from Concordia
College (1958) and an MA from the American \
      Institute of Culinary Arts (1966). She was assigned to the London
office temporarily from July through November 1992.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
    },
    {
      'EmployeeID': 5,
      'LastName': 'Buchanan',
      'FirstName': 'Steven',
      'Title': 'Sales Manager',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-468010800000),
      'HireDate': new Date(750830400000),

```

```

      'Address': '14 Garrett Hill',
      'City': 'London',
      'Region': null,
      'PostalCode':
      'SW1 8JR',
      'Country': 'UK',
      'HomePhone': '(71) 555-4848',
      'Extension': '3453',
      'Photo': { 'Length': 21626 },

      'Notes': 'Steven Buchanan graduated from St. Andrews University,
Scotland, with a BSC degree in 1976. Upon joining the company as \
a sales representative in 1992, he spent 6 months in an orientation
program at the Seattle office and then returned to his permanent \
post in London. He was promoted to sales manager in March 1993. Mr.
Buchanan has completed the courses \'Successful \
Telemarketing\' and \'International Sales Management.\' He is fluent
in French.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
    },
    {
      'EmployeeID': 6,
      'LastName': 'Suyama',
      'FirstName': 'Michael',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-205185600000),
      'HireDate': new Date(750830400000),
      'Address': 'Coventry House\r\nMiner Rd.',
      'City': 'London',
      'Region': null,
      'PostalCode': 'EC2 7JR',
      'Country': 'UK',
      'HomePhone': '(71) 555-7773',
      'Extension': '428',
      'Photo': { 'Length': 21626 },

      'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-
Cultural Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese,
and Spanish.',
      'ReportsTo': 5,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 7,
      'LastName': 'King',
      'FirstName': 'Robert',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-302731200000),
      'HireDate': new Date(757486800000),
      'Address': 'Edgeham Hollow\r\nWinchester Way',
      'City': 'London',

```

```

      'Region': null,
      'PostalCode': 'RG1 9SP',
      'Country': 'UK',
      'HomePhone': '(71) 555-5598',
      'Extension': '465',
      'Photo': { 'Length': 21626 },

      'Notes': 'Robert King served in the Peace Corps and traveled
extensively before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company.
After completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
      'ReportsTo': 5,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 8,
      'LastName': 'Callahan',
      'FirstName': 'Laura',
      'Title': 'Inside Sales Coordinator',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-377982000000),
      'HireDate': new Date(762843600000),
      'Address': '4726 - 11th Ave. N.E.',
      'City': 'Seattle',
      'Region': 'WA',
      'PostalCode': '98105',
      'Country': 'USA',
      'HomePhone': '(206) 555-1189',
      'Extension': '2344',
      'Photo': { 'Length': 21626 },

      'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 9,
      'LastName': 'Dodsworth',
      'FirstName': 'Anne',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-123966000000),
      'HireDate': new Date(784875600000),
      'Address': '7 Houndstooth Rd.',
      'City': 'London',
      'Region': null,
      'PostalCode': 'WG2 7LT',
      'Country': 'UK',
      'HomePhone': '(71) 555-4444',
      'Extension': '452',
      'Photo': { 'Length': 21626 },

      'Notes': 'Anne has a BA degree in English from St. Lawrence College.
She is fluent in French and German.',

```

```

      'ReportsTo': 5,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    }
  ];

```

DATASOURCE.TSX

```

export let childData: object[]=[
  {Order: 100, ShipName: 'Berlin', EmployeeID: 2},
  {Order: 101, ShipName: 'Capte', EmployeeID: 3},
  {Order: 102, ShipName: 'Marlon', EmployeeID: 4},
  {Order: 103, ShipName: 'Black pearl', EmployeeID: 5},
  {Order: 104, ShipName: 'Pearl', EmployeeID: 6},
  {Order: 105, ShipName: 'Noth bay', EmployeeID: 7},
  {Order: 106, ShipName: 'baratna', EmployeeID: 8},
  {Order: 107, ShipName: 'Charge', EmployeeID: 9}];
export let employeeData: Object[] = [{
  'EmployeeID': 1,
  'LastName': 'Davolio',
  'FirstName': 'Nancy',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-664743600000),
  'HireDate': new Date(704692800000),
  'Address': '507 - 20th Ave. E.\r\nApt. 2A',
  'City': 'Seattle',
  'Region': 'WA',
  'PostalCode': '98122',
  'Country': 'USA',
  'HomePhone': '(206) 555-9857',
  'Extension': '5467',
  'Photo': { 'Length': 21626 },

  'Notes': 'Education includes a BA in psychology from Colorado State University in 1970. She also completed\'
    \'The Art of the Cold Call.\' Nancy is a member of Toastmasters International.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
  'EmployeeID': 2,
  'LastName': 'Fuller',
  'FirstName': 'Andrew',
  'Title': 'Vice President, Sales',
  'TitleOfCourtesy': 'Dr.',
  'BirthDate': new Date(-563828400000),
  'HireDate': new Date(713764800000),
  'Address': '908 W. Capital Way',
  'City': 'Tacoma',
  'Region': 'WA',
  'PostalCode': '98401',
  'Country': 'USA',
  'HomePhone': '(206) 555-9482',
  'Extension': '3457',
  'Photo': { 'Length': 21626 },

```

```

      'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
      Dallas in 1981. He is fluent in French and Italian and reads German.
He joined the company as a sales representative, \
      was promoted to sales manager in January 1992 and to vice president
of sales in March 1993. Andrew is a member of the \
      Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.',
      'ReportsTo': 0,
      'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
    },
    {
      'EmployeeID': 3,
      'LastName': 'Leverling',
      'FirstName': 'Janet',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-200088000000),
      'HireDate': new Date(702104400000),
      'Address': '722 Moss Bay Blvd.',
      'City': 'Kirkland',
      'Region': 'WA',
      'PostalCode': '98033',
      'Country': 'USA',
      'HomePhone': '(206) 555-3412',
      'Extension': '3355',
      'Photo': { 'Length': 21722 },

      'Notes': 'Janet has a BS degree in chemistry from Boston College
(1984). \
      She has also completed a certificate program in food retailing
management.\
      Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
    },
    {
      'EmployeeID': 4,
      'LastName': 'Peacock',
      'FirstName': 'Margaret',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mrs.',
      'BirthDate': new Date(-1018814400000),
      'HireDate': new Date(736401600000),
      'Address': '4110 Old Redmond Rd.',
      'City': 'Redmond',
      'Region': 'WA',
      'PostalCode': '98052',
      'Country': 'USA',
      'HomePhone': '(206) 555-8122',
      'Extension': '5176',
      'Photo': { 'Length': 21626 },

      'Notes': 'Margaret holds a BA in English literature from Concordia
College (1958) and an MA from the American \

```

```

    Institute of Culinary Arts (1966). She was assigned to the London
    office temporarily from July through November 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
  },
  {
    'EmployeeID': 5,
    'LastName': 'Buchanan',
    'FirstName': 'Steven',
    'Title': 'Sales Manager',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-468010800000),
    'HireDate': new Date(750830400000),
    'Address': '14 Garrett Hill',
    'City': 'London',
    'Region': null,
    'PostalCode':
    'SW1 8JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-4848',
    'Extension': '3453',
    'Photo': { 'Length': 21626 },

    'Notes': 'Steven Buchanan graduated from St. Andrews University,
    Scotland, with a BSC degree in 1976. Upon joining the company as \
    a sales representative in 1992, he spent 6 months in an orientation
    program at the Seattle office and then returned to his permanent \
    post in London. He was promoted to sales manager in March 1993. Mr.
    Buchanan has completed the courses \'Successful \
    Telemarketing\' and \'International Sales Management.\' He is fluent
    in French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
  },
  {
    'EmployeeID': 6,
    'LastName': 'Suyama',
    'FirstName': 'Michael',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-205185600000),
    'HireDate': new Date(750830400000),
    'Address': 'Coventry House\r\nMiner Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'EC2 7JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-7773',
    'Extension': '428',
    'Photo': { 'Length': 21626 },

    'Notes': 'Michael is a graduate of Sussex University (MA, economics,
    1983) and the University of California at Los Angeles \
    (MBA, marketing, 1986). He has also taken the courses \'Multi-
    Cultural Selling\' and \'Time Management for the Sales Professional.\' \
    He is fluent in Japanese and can read and write French, Portuguese,
    and Spanish.',
  }

```



```

      'ReportsTo': 5,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 7,
      'LastName': 'King',
      'FirstName': 'Robert',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-302731200000),
      'HireDate': new Date(757486800000),
      'Address': 'Edgeham Hollow\r\nWinchester Way',
      'City': 'London',
      'Region': null,
      'PostalCode': 'RG1 9SP',
      'Country': 'UK',
      'HomePhone': '(71) 555-5598',
      'Extension': '465',
      'Photo': { 'Length': 21626 },

      'Notes': 'Robert King served in the Peace Corps and traveled
extensively before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company.
After completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
      'ReportsTo': 5,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 8,
      'LastName': 'Callahan',
      'FirstName': 'Laura',
      'Title': 'Inside Sales Coordinator',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-377982000000),
      'HireDate': new Date(762843600000),
      'Address': '4726 - 11th Ave. N.E.',
      'City': 'Seattle',
      'Region': 'WA',
      'PostalCode': '98105',
      'Country': 'USA',
      'HomePhone': '(206) 555-1189',
      'Extension': '2344',
      'Photo': { 'Length': 21626 },

      'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 9,
      'LastName': 'Dodsworth',
      'FirstName': 'Anne',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Ms.',

```

```
'BirthDate': new Date(-123966000000),
'HireDate': new Date(784875600000),
'Address': '7 Houndstooth Rd.',
'City': 'London',
'Region': null,
'PostalCode': 'WG2 7LT',
'Country': 'UK',
'HomePhone': '(71) 555-4444',
'Extension': '452',
'Photo': { 'Length': 21626 },

'Notes': 'Anne has a BA degree in English from St. Lawrence College.
She is fluent in French and German.',
'ReportsTo': 5,
'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
}];
```

Customize the child grid

The Syncfusion React Grid component offers various ways to customize the child grid appearance using both default CSS and custom themes. To access the child grid elements, you can use the **.e-detailcell** class selector, which targets the child grid.

Header

You can customize the appearance of the header elements in the child grid using CSS. Here are examples of how to customize the child grid header, header cell, and header cell div element.

Customizing the child grid header

To customize the appearance of the child grid header root element, you can use the following CSS code:

```
`css
.e-detailcell .e-grid .e-headercontent{
border: 2px solid green;
}
`
```

In this example, the **.e-detailcell** class targets the child grid and **.e-headercontent** targets its header root element. You can modify the **border** property to change the style of the header border. This customization allows you to override the thin line between the header and content of the child grid.

	EMPLOYEE ID	FIRSTNAME	LAST NAME	CITY
>	1	Nancy	Davolio	Seattle
▼	2	Andrew	Fuller	Tacoma

ORDER ID	CUSTOMER ID	SHIP CITY	SHIP NAME
10250	HANAR	Rio de Janeiro	Hanari Carnes
10252	SUPRD	Charleroi	Suprêmes délices
10257	HILAA	San Cristóbal	HILARION-Abastos

<<

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1

2

>

>>

1 of 2 pages (6 items)

Customizing the child grid pager container element

To customize the appearance of the child grid pager container element, you can use the following CSS code:

```
`css
.e-detailcell .e-grid .e-pagercontainer {
border: 2px solid #00b5ff;
font-family: cursive;
}
```

In this example, the **.e-pagercontainer** class targets the pager container element. You can modify the **border** property and **font-family** property to change the border color and font family of the pager container.

	EMPLOYEE ID	FIRSTNAME	LAST NAME	CITY																									
>	1	Nancy	Davolio	Seattle																									
▼	2	Andrew	Fuller	Tacoma																									
<table> <tr> <th></th><th>ORDER ID</th><th>CUSTOMER ID</th><th>SHIP CITY</th><th>SHIP NAME</th></tr> <tr> <td></td><td>10250</td><td>HANAR</td><td>Rio de Janeiro</td><td>Hanari Carnes</td></tr> <tr> <td></td><td>10252</td><td>SUPRD</td><td>Charleroi</td><td>Suprêmes délices</td></tr> <tr> <td></td><td>10257</td><td>HILAA</td><td>San Cristóbal</td><td>HILARION-Abastos</td></tr> <tr> <td colspan="5"> <div> << < 1 2 > >> </div> <div>1 of 2 pages (6 items)</div> </td></tr> </table>						ORDER ID	CUSTOMER ID	SHIP CITY	SHIP NAME		10250	HANAR	Rio de Janeiro	Hanari Carnes		10252	SUPRD	Charleroi	Suprêmes délices		10257	HILAA	San Cristóbal	HILARION-Abastos	<div> << < 1 2 > >> </div> <div>1 of 2 pages (6 items)</div>				
	ORDER ID	CUSTOMER ID	SHIP CITY	SHIP NAME																									
	10250	HANAR	Rio de Janeiro	Hanari Carnes																									
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	10257	HILAA	San Cristóbal	HILARION-Abastos																									
<div> << < 1 2 > >> </div> <div>1 of 2 pages (6 items)</div>																													

Customizing the child grid pager navigation elements

To customize the appearance of the child grid pager navigation elements, you can use the following CSS code:

```
`css
.e-detailcell .e-grid .e-gridpager .e-prevpagedisabled,
.e-detailcell .e-grid .e-gridpager .e-prevpage,
.e-detailcell .e-grid .e-gridpager .e-nextpage,
.e-detailcell .e-grid .e-gridpager .e-nextpagedisabled,
.e-detailcell .e-grid .e-gridpager .e-lastpagedisabled,
.e-detailcell .e-grid .e-gridpager .e-lastpage,
.e-detailcell .e-grid .e-gridpager .e-firstpage,
.e-detailcell .e-grid .e-gridpager .e-firstpagedisabled {
background-color: #deecf9;
}
```

In this example, the classes **.e-prevpagedisabled**, **.e-prevpage**, **.e-nextpage**, **.e-nextpagedisabled**, **.e-lastpagedisabled**, **.e-lastpage**, **.e-firstpage**, and **.e-firstpagedisabled** target the various pager navigation elements of the child grid. You can modify the **background-color** property to change the background color of these elements.

	EMPLOYEE ID	FIRSTNAME	LAST NAME	CITY																									
>	1	Nancy	Davolio	Seattle																									
▼	2	Andrew	Fuller	Tacoma																									
<table> <tr> <th></th><th>ORDER ID</th><th>CUSTOMER ID</th><th>FREIGHT</th><th>SHIP NAME</th></tr> <tr> <td></td><td>10250</td><td>HANAR</td><td>65.83</td><td>Hanari Carnes</td></tr> <tr> <td></td><td>10252</td><td>SUPRD</td><td>51.3</td><td>Suprêmes délices</td></tr> <tr> <td></td><td>10253</td><td>HANAR</td><td>58.17</td><td>Hanari Carnes</td></tr> <tr> <td colspan="4"> <div> << < 1 2 > >> </div> </td><td>1 of 2 pages (6 items)</td></tr> </table>						ORDER ID	CUSTOMER ID	FREIGHT	SHIP NAME		10250	HANAR	65.83	Hanari Carnes		10252	SUPRD	51.3	Suprêmes délices		10253	HANAR	58.17	Hanari Carnes	<div> << < 1 2 > >> </div>				1 of 2 pages (6 items)
	ORDER ID	CUSTOMER ID	FREIGHT	SHIP NAME																									
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	10252	SUPRD	51.3	Suprêmes délices																									
	10253	HANAR	58.17	Hanari Carnes																									
<div> << < 1 2 > >> </div>				1 of 2 pages (6 items)																									
>	3	Janet	Leverling	Kirkland																									

Customizing the child grid pager numeric link elements

To customize the appearance of the child grid pager current page numeric link elements, you can use the following CSS code:

```
`css
.e-detailcell .e-grid .e-gridpager .e-numericitem {
background-color: #5290cb;
color: #ffffff;
cursor: pointer;
}
.e-detailcell .e-grid .e-gridpager .e-numericitem:hover {
background-color: white;
color: #007bff;
}
`
```

In this example, the **.e-numericitem** class targets the page numeric link elements. You can modify the **background-color**, **color** properties to change the background color and text color of these elements.

	EMPLOYEE ID	FIRSTNAME	LAST NAME	CITY																
>	1	Nancy	Davolio	Seattle																
▼	2	Andrew	Fuller	Tacoma																
<table><tr><th>ORDER ID</th><th>CUSTOMER ID</th><th>SHIP CITY</th><th>SHIP NAME</th></tr><tr><td>10250</td><td>HANAR</td><td>Rio de Janeiro</td><td>Hanari Carnes</td></tr><tr><td>10251</td><td>VICTE</td><td>Lyon</td><td>Victuailles en stock</td></tr><tr><td>10252</td><td>SUPRD</td><td>Charleroi</td><td>Suprêmes délices</td></tr></table>					ORDER ID	CUSTOMER ID	SHIP CITY	SHIP NAME	10250	HANAR	Rio de Janeiro	Hanari Carnes	10251	VICTE	Lyon	Victuailles en stock	10252	SUPRD	Charleroi	Suprêmes délices
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10250	HANAR	Rio de Janeiro	Hanari Carnes																	
10251	VICTE	Lyon	Victuailles en stock																	
10252	SUPRD	Charleroi	Suprêmes délices																	
<div><div><<< < 1 2 3 4 > >>></div><div>1 of 4 pages (10 items)</div></div>																				

Customizing the child grid pager current page numeric element

To customize the appearance of the child grid pager current page numeric element, you can use the following CSS code:

```
`css
.e-detailcell .e-grid .e-gridpager .e-currentitem {
background-color: #0078d7;
color: #fff;
}
```

In this example, the **.e-currentitem** class targets the current page numeric item. You can modify the **background-color** property to change the background color of this element and **color** property to change the text color.

	EMPLOYEE ID	FIRSTNAME	LAST NAME	CITY																									
>	1	Nancy	Davolio	Seattle																									
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<div> << < 1 2 > >> </div> <div>1 of 2 pages (6 items)</div>																													

Sorting

You can customize the appearance of the sorting icons and multi sorting icons in the child grid using CSS. You can use the available Syncfusion [icons](#) based on your theme. Here's how to do it:

Customizing the child grid sorting icon

To customize the sorting icon that appears in the child grid header when sorting is applied, you can use the following CSS code:

```
`css
.e-detailcell .e-grid .e-icon-ascending::before {
content: '\e7a3';
/ Icon code for ascending order /
}
.e-detailcell .e-grid .e-icon-descending::before {
content: '\e7b6';
/ Icon code for descending order /
}
`
```

In this example, the **.e-detailcell** class targets the child grid and the **.e-icon-ascending::before** class targets the sorting icon for ascending order, and the **.e-icon-descending::before** class targets the sorting icon for descending order.

	EMPLOYEE ID	FIRSTNAME	LAST NAME	CITY
>	1	Nancy	Davolio	Seattle
▼	2	Andrew	Fuller	Tacoma
	ORDER ID	CUSTOMER ID	1 ↑ SHIP CITY	2 ↓ SHIP NAME
	10250	HANAR	Rio de Janeiro	Hanari Carnes
	10257	HILAA	San Cristóbal	HILARION-Abastos
	10260	OTTIK	Köln	Ottilies Käseladen
>	3	Janet	Leverling	Kirkland

Filtering

You can customize the appearance of filtering elements in the child grid using CSS. Below are examples of how to customize various filtering elements, including filter bar cell elements, filter bar input elements, focus styles, clear icons, filter icons, filter dialog content, filter dialog footer, filter dialog input elements, filter dialog button elements, and Excel filter dialog number filters.

Customizing the child grid filter bar cell element

To customize the appearance of the filter bar cell element in the child grid header, you can use the following CSS code:

```
`css
.e-detailcell .e-grid .e-filterbar .e-filterbarcell {
background-color: #045fb4;
}
`
```

In this example, the **.e-detailcell** class targets the child grid and the **.e-filterbarcell** class targets the filter bar cell element in the child grid header. You can modify the **background-color** property to change the color of the filter bar cell element.

EMPLOYEE ID	FIRSTNAME	LAST NAME	CITY																				
>	1	Nancy Davolio	Seattle																				
▼	2	Andrew Fuller	Tacoma																				
<table> <tr> <th>ORDER ID</th><th>CUSTOMER ID</th><th>SHIP CITY</th><th>SHIP NAME</th></tr> <tr> <td></td><td>HILAA</td><td></td><td></td></tr> <tr> <td>10250</td><td>HANAR</td><td>Rio de Janeiro</td><td>Hanari Carnes</td></tr> <tr> <td>10257</td><td>HILAA</td><td>San Cristóbal</td><td>HILARION-Abastos</td></tr> <tr> <td>10260</td><td>OTTIK</td><td>Köln</td><td>Ottilies Käseladen</td></tr> </table>				ORDER ID	CUSTOMER ID	SHIP CITY	SHIP NAME		HILAA			10250	HANAR	Rio de Janeiro	Hanari Carnes	10257	HILAA	San Cristóbal	HILARION-Abastos	10260	OTTIK	Köln	Ottilies Käseladen
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10260	OTTIK	Köln	Ottilies Käseladen																				
>	3	Janet Leverling	Kirkland																				

Customizing the child grid filter bar input focus

To customize the appearance of the child grid's filter bar input element's focus highlight, you can use the following CSS code:

```
`css
.e-detailcell .e-grid .e-filterbarcell .e-input-group.e-input-focus{
background-color: #deecf9;
}
`
```

In this example, the **.e-filterbarcell** class targets the filter bar cell element, and the **.e-input-group.e-input-focus** class targets the focused input element. You can modify the **background-color** property to change the color of the focus highlight.

EMPLOYEE ID	FIRSTNAME	LAST NAME	CITY																				
>	1	Nancy Davolio	Seattle																				
▼	2	Andrew Fuller	Tacoma																				
<table> <tr> <th>ORDER ID</th><th>CUSTOMER ID</th><th>SHIP CITY</th><th>SHIP NAME</th></tr> <tr> <td><input type="text"/></td><td><input type="text"/></td><td><input type="text"/></td><td><input type="text"/></td></tr> <tr> <td>10250</td><td>HANAR</td><td>Rio de Janeiro</td><td>Hanari Carnes</td></tr> <tr> <td>10257</td><td>HILAA</td><td>San Cristóbal</td><td>HILARION-Abastos</td></tr> <tr> <td>10260</td><td>OTTIK</td><td>Köln</td><td>Ottilies Käseladen</td></tr> </table>				ORDER ID	CUSTOMER ID	SHIP CITY	SHIP NAME	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	10250	HANAR	Rio de Janeiro	Hanari Carnes	10257	HILAA	San Cristóbal	HILARION-Abastos	10260	OTTIK	Köln	Ottilies Käseladen
ORDER ID	CUSTOMER ID	SHIP CITY	SHIP NAME																				
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>																				
10250	HANAR	Rio de Janeiro	Hanari Carnes																				
10257	HILAA	San Cristóbal	HILARION-Abastos																				
10260	OTTIK	Köln	Ottilies Käseladen																				
>	3	Janet Leverling	Kirkland																				

Customizing the child grid filter bar input clear icon

To customize the appearance of the child grid's filter bar input element's clear icon, you can use the following CSS code:

```
`css
.e-detailcell .e-grid .e-filterbarcell .e-input-group .e-clear-icon::before {
content: '\e72c';
}
```

In this example, the **.e-clear-icon** class targets the clear icon element within the input group. You can modify the **content** property to change the icon displayed.

EMPLOYEE ID	FIRSTNAME	LAST NAME	CITY																				
>	1	Nancy Davolio	Seattle																				
▼	2	Andrew Fuller	Tacoma																				
<table> <tr> <th>ORDER ID</th><th>CUSTOMER ID</th><th>SHIP CITY</th><th>SHIP NAME</th></tr> <tr> <td></td><td>VIN</td><td></td><td></td></tr> <tr> <td>10250</td><td>HANAR</td><td>Rio de Janeiro</td><td>Hanari Carnes</td></tr> <tr> <td>10257</td><td>HILAA</td><td>San Cristóbal</td><td>HILARION-Abastos</td></tr> <tr> <td>10260</td><td>OTTIK</td><td>Köln</td><td>Ottilies Käseladen</td></tr> </table>				ORDER ID	CUSTOMER ID	SHIP CITY	SHIP NAME		VIN			10250	HANAR	Rio de Janeiro	Hanari Carnes	10257	HILAA	San Cristóbal	HILARION-Abastos	10260	OTTIK	Köln	Ottilies Käseladen
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10260	OTTIK	Köln	Ottilies Käseladen																				
>	3	Janet Leverling	Kirkland																				

Customizing the child grid child grid filtering icon

To customize the appearance of the filtering icon in the child grid header, you can use the following CSS code:

```
`css
.e-detailcell .e-grid .e-icon-filter::before{
content: '\e81e';
}
```

In this example, the **.e-icon-filter** class targets the filtering icon element. You can modify the **content** property to change the icon displayed.

	EMPLOYEE ID	FIRSTNAME	LAST NAME	CITY																
>	1	Nancy	Davolio	Seattle																
▼	2	Andrew	Fuller	Tacoma																
	<table><tr><th>ORDER ID</th><th>CUSTOMER ID</th><th>SHIP CITY</th><th>SHIP NAME</th></tr><tr><td>10250</td><td>HANAR</td><td>Rio de Janeiro</td><td>Hanari Carnes</td></tr><tr><td>10257</td><td>HILAA</td><td>San Cristóbal</td><td>HILARION-Abastos</td></tr><tr><td>10260</td><td>OTTIK</td><td>Köln</td><td>Ottilies Käseladen</td></tr></table>				ORDER ID	CUSTOMER ID	SHIP CITY	SHIP NAME	10250	HANAR	Rio de Janeiro	Hanari Carnes	10257	HILAA	San Cristóbal	HILARION-Abastos	10260	OTTIK	Köln	Ottilies Käseladen
	ORDER ID	CUSTOMER ID	SHIP CITY	SHIP NAME																
	10250	HANAR	Rio de Janeiro	Hanari Carnes																
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10260	OTTIK	Köln	Ottilies Käseladen																	
>	3	Janet	Leverling	Kirkland																

Customizing the child grid filter dialog content

To customize the appearance of the child grid's filter dialog's content element, you can use the following CSS code:

```
`css
.e-detailcell .e-grid .e-filter-popup .e-dlg-content {
background-color: #deecf9;
}
`
```

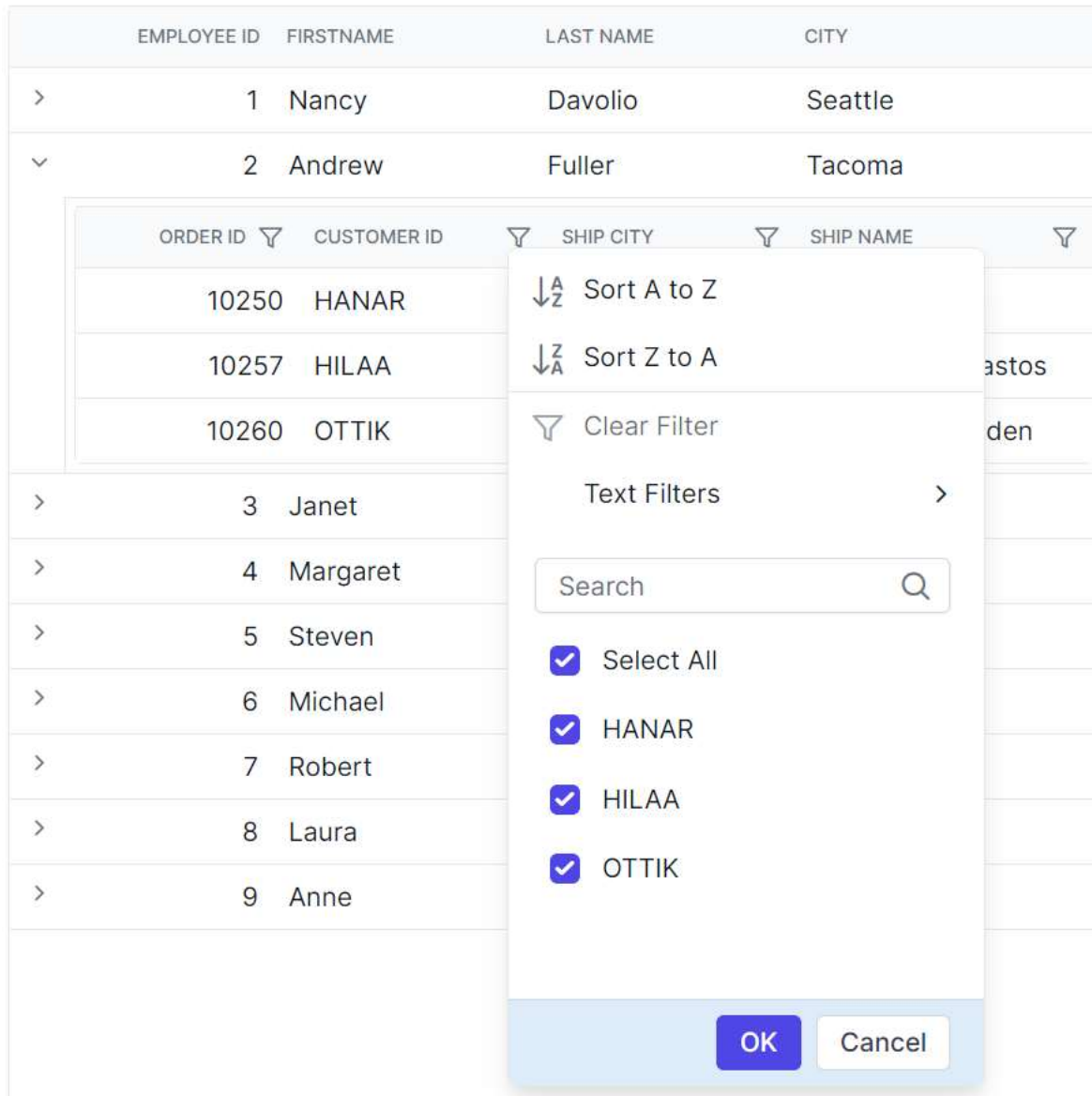
In this example, the **.e-filter-popup .e-dlg-content** classes target the content element within the filter dialog. You can modify the **background-color** property to change the color of the dialog's content.

Customizing the child grid filter dialog footer

To customize the appearance of the child grid's filter dialog's footer element, you can use the following CSS code:

```
`css
.e-detailcell .e-grid .e-filter-popup .e-footer-content {
background-color: #deecf9;
}
```

In this example, the **.e-filter-popup .e-footer-content** classes target the footer element within the filter dialog. You can modify the **background-color** property to change the color of the dialog's footer.

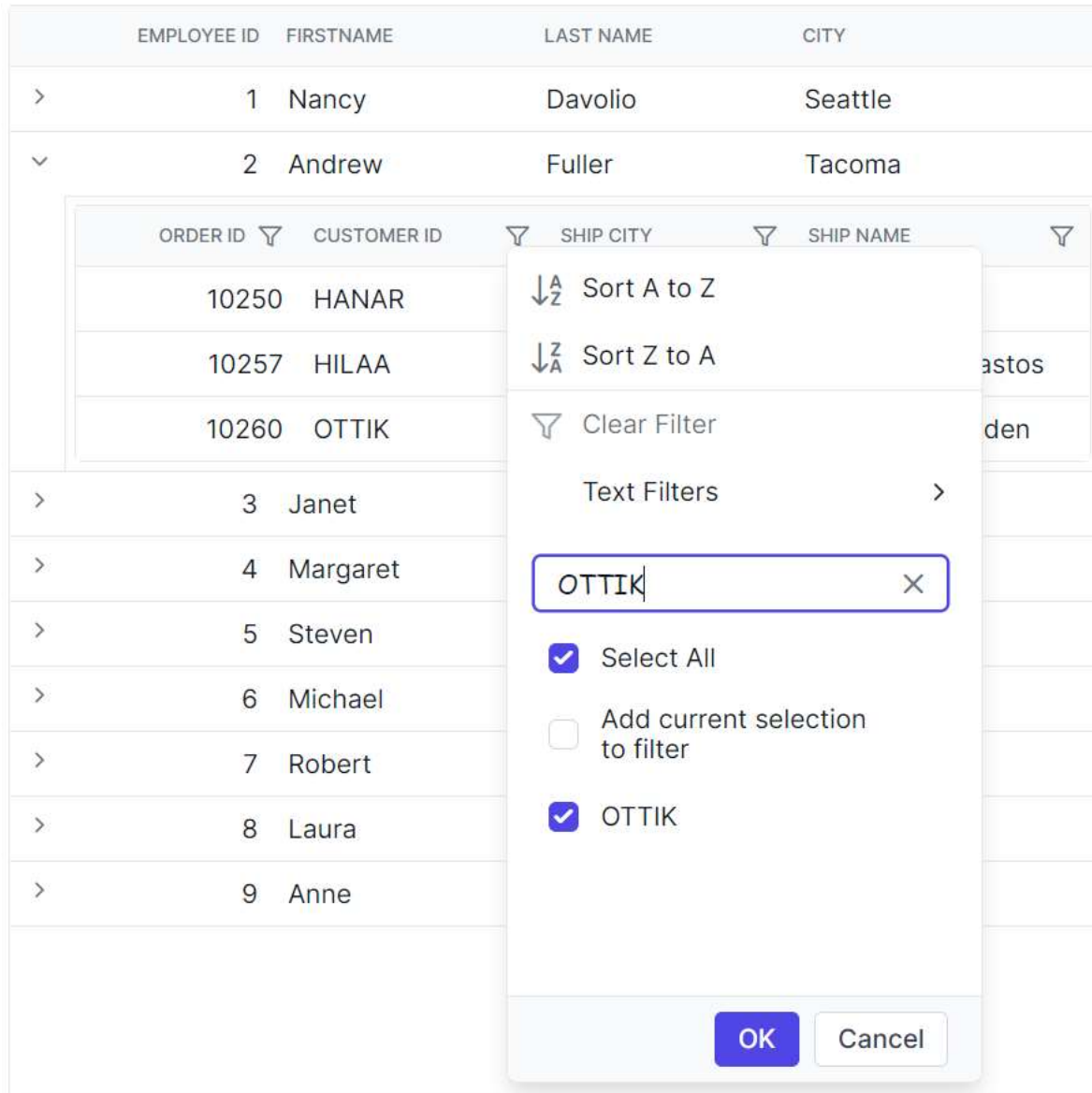


Customizing the child grid filter dialog input element

To customize the appearance of the child grid's filter dialog's input elements, you can use the following CSS code:

```
`css
.e-detailcell .e-grid .e-filter-popup .e-input-group input.e-input{
font-family: cursive;
}
`
```

In this example, the **.e-filter-popup** class targets the filter dialog, and the **.e-input** class targets the input elements within the dialog. You can modify the **font-family** property to change the font of the input elements.



Customizing the child grid filter dialog button element

To customize the appearance of the child grid's filter dialog's button elements, you can use the following CSS code:

```
`css
.e-detailcell .e-grid .e-filter-popup .e-btn{
font-family: cursive;
}
```

In this example, the **.e-filter-popup** class targets the filter dialog, and the **.e-btn** class targets the button elements within the dialog. You can modify the **font-family** property to change the font of the button elements.

EMPLOYEE ID	FIRSTNAME	LAST NAME	CITY																
>	1	Nancy Davolio	Seattle																
▼	2	Andrew Fuller	Tacoma																
<table> <tr> <th>ORDER ID</th><th>CUSTOMER ID</th><th>SHIP CITY</th><th>SHIP NAME</th></tr> <tr> <td>10250</td><td>HANAR</td><td></td><td></td></tr> <tr> <td>10257</td><td>HILAA</td><td></td><td>astos</td></tr> <tr> <td>10260</td><td>OTTIK</td><td></td><td>den</td></tr> </table>				ORDER ID	CUSTOMER ID	SHIP CITY	SHIP NAME	10250	HANAR			10257	HILAA		astos	10260	OTTIK		den
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10260	OTTIK		den																
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>	4	Margaret																	
>	5	Steven																	
>	6	Michael																	
>	7	Robert																	
>	8	Laura																	
>	9	Anne																	

Sort A to Z

Sort Z to A

Clear Filter

Text Filters

Search

☒ Select All
 ☒ HANAR
 ☒ HILAA
 ☒ OTTIK

OKCancel

Customizing the child grid excel filter dialog number filters element

To customize the appearance of the excel filter dialog's number filters in the child grid, you can use the following CSS code:

```
`css
.e-detailcell .e-grid .e-filter-popup .e-contextmenu-wrapper ul{
background-color: #deecf9;
}
```

In this example, the **.e-filter-popup .e-contextmenu-wrapper** ul classes target the number filter elements within the excel filter dialog. You can modify the `background-color` property to change the color of these elements.

EMPLOYEE ID	FIRSTNAME	LAST NAME	CITY																	
>	1	Nancy	Davolio	Seattle																
▼	2	Andrew	Fuller	Tacoma																
<table><tr><th>ORDER ID</th><th>CUSTOMER ID</th><th>SHIP CITY</th><th>SHIP NAME</th></tr><tr><td>10250</td><td>HANAR</td><td></td><td></td></tr><tr><td>10257</td><td>HILAA</td><td></td><td>astos</td></tr><tr><td>10260</td><td>OTTIK</td><td></td><td>den</td></tr></table>					ORDER ID	CUSTOMER ID	SHIP CITY	SHIP NAME	10250	HANAR			10257	HILAA		astos	10260	OTTIK		den
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10260	OTTIK		den																	
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>	4	Margaret																		
>	5	Steven																		
>	6	Michael																		
>	7	Robert																		
>	8	Laura																		
>	9	Anne																		

Sort A to Z

Sort Z to A

Clear Filter

Text Filters

Search

☒ Select All

☒ HANAR

☒ HILAA

☒ OTTIK

OK

Cancel

Grouping

You can customize the appearance of grouping elements in the child grid using CSS. Here are examples of how to customize the group header, group expand/collapse icons, group caption row, and grouping indent cell.

Customizing the child grid group header

To customize the appearance of the child grid's group header element, you can use the following CSS code:

```
`css
.e-detailcell .e-grid .e-groupdroparea {
background-color: #132f49;
}
```

In this example, the `.e-detailcell` class targets the child grid and the `.e-groupdroparea` class targets the group header element. You can modify the `background-color` property to change the color of the group header.

EMPLOYEE ID	FIRSTNAME	LAST NAME	CITY
>	1	Nancy Davolio	Seattle
∨	2	Andrew Fuller	Tacoma
Drag a column header here to group its column			
ORDER ID	CUSTOMER ID	SHIP CITY	SHIP NAME
10250	HANAR	Rio de Janeiro	Hanari Carnes
10257	HILAA	San Cristóbal	HILARION-Abastos
10260	OTTIK	Köln	Ottilies Käseladen
>	3	Janet Leverling	Kirkland

Customizing the child grid group expand or collapse icons

To customize the appearance of the group expand/collapse icons in the child grid, you can use the following CSS code:

```
`css
.e-detailcell .e-grid .e-icon-gdownarrow::before{
content:'\e7c9'
}
.e-detailcell .e-grid .e-icon-grightarrow::before{
content:'\e80f'
}
```

In this example, the `.e-icon-gdownarrow` and `.e-icon-grightarrow` classes target the expand and collapse icons, respectively. You can modify the `content` property to change the icon displayed. You can use the available Syncfusion icons based on your theme.

EMPLOYEE ID	FIRSTNAME	LAST NAME	CITY																						
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<div>Customer ID ↑ ×</div> <table><tr><th>ORDER ID</th><th>SHIP CITY</th><th>SHIP NAME</th></tr><tr><td colspan="3">Customer ID: HANAR - 1 item</td></tr><tr><td colspan="3">Customer ID: HILAA - 1 item</td></tr><tr><td colspan="3">Customer ID: OTTIK - 1 item</td></tr><tr><td>10260</td><td>Köln</td><td>Ottilies Käseladen</td></tr><tr><td colspan="3">Customer ID: SUPRD - 1 item</td></tr><tr><td>10252</td><td>Charleroi</td><td>Suprêmes délices</td></tr></table>					ORDER ID	SHIP CITY	SHIP NAME	Customer ID: HANAR - 1 item			Customer ID: HILAA - 1 item			Customer ID: OTTIK - 1 item			10260	Köln	Ottilies Käseladen	Customer ID: SUPRD - 1 item			10252	Charleroi	Suprêmes délices
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10252	Charleroi	Suprêmes délices																							
>	3	Janet	Leverling	Kirkland																					

Customizing the child grid group caption row

To customize the appearance of the child grid's group caption row and the icons indicating record expansion or collapse, you can use the following CSS code:

```
`css
.e-detailcell .e-grid .e-groupcaption {
background-color: #deecf9;
}
.e-detailcell .e-grid .e-recordplusexpand,
.e-detailcell .e-grid .e-recordpluscollapse {
background-color: #deecf9;
}
`
```

In this example, the **.e-groupcaption** class targets the group caption row element, and the **.e-recordplusexpand** and **.e-recordpluscollapse** classes target the icons indicating record expansion or collapse. You can modify the **background-color** property to change the color of these elements.

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>	3	Janet	Leverling	Kirkland																								

Customizing the child grid grouping indent cell

To customize the appearance of the child grid's grouping indent cell element, you can use the following CSS code:

```
`css
.e-detailcell .e-grid .e-indentcell {
background-color: #deecf9;
}
`
```

In this example, the **.e-indentcell** class targets the grouping indent cell element. You can modify the **background-color** property to change the color of the indent cell.

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Toolbar

You can customize the appearance of the toolbar in the child grid using CSS. Here are examples of how to customize the toolbar root element and toolbar button element.

Customizing the child grid toolbar root element

To customize the appearance of the child grid's toolbar root element, you can use the following CSS code:

```
`css
.e-detailcell .e-grid .e-toolbar-items {
background-color: #deecf9;
}
`
```

In this example, the **.e-detailcell** class targets the child grid and the **.e-toolbar-items** class targets the background color of the toolbar root element. You can modify the `background-color` property to change the background color of the toolbar.

EMPLOYEE ID	FIRSTNAME	LAST NAME	CITY																
>	1	Nancy Davolio	Seattle																
∨	2	Andrew Fuller	Tacoma																
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Customizing the child grid toolbar button element

To customize the appearance of the child grid's toolbar buttons, you can use the following CSS code:

```
`css
.e-detailcell .e-grid .e-toolbar .e-btn {
background-color: #deecf9;
}
```

In this example, the **.e-toolbar .e-btn** selector targets the background color of the toolbar button elements. You can modify the **background-color** property to change the background color of the toolbar buttons.

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>	1	Nancy Davolio	Seattle																
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Editing

You can customize the appearance of editing-related elements in the child grid using CSS. Below are examples of how to customize various editing-related elements.

Customizing the child grid edited and added row element

To customize the appearance of edited and added row table elements in the child grid, you can use the following CSS code:

```
`css
.e-detailcell .e-grid .e-editedrow table,
.e-detailcell .e-grid .e-addedrow table {
background-color: #62b2eb;
}
`
```

In this example, the **.e-detailcell** class targets the child grid and the **.e-editedrow** class represents the edited row element, and the **.e-addedrow** class represents the added row element. You can modify the **background-color** property to change the color of these row table elements.

>

1

Nancy

Davolio

Seattle

▼

2

Andrew

Fuller

Tacoma

+ Add

Edit

Delete

Update

Cancel

ORDER ID

CUSTOMER ID

SHIP CITY

SHIP NAME

10250

HANAR

Rio de Janeiro

Hanari Carnes

10257

HILAA

San Cristóbal

HILARION-Abastos

10260

OTTIK

Köln

Ottilies Käseladen

>

3

Janet

Leverling

Kirkland

EMPLOYEE ID

FIRSTNAME

LAST NAME

CITY

>

1

Nancy

Davolio

Seattle

▼

2

Andrew

Fuller

Tacoma

+ Add

Edit

Delete

Update

Cancel

ORDER ID

CUSTOMER ID

SHIP CITY

SHIP NAME

10250

HANAR

Rio de Janeiro

Hanari Carnes

10257

HILAA

San Cristóbal

HILARION-Abastos

10260

OTTIK

Köln

Ottilies Käseladen

>

3

Janet

Leverling

Kirkland

Customizing the child grid edited row input element

To customize the appearance of edited row input elements in the child grid, you can use the following CSS code:

```
`css
.e-detailcell .e-grid .e-editedrow .e-input-group input.e-input{
font-family: cursive;
```

```
color:rgb(214, 33, 123)
```

```
}
```

```
,
```

In this example, the **.e-editedrow** class represents the edited row element, and the **.e-input** class represents the input elements within the form. You can modify the **font-family** property to change the font and **color** property to change text color of the input elements.

EMPLOYEE ID	FIRSTNAME	LAST NAME	CITY																	
>	1	Nancy	Davolio	Seattle																
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>	3	Janet	Leverling	Kirkland																

Customizing the child grid edit dialog header element

To customize the appearance of the edit dialog header element in the child grid, you can use the following CSS code:

```
`css
```

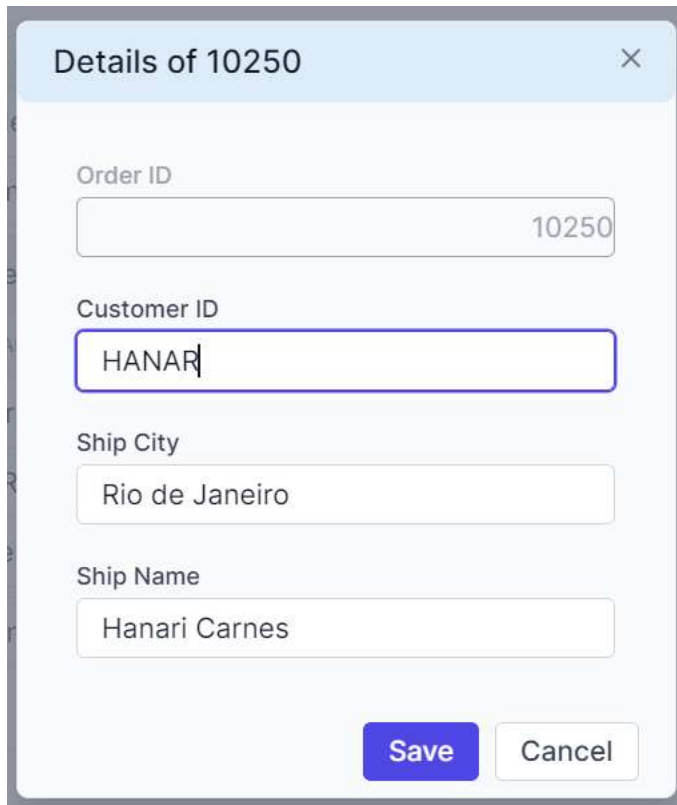
```
.e-edit-dialog .e-dlg-header-content {
```

```
background-color: #deecf9;
```

```
}
```

```
,
```

In this example, the **.e-edit-dialog** class represents the edit dialog, and the **.e-dlg-header-content** class targets the header content within the dialog. You can modify the **background-color** property to change the color of the header element.



Details of 10250

Order ID
10250

Customer ID
HANAR

Ship City
Rio de Janeiro

Ship Name
Hanari Carnes

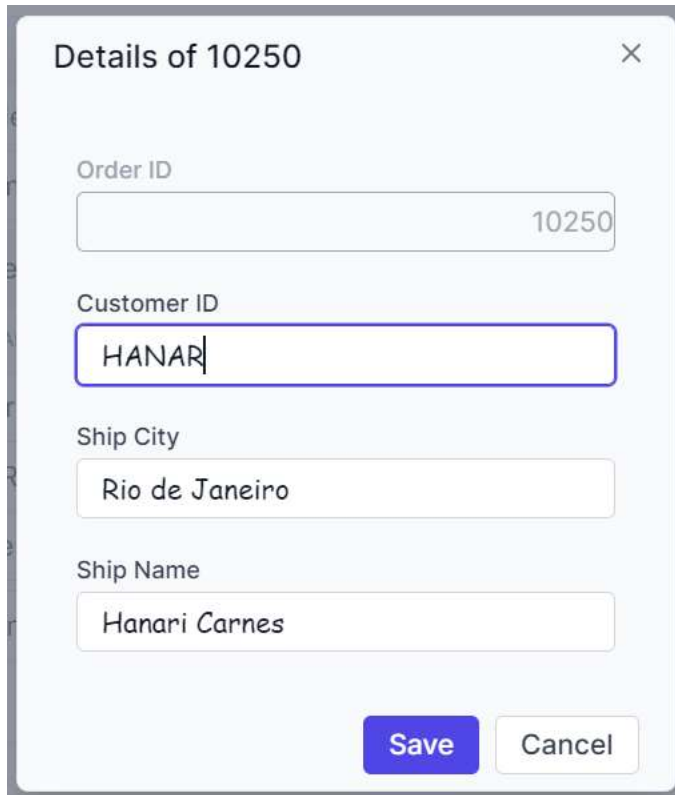
Save Cancel

Customizing the child grid edited row input element in dialog edit mode

To customize the appearance of the child grid's edited row input elements in dialog edit mode, you can use the following CSS code:

```
`css
.e-grid .e-gridform .e-rowcell .e-float-input .e-field {
font-family: cursive;
}
```

In this example, the **.e-gridform** class represents the editing form, and the **.e-float-input** class targets the floating input elements within the form. You can modify the **font-family** property to change the font of the input elements.



Details of 10250

Order ID
10250

Customer ID
HANAR

Ship City
Rio de Janeiro

Ship Name
Hanari Carnes

Save Cancel

Customizing the child grid command column buttons

To customize the appearance of the child grid's command column buttons such as edit, delete, update, and cancel, you can use the following CSS code:

```
`css
.e-detailcell .e-grid .e-delete::before, .e-grid .e-cancel-icon::before{
color: #f51717;
}
.e-detailcell .e-grid .e-edit::before, .e-grid .e-update::before {
color: #077005;
}
`
```

In this example, the **.e-edit**, **.e-delete**, **.e-update**, and **.e-cancel-icon** classes represent the respective command column buttons. You can modify the `color` property to change the color of these buttons.

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>	1	Nancy	Davolio	Seattle																								
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Aggregate

You can customize the appearance of aggregate elements in the child grid using CSS. Below are examples of how to customize the aggregate root element and the aggregate cell elements.

Customizing the child grid aggregate root element

To customize the appearance of the child grid's aggregate root elements, you can use the following CSS code:

```
`css
.e-detailcell .e-grid .e-gridfooter {
font-family: cursive;
}
```


In this example, the **.e-detailcell** class targets the child grid and the **e-gridfooter** class represents the root element of the aggregate row in the grid footer. You can modify the **font-family** property to change the font of the aggregate root element.

	EMPLOYEE ID	FIRSTNAME	LAST NAME	CITY																								
>	1	Nancy	Davolio	Seattle																								
▼	2	Andrew	Fuller	Tacoma																								
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	Max: \$81.91																											
>	3	Janet	Leverling	Kirkland																								

Customizing the child grid aggregate cell elements

To customize the appearance of the child grid's aggregate cell elements (summary row cell elements), you can use the following CSS code:

```
`css
.e-detailcell .e-grid .e-summaryrow .e-summarycell {
background-color: #deecf9;
}
`
```

In this example, the **e-summaryrow** class represents the summary row containing aggregate cells, and the **e-summarycell** class targets individual aggregate cells within the summary row. You can modify the **background-color** property to change the **color** of the aggregate cell elements.

	EMPLOYEE ID	FIRSTNAME	LAST NAME	CITY																						
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Selection

You can customize the appearance of the selection in the child grid using CSS. Here are examples of how to customize the row selection background, cell selection background, and column selection background.

Customizing the child grid row selection background

To customize the appearance of the child grid's row selection, you can use the following CSS code:

```
`css
.e-detailcell .e-grid td.e-selectionbackground {
background-color: #00b7ea;
}
```

In this example, the **.e-detailcell** class targets the child grid and the **.e-selectionbackground** class targets the background color of the row selection. You can modify the **background-color** property to change the background color of the selected rows.

EMPLOYEE ID	FIRSTNAME	LAST NAME	CITY																	
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10260	OTTIK	55.09	Ottilies Käseladen																	
>	3	Janet	Leverling	Kirkland																

Customizing the child grid cell selection background

To customize the appearance of the child grid's cell selection, you can use the following CSS code:

`CSS

```
.e-detailcell .e-grid td.e-cellselectionbackground {
```

```
background-color: #00b7ea;
```

}

•

In this example, the `.e-cellselectionbackground` class targets the background color of the cell selection. You can modify the `background-color` property to change the background color of the selected cells.

EMPLOYEE ID	FIRSTNAME	LAST NAME	CITY																	
>	1	Nancy	Davolio	Seattle																
▼	2	Andrew	Fuller	Tacoma																
<table><tr><th>ORDER ID</th><th>CUSTOMER ID</th><th>FREIGHT</th><th>SHIP NAME</th></tr><tr><td>10250</td><td>HANAR</td><td>65.83</td><td>Hanari Carnes</td></tr><tr><td>10257</td><td>HILAA</td><td>81.91</td><td>HILARION-Abastos</td></tr><tr><td>10260</td><td>OTTIK</td><td>55.09</td><td>Ottilies Käseladen</td></tr></table>					ORDER ID	CUSTOMER ID	FREIGHT	SHIP NAME	10250	HANAR	65.83	Hanari Carnes	10257	HILAA	81.91	HILARION-Abastos	10260	OTTIK	55.09	Ottilies Käseladen
ORDER ID	CUSTOMER ID	FREIGHT	SHIP NAME																	
10250	HANAR	65.83	Hanari Carnes																	
10257	HILAA	81.91	HILARION-Abastos																	
10260	OTTIK	55.09	Ottilies Käseladen																	
>	3	Janet	Leverling	Kirkland																

Customizing the child grid column selection background

To customize the appearance of the child grid's column selection, you can use the following CSS code:

```
`css
.e-detailcell .e-grid .e-columnselection {
background-color: #aec2ec;
}
`
```

In this example, the **.e-columnselection** class targets the background color of the column selection. You can modify the `background-color` property to change the background color of the selected columns.

EMPLOYEE ID	FIRSTNAME	LAST NAME	CITY	
>	1	Nancy	Davolio	Seattle
▼	2	Andrew	Fuller	Tacoma
	ORDER ID	CUSTOMER ID	FREIGHT	SHIP NAME
	10250	HANAR	65.83	Hanari Carnes
	10257	HILAA	81.91	HILARION-Abastos
	10260	OTTIK	55.09	Ottilies Käseladen
>	3	Janet	Leverling	Kirkland

State Management in React Grid component

State management in the React Grid component allows you to maintain the grid's state even after a browser refresh or when navigating to a different page within the same browser session. This feature is particularly useful for retaining the grid's configuration and data even after a page reload.

To enable state persistence in the Grid, you can utilize the [enablePersistence](#) property. When this property is set to **true**, the grid will automatically save its state in the browser's [localStorage](#), ensuring that the state is preserved across page reloads.

```
`ts
<GridComponent dataSource={data} enablePersistence={true}></ejs-GridComponent>
`
```

The grid will store the state using the combination of the component name and component ID in the storage. For example, if the component name is **grid** and the ID is **OrderDetails**, the state will be stored as **gridOrderDetails**.

When enabling state persistence, the following grid settings will persist in the local storage.

Grid Settings | Properties persist | Ignored properties

pageSettings |currentPage
pageCount
pageSize
pageSizes
totalRecordsCount
|template
enableQueryString

groupSettings

|allowReordering
columns
disablePageWiseAggregates
enableLazyLoading
showDropArea
showGroupedColumn
showToggleButton
showUngroupButton |captionTemplate

columns

|allowEditing
allowFiltering
allowGrouping
allowReordering
allowResizing
allowSearching
allowSorting
autoFit
disableHtmlEncode
enableGroupByFormat
field
foreignKeyField
index
showColumnMenu
showInColumnChooser
sortDirection
type
uid
visible
width

|clipMode
commands
customAttributes
dataSource
defaultValue
displayAsCheckBox
editeditemplate
editType
filter
filterBarTemplate
filterTemplate
foreignKeyValue
format
formatter
freeze
headerTemplate
headerText
headerTextAlign
headerValueAccessor
hideAtMedia
isFrozen
isIdentity
isPrimaryKey
lockColumn
maxWidth
minWidth
sortComparer
template
textAlign
validationRules
valueAccessor

sortSettings | - | -

filterSettings | - | -

searchSettings | - | -

selectedRowIndex | - | -

The grid will persist only the last selected row index.

Restore initial Grid state

In the Syncfusion React Grid component, you have the capability to restore the grid to its initial state, reverting all changes and configurations made during the interaction. This feature can be particularly useful when you want to reset the grid to its original settings, eliminating any applied filters, sorting, or column reordering.

Here are the steps to reset the grid to its initial state, even when the [enablePersistence](#) property is enabled:

Changing component id

If you want to restore the initial state of the grid, consider changing the component ID. This step ensures that the grid is treated as a new instance, effectively reverting to its default settings.

Here is an example code to change the component id dynamically to restore initial grid state.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Filter, Inject, Page } from '@syncfusion/ej2-react-grids';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  let grid;
  const clickHandler = () => {
    grid = `OrderDetails` + Math.floor(Math.random() * 10);
    location.reload();
  };
}
```

```

    }
    return (<div> <ButtonComponent onClick={clickHandler}>Restore to initial
state</ButtonComponent>
    <GridComponent id="Grid" dataSource={data} allowFiltering={true}
allowPaging={true} enablePersistence={true} height={230}
    ref={g => grid = g}>
    <ColumnsDirective>
    <ColumnDirective field='OrderID' headerText='Order ID'
width='100' textAlign="Right" />
    <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
    <ColumnDirective field='ShipCity' headerText='Ship City'
width='100' />
    <ColumnDirective field='ShipName' headerText='Ship Name'
width='100' />
    </ColumnsDirective>
    <Inject services={[Filter, Page]} />
    </GridComponent></div>)
  };
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
'@syncfusion/ej2-react-grids';
import { Filter, Inject, Page } from '@syncfusion/ej2-react-grids';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid: GridComponent | null;
  const clickHandler = () => {
    (grid as GridComponent) = `OrderDetails` + Math.floor(Math.random() *
10);
    location.reload();
  }
  return (<div> <ButtonComponent onClick={clickHandler}>Restore to initial
state</ButtonComponent>
    <GridComponent id="Grid" dataSource={data} allowFiltering={true}
allowPaging={true} enablePersistence={true} height={230}
    ref={g => grid = g}>
    <ColumnsDirective>
    <ColumnDirective field='OrderID' headerText='Order ID'
width='100' textAlign="Right" />
    <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
    <ColumnDirective field='ShipCity' headerText='Ship City'
width='100' />
    <ColumnDirective field='ShipName' headerText='Ship Name'
width='100' />
    </ColumnsDirective>
    <Inject services={[Filter, Page]} />
    </GridComponent></div>)
  };
export default App;

```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
```

```

        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',

```



```
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',  
        Freight: 3.05, Verified: !1  
    },  
    {  
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new  
        Date(8379738e5),  
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',  
        ShipAddress: '2817 Milton Dr.',  
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',  
        Freight: 48.29, Verified: !0  
    }  
];
```

DATASOURCE.TSX

```
export let data: Object[] = [  
    {  
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new  
        Date(8364186e5),  
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',  
        ShipAddress: '59 rue de l Abbaye',  
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',  
        Freight: 32.38, Verified: !0  
    },  
    {  
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new  
        Date(836505e6),  
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:  
        'Luisenstr. 48',  
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',  
        Freight: 11.61, Verified: !1  
    },  
    {  
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new  
        Date(8367642e5),  
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:  
        'Rua do Paço, 67',  
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',  
        Freight: 65.83, Verified: !0  
    },  
    {  
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new  
        Date(8367642e5),  
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,  
        rue du Commerce',  
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',  
        Freight: 41.34, Verified: !0  
    },  
    {  
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new  
        Date(8368506e5),  
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:  
        'Boulevard Tirou, 255',  
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',  
        Freight: 51.3, Verified: !0  
    },  
];
```

```

    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
  ],
  {

```

```

    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

Clearing local storage

Another method to reset the grid is by clearing the local storage associated with the grid component. This action removes any stored state information, allowing the grid to return to its original configuration.

Here is an example code on how to clear local storage to retain its default state.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
'@syncfusion/ej2-react-grids';
import { Filter, Inject, Page } from '@syncfusion/ej2-react-grids';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  const clickHandler = () => {
    grid.enablePersistence = false;
    window.localStorage.setItem("gridGrid", "");
    grid.destroy();
    //reloads the page
    location.reload();
  }
  return (<div> <ButtonComponent onClick={clickHandler}>Restore to initial
state</ButtonComponent>
    <GridComponent id="Grid" dataSource={data} allowFiltering={true}
allowPaging={true} enablePersistence={true} height={230}
      ref={g => grid = g}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID'
width='100' textAlign="Right" />

```

```

        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
        <ColumnDirective field='ShipCity' headerText='Ship City'
width='100' />
        <ColumnDirective field='ShipName' headerText='Ship Name'
width='100' />
    </ColumnsDirective>
    <Inject services={[Filter, Page]} />
    </GridComponent></div>
};
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Filter, Inject, Page } from '@syncfusion/ej2-react-grids';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
import { data } from './datasource';
function App() {
    let grid: GridComponent | null;
    const clickHandler = () => {
        grid.enablePersistence = false;
        window.localStorage.setItem("gridGrid", "");
        grid.destroy();
        //reloads the page
        location.reload();
    }
    return (<div> <ButtonComponent onClick={clickHandler}>Restore to initial
state</ButtonComponent>
        <GridComponent id="Grid" dataSource={data} allowFiltering={true}
allowPaging={true} enablePersistence={true} height={230}
        ref={g => grid = g}>
            <ColumnsDirective>
                <ColumnDirective field='OrderID' headerText='Order ID'
width='100' textAlign="Right" />
                <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
                <ColumnDirective field='ShipCity' headerText='Ship City'
width='100' />
                <ColumnDirective field='ShipName' headerText='Ship Name'
width='100' />
            </ColumnsDirective>
            <Inject services={[Filter, Page]} />
        </GridComponent></div>
    );
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),

```

```

        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),

```

```

        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),

```

```
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',  
    ShipAddress: '2817 Milton Dr.',  
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',  
    Freight: 48.29, Verified: !0  
  }  
];
```

DATASOURCE.TSX

```
export let data: Object[] = [  
  {  
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new  
Date(8364186e5),  
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',  
    ShipAddress: '59 rue de l Abbaye',  
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',  
    Freight: 32.38, Verified: !0  
  },  
  {  
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new  
Date(836505e6),  
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:  
'Luisenstr. 48',  
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',  
    Freight: 11.61, Verified: !1  
  },  
  {  
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new  
Date(8367642e5),  
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:  
'Rua do Paço, 67',  
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',  
    Freight: 65.83, Verified: !0  
  },  
  {  
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new  
Date(8367642e5),  
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,  
rue du Commerce',  
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',  
    Freight: 41.34, Verified: !0  
  },  
  {  
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new  
Date(8368506e5),  
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:  
'Boulevard Tirou, 255',  
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',  
    Freight: 51.3, Verified: !0  
  },  
  {  
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new  
Date(836937e6),  
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:  
'Rua do Paço, 67',
```

```

        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',

```



```

        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]];

```

Restore to specific state version

Syncfusion React Grid supports version-based persistence for easy restoration to a specific state. To enable version based persistence, import `enableVersionBasedPersistence` from `@syncfusion/ej2-base` and set it globally to **true**. Define the grid in the template with properties, bind data, and configure persistence using `enablePersistence` and `ej2state-persistenceVersion`.

In the below example, the `clickHandler` method is responsible for handling button clicks corresponding to different versions. Inside this method, the targeted version is assigned to the grid's `ej2statepersistenceVersion` dynamically. The code checks if there is already a persisted state for the selected version in the local storage. If found, the grid is updated with the settings retrieved from the local storage, including columns, filter settings, group settings, sort settings, page settings, and selected row index. If no persisted state is found, the current grid state is persisted to the local storage using the `getPersistData` method.

Here is an example of how to integrate version-based persistence into your React component and restore to specific state version:

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
'@syncfusion/ej2-react-grids';
import { Inject, Page, Reorder, Group, Sort, Filter } from '@syncfusion/ej2-
react-grids';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import React, { useState } from 'react';
import { data } from '../datasource';
function App() {
  let grid;
  const [message, setMessage] = useState('');
  let gridVersion='v.0';
  let version = [1, 2, 3];
  const clickHandler = (version) => {
    grid.ej2StatePersistenceVersion = version;

```

```

    var persistedGridSettings =
    (window.localStorage.getItem(`gridOrderDetails` +
    grid.ej2StatePersistenceVersion));
    if (persistedGridSettings) {
        grid.setProperties(JSON.parse(persistedGridSettings));
        setMessage(`Grid state restored to ` + version);
    } else {
        var gridData = grid.getPersistData();
        window.localStorage.setItem(`gridOrderDetails` +
    grid.ej2StatePersistenceVersion), gridData);
    }
}

return( <div>
    <p id='message'>{message}</p>
    <div>
        {version.map((v) => (
            <ButtonComponent key={v} onClick={() =>
    clickHandler(`v.${v}`)}>Version{v}</ButtonComponent>
        ))}
    </div>

    <GridComponent id="Grid" dataSource={data} allowPaging={true}
    allowFiltering={true} allowSorting={true} allowReordering={true}
    allowGrouping={true} enablePersistence={true}
    ej2StatePersistenceVersion={gridVersion} height={315}
    ref={g => grid = g}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID'
    width='100' textAlign="Right"/>
            <ColumnDirective field='CustomerID' headerText='Customer ID'
    width='100' />
            <ColumnDirective field='ShipCity' headerText='Ship City'
    width='100' />
            <ColumnDirective field='ShipName' headerText='Ship Name'
    width='100' />
        </ColumnsDirective>
        <Inject services={[Page, Reorder, Group, Sort, Filter]} />
    </GridComponent></div>
);
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
    '@syncfusion/ej2-react-grids';
import { Inject, Page, Reorder, Group, Sort, Filter } from '@syncfusion/ej2-
    react-grids';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import React, {useState} from 'react';
import { data } from '../datasource';
function App() {
    let grid: GridComponent | null;
    const [message, setMessage] = useState('');
    let gridVersion:string='v.0';
    let version: number[] = [1, 2, 3];
    const clickHandler = (version: string) => {

```

```

    (grid as GridComponent).ej2StatePersistenceVersion = version;
    var persistedGridSettings: string =
    (window.localStorage.getItem(`gridOrderDetails` + (grid as
    GridComponent).ej2StatePersistenceVersion)) as string;
    if (persistedGridSettings) {
        (grid as
    GridComponent).setProperties(JSON.parse(persistedGridSettings));
        setMessage(`Grid state restored to ` + version);
    } else {
        var gridData = (grid as GridComponent).getPersistData();
        window.localStorage.setItem(`gridOrderDetails` + (grid as
    GridComponent).ej2StatePersistenceVersion, gridData);
    }
}

return( <div>
    <p id='message'>{message}</p>
    <div>
        {version.map((v) => (
            <ButtonComponent key={v} onClick={() =>
    clickHandler(`v.${v}`)}>Version{v}</ButtonComponent>
        ))}
    </div>

    <GridComponent id="Grid" dataSource={data} allowPaging={true}
    allowFiltering={true} allowSorting={true} allowReordering={true}
    allowGrouping={true} enablePersistence={true}
    ej2StatePersistenceVersion={gridVersion} height={315}
    ref={g => grid = g}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID'
    width='100' textAlign="Right"/>
            <ColumnDirective field='CustomerID' headerText='Customer ID'
    width='100' />
            <ColumnDirective field='ShipCity' headerText='Ship City'
    width='100' />
            <ColumnDirective field='ShipName' headerText='Ship Name'
    width='100' />
        </ColumnsDirective>
        <Inject services={[Page, Reorder, Group, Sort, Filter]} />
    </GridComponent></div>
);
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {

```

```

    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {

```

```

    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```
export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
```

```

        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),

```

```

      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }
  ]];

```

Restore to previous state

The Syncfusion React Grid component allows you to save and restore its state using local storage. This feature is helpful when you want to preserve the current state of the Grid, such as column order, sorting, and filtering, so that you can return to your previous work or configurations.

To implement this functionality, use the `getItem` and `setItem` methods for local storage, along with the Grid component's `setProperties` and [getPersistData](#) methods.

The provided code demonstrates how to save and restore the previous state of a Syncfusion React Grid component using local storage.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, EditSettingsModel,
FilterSettingsModel, GridComponent, GroupSettingsModel, PageSettingsModel }
from '@syncfusion/ej2-react-grids';
import { Filter, Inject, Page, Sort, Group, Edit, Toolbar, ToolbarItems }
from '@syncfusion/ej2-react-grids';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import React, { useState } from 'react';
import { data } from './datasource';
function App() {
  let grid;
  let state;
  const [message, setMessage] = useState('');
  const groupOptions = { showGroupedColumn: false, columns: ["ShipCountry"]
};
  const filterOptions = { type: "Menu" };
  const pageSettings = { pageCount: 5 };
  const editSettings = { allowEditing: true };
  const toolbar = ['Edit', 'Update', 'Cancel'];
  const orderidrules = { required: true, number: true };
  const customeridrules = { required: true };
  const freightrules = { required: true };
  const editparams = { params: { popupHeight: "300px" } };
  const formatoptions = { type: "dateTime", format: "M/d/y hh:mm a" };
  const actionBegin = () => {
    setMessage('');
  }
  // Save grid state to local storage
  const saveBtn = () => {
    var persistData = grid.getPersistData(); // Grid persistData

```



```

    window.localStorage.setItem("gridOrders", persistData);
    setMessage("Grid state saved.");
  }
  // Restore grid state from local storage
  const restoreBtn = () => {
    let value = window.localStorage.getItem("gridOrders"); // "gridOrders" is
    // component name + component id.
    state = JSON.parse(value);
    if (state) {
      grid.setProperties(state);
      setMessage("Previous grid state restored.");
    } else {
      setMessage("No saved state found.");
    }
  }
  return (<div>
    <ButtonComponent className="e-success"
    onClick={saveBtn}>Save</ButtonComponent>
    <ButtonComponent className="e-danger"
    onClick={restoreBtn}>Restore</ButtonComponent>
    <p id='message'>{message}</p>
    <GridComponent id='Orders' dataSource={data} allowFiltering={true}
    filterSettings={filterOptions} allowPaging={true} pageSettings={pageSettings}
    allowSorting={true} allowGrouping={true} groupSettings={groupOptions}
    editSettings={editSettings} toolbar={toolbar} enablePersistence={true}
    height={230}
    ref={g => grid = g} actionBegin={actionBegin}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='100'
        textAlign="Right" validationRules={orderidrules} isPrimaryKey={true} />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
        width='100' validationRules={customeridrules} />
        <ColumnDirective field='Freight' headerText='Freight' width='100'
        format='C2' editType="numericedit" validationRules={freightrules} />
        <ColumnDirective field='OrderDate' headerText='OrderDate' width='100'
        allowGrouping={false} editType="datetimepickeredit" format={formatoptions} />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
        width='100' editType="dropdownedit" edit={editparams} />
      </ColumnsDirective>
      <Inject services={[Filter, Page, Sort, Group, Edit, Toolbar]} />
    </GridComponent></div>
  );
};
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, EditSettingsModel,
FilterSettingsModel, GridComponent, GroupSettingsModel, PageSettingsModel }
from '@syncfusion/ej2-react-grids';
import { Filter, Inject, Page, Sort, Group, Edit, Toolbar, ToolbarItems }
from '@syncfusion/ej2-react-grids';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import React, { useState } from 'react';
import { data } from '../datasource';
function App() {
  let grid: GridComponent | null;

```

```

let state: GridComponent;
const [message, setMessage] = useState('');
const groupOptions: GroupSettingsModel = { showGroupedColumn: false,
columns: ["ShipCountry"] };
const filterOptions: FilterSettingsModel = { type: "Menu" };
const pageSettings: PageSettingsModel = { pageCount: 5 };
const editSettings: EditSettingsModel = { allowEditing: true };
const toolbar: ToolbarItems[] = ['Edit', 'Update', 'Cancel'];
const orderidrules: Object = { required: true, number: true };
const customeridrules: Object = { required: true };
const freightrules: Object = { required: true };
const editparams: Object = { params: { popupHeight: "300px" } };
const formatoptions: Object = { type: "dateTime", format: "M/d/y hh:mm a"
};
const actionBegin = () => {
    setMessage('');
}
// Save grid state to local storage
const saveBtn = () => {
    var persistData = (grid as GridComponent).getPersistData(); // Grid
persistData
    window.localStorage.setItem("gridOrders", persistData);
    setMessage("Grid state saved.");
}
// Restore grid state from local storage
const restoreBtn = () => {
    let value: string = window.localStorage.getItem("gridOrders") as string;
    // "gridOrders" is component name + component id.
    state = JSON.parse(value);
    if (state) {
        (grid as GridComponent).setProperties(state);
        setMessage("Previous grid state restored.");
    } else {
        setMessage("No saved state found.");
    }
}
return (<div>
    <ButtonComponent className="e-success"
onClick={saveBtn}>Save</ButtonComponent>
    <ButtonComponent className="e-danger"
onClick={restoreBtn}>Restore</ButtonComponent>
    <p id='message'>{message}</p>
    <GridComponent id='Orders' dataSource={data} allowFiltering={true}
filterSettings={filterOptions} allowPaging={true} pageSettings={pageSettings}
allowSorting={true} allowGrouping={true} groupSettings={groupOptions}
editSettings={editSettings} toolbar={toolbar} enablePersistence={true}
height={230}
    ref={g => grid = g} actionBegin={actionBegin}>
    <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" validationRules={orderidrules} isPrimaryKey={true} />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' validationRules={customeridrules} />
        <ColumnDirective field='Freight' headerText='Freight' width='100'
format='C2' editType="numericedit" validationRules={freightrules} />
        <ColumnDirective field='OrderDate' headerText='OrderDate' width='100'
allowGrouping={false} editType="datetimepickeredit" format={formatoptions} />

```

```

    <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='100' editType="dropdownedit" edit={editparams} />
    </ColumnsDirective>
    <Inject services={[Filter, Page, Sort, Group, Edit, Toolbar]} />
    </GridComponent></div>
  };
  export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',

```

```

        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]
  ];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },

```

```

    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {

```

```

    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

Maintaining custom query in a persistent state

When [enablePersistence](#) is enabled, the Grid does not automatically maintain custom query parameters after a page load. This is because the Grid refreshes its query params for every page load. You can maintain the custom query params by resetting the [addParams](#) method in the [actionBegin](#) event.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Filter, Inject, Page } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  let grid;
  const actionBegin = () => {
    if (grid) {
      grid.query.addParams('dataSource', 'data');
    }
  }
  return (<GridComponent dataSource={data} allowFiltering={true}
allowPaging={true} enablePersistence={true} height={230}
  actionBegin={actionBegin} ref={g => grid = g}>
    <ColumnsDirective>

```

```

        <ColumnDirective field='OrderID' headerText='Order ID'
width='100' textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
        <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='100' />
        <ColumnDirective field='ShipCity' headerText='Ship City'
width='100' />
        <ColumnDirective field='ShipName' headerText='Ship Name'
width='100' />
    </ColumnsDirective>
    <Inject services={[Filter, Page]} />
    </GridComponent>
);
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
'@syncfusion/ej2-react-grids';
import { Filter, Inject, Page } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    let grid: GridComponent | null;
    const actionBegin = () => {
        if (grid) {
            grid.query.addParams('dataSource', 'data');
        }
    }
    return (<GridComponent dataSource={data} allowFiltering={true}
allowPaging={true} enablePersistence={true} height={230}
    actionBegin={actionBegin} ref={g => grid = g}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
            <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
            <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='100' />
            <ColumnDirective field='ShipCity' headerText='Ship City' width='100' />
            <ColumnDirective field='ShipName' headerText='Ship Name' width='100' />
        </ColumnsDirective>
        <Inject services={[Filter, Page]} />
    </GridComponent>
);
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
    }
];

```



```

        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
      },
      {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
      },
      {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',

```

```
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',  
        Freight: 48.29, Verified: !0  
    }  
];
```

DATASOURCE.TSX

```
export let data: Object[] = [  
    {  
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new  
Date(8364186e5),  
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',  
        ShipAddress: '59 rue de l Abbaye',  
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',  
        Freight: 32.38, Verified: !0  
    },  
    {  
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new  
Date(836505e6),  
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:  
'Luisenstr. 48',  
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',  
        Freight: 11.61, Verified: !1  
    },  
    {  
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new  
Date(8367642e5),  
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:  
'Rua do Paço, 67',  
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',  
        Freight: 65.83, Verified: !0  
    },  
    {  
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new  
Date(8367642e5),  
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,  
rue du Commerce',  
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',  
        Freight: 41.34, Verified: !0  
    },  
    {  
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new  
Date(8368506e5),  
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:  
'Boulevard Tirou, 255',  
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',  
        Freight: 51.3, Verified: !0  
    },  
    {  
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new  
Date(836937e6),  
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:  
'Rua do Paço, 67',  
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',  
        Freight: 58.17, Verified: !0  
    },  
];
```

```

    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {

```

```

    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
    ];

```

Get or set local storage value

If the [enablePersistence](#) property is set to **true**, the Grid property value is saved in the **window.localStorage** for reference. You can get or set the localStorage value by using the **getItem** and **setItem** methods in **window.localStorage**.

To retrieve the Grid model from Local Storage, follow these steps:

```

`typescript
//get the Grid model.

let value: string = window.localStorage.getItem('gridOrders'); //"gridOrders" is component name +
component id.

let model: Object = JSON.parse(value);
`

`typescript
//set the Grid model.

window.localStorage.setItem('gridOrders', JSON.stringify(value)); //"gridOrders" is component name +
component id.
`

```

Prevent columns from persisting

In the Syncfusion React Grid component, you may sometimes want to prevent certain settings from being persisted when using the [enablePersistence](#) feature. When the `enablePersistence` property is set to **true**, the Grid properties such as [Grouping](#), [Paging](#), [Filtering](#), [Sorting](#), and [Columns](#) will persist. You can use the `addOnPersist` method to prevent these Grid properties from persisting.

The following example demonstrates how to prevent Grid columns from persisting. In the [dataBound](#) event of the Grid, you can override the `addOnPersist` method and remove the columns from the key list given for persistence.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
'@syncfusion/ej2-react-grids';

```

```

import { Inject, Page } from '@syncfusion/ej2-react-grids';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  const dataBound = () => {
    let cloned = grid.addOnPersist;
    grid.addOnPersist = function (key) {
      key = key.filter((item) => item !== "columns");
      return cloned.call(this, key);
    };
  }
  const addColumn = () => {
    let obj = { field: "Freight", headerText: 'Freight', width: 120 };
    grid.columns.push(obj); //you can add the columns by using the Grid
    columns method
    grid.refreshColumns();
  }
  const removeColumn = () => {
    grid.columns.pop();
    grid.refreshColumns();
  }
  return( <div> <ButtonComponent onClick= { addColumn }>Add
Columns</ButtonComponent>
  <ButtonComponent onClick= { removeColumn }>Remove
Columns</ButtonComponent>
  <GridComponent id="Grid" dataSource={data} allowPaging={true}
enablePersistence={true} dataBound={dataBound} height={315}
  ref={g => grid = g}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID'
width='100' textAlign="Right"/>
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
      <ColumnDirective field='ShipCity' headerText='Ship City'
width='100' />
      <ColumnDirective field='ShipName' headerText='Ship Name'
width='100' />
    </ColumnsDirective>
    <Inject services={[Page]} />
  </GridComponent></div>
);
}
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Inject, Page } from '@syncfusion/ej2-react-grids';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid: GridComponent | null;
  const dataBound = () => {

```

```

let cloned = (grid as GridComponent).addOnPersist;
(grid as GridComponent).addOnPersist = function (key) {
    key = key.filter((item: string) => item !== "columns");
    return cloned.call(this, key);
};
}
const addColumn = () => {
    let obj = { field: "Freight", headerText: 'Freight', width: 120 };
    (grid as GridComponent).columns.push(obj); //you can add the columns by using the Grid columns method
    (grid as GridComponent).refreshColumns();
}
const removeColumn = () => {
    (grid as GridComponent).columns.pop();
    (grid as GridComponent).refreshColumns();
}
return( <div> <ButtonComponent onClick= { addColumn }>Add
Columns</ButtonComponent>
<ButtonComponent onClick= { removeColumn }>Remove
Columns</ButtonComponent>
<GridComponent id="Grid" dataSource={data} allowPaging={true}
enablePersistence={true} dataBound={dataBound} height={315}
ref={g => grid = g}>
    <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID'
width='100' textAlign="Right"/>
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
        <ColumnDirective field='ShipCity' headerText='Ship City'
width='100' />
        <ColumnDirective field='ShipName' headerText='Ship Name'
width='100' />
    </ColumnsDirective>
    <Inject services={[Page]} />
</GridComponent></div>
);
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    }
]

```

```

    },
    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
  },

```



```

    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
  ];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),

```

```

        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),

```

```

        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),

```

```

    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
    ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
    Freight: 48.29, Verified: !0
  }];

```

Add to persist

Persistence can be added to a Syncfusion React Grid component to enhance the user experience. Persistence allows saving and restoring the state of the grid, including column layouts, sorting, filtering, and other user-specific settings. In this documentation, you will explore how to persist column templates, header templates, and header text settings in the React Grid.

Add a new column in persisted columns list

When the [enablePersistence](#) property is set to true in the Syncfusion Grid component, column configurations are persisted. If you need to add new columns to the existing persisted state, you can achieve this by using the Grid's built-in methods like `push`, and then call the [refreshColumns](#) method to update the UI with the new columns.

Here's an example of how to add a new column to a list of persisted columns:

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Inject, Page } from '@syncfusion/ej2-react-grids';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  const addColumn = () => {
    let obj = { field: "Freight", headerText: 'Freight', width: 120 };
    grid.columns.push(obj); //you can add the columns by using the Grid
    columns method
    grid.refreshColumns();
  }
  return (<div> <ButtonComponent onClick={addColumn}>Add
  Columns</ButtonComponent>
    <GridComponent id="Grid" dataSource={data} allowPaging={true}
    enablePersistence={true} height={315}
      ref={g => grid = g}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='100'
        textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
        width='100' />
        <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
        />
        <ColumnDirective field='ShipName' headerText='Ship Name' width='100'
        />
      </ColumnsDirective>
      <Inject services={[Page]} />
    </GridComponent></div>)
  );
}
export default App;

```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Inject, Page } from '@syncfusion/ej2-react-grids';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid: GridComponent | null;
  const addColumn = () => {
    let obj = { field: "Freight", headerText: 'Freight', width: 120 };
    (grid as GridComponent).columns.push(obj); //you can add the columns by
    using the Grid columns method
    (grid as GridComponent).refreshColumns();
  }
  return (<div> <ButtonComponent onClick={addColumn}>Add
  Columns</ButtonComponent>
  <GridComponent id="Grid" dataSource={data} allowPaging={true}
  enablePersistence={true} height={315}
  ref={g => grid = g}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
  textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
  width='100' />
      <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
  />
      <ColumnDirective field='ShipName' headerText='Ship Name' width='100'
  />
    </ColumnsDirective>
    <Inject services={[Page]} />
  </GridComponent></div>);
};
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
];
```

```

    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
  ]
}

```

```

    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),

```

```

        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),

```



```

        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),

```

```

        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }];

```

* Adding new columns using `ColumnDirectives` directly in the grid initialization is not recommended if you intend to persist the new columns with the existing columns list

Persist the column template, header template and header text

By default, when the `enablePersistence` property is set to **true** in the Syncfusion Grid component, certain column properties such as column template, header text, header template, column formatter, and value accessor are not persisted. This is because these properties can be customized at the application level.

To restore these column properties and achieve persistence, you can follow the approach of cloning the grid's columns property using JavaScript Object's assign method and manually storing it along with the persist data. When restoring the settings, this cloned column object must be assigned to the grid's columns property to restore the column settings. The following sample demonstrates this process:

APP.JSX

```

import { Column, ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Filter, Inject, Page } from '@syncfusion/ej2-react-grids';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import React, { useState } from 'react';
import { data } from './datasource';
function App() {
    let grid;
    const [message, setMessage] = useState('');
    let persistedGridSettings;
    const saveBtn = () => {
        persistedGridSettings = JSON.parse((grid).getPersistData());
        var gridColumns = Object.assign([], (grid).getColumns());
        persistedGridSettings.columns.forEach((persistedColumn) => {
            const column = gridColumns.find((col) => col.field ===
persistedColumn.field);
            if (column) {
                persistedColumn.headerText = 'Text Changed';
                persistedColumn.template = column.template;
                persistedColumn.headerTemplate = column.headerTemplate;
            }
        });
        window.localStorage.setItem('gridOrders1',
JSON.stringify(persistedGridSettings));
        grid.setProperties(persistedGridSettings);
        setMessage('Saved the headerText, template column, and headerTemplate
properties in the persisted settings');
    }
    const restoreBtn = () => {
        const savedSettings = window.localStorage.getItem("gridOrders1");
        if (savedSettings) {
            grid.setProperties(JSON.parse(savedSettings));
        }
    }
}

```

```

        setMessage('Restored the headerText, template column, and
headerTemplate');
    } else {
        setMessage('No saved settings found.');
```

```
    }
```

```

    return (<div><p id='message'>{message}</p>
        <ButtonComponent onClick={saveBtn}>Save column settings</ButtonComponent>
        <ButtonComponent onClick={restoreBtn}>Restore column
settings</ButtonComponent>
        <GridComponent id='Orders' dataSource={data} allowFiltering={true}
allowPaging={true} enablePersistence={true} height={230}
        ref={g => grid = g}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
            <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
            <ColumnDirective field='ShipCity' headerText='Ship City' width='100'
/>
            <ColumnDirective field='ShipName' headerText='Ship Name' width='100'
/>
        </ColumnsDirective>
        <Inject services={[Filter, Page]} />
        </GridComponent></div>);
};
export default App;
```

APP.TSX

```

import { Column, ColumnDirective, ColumnsDirective, GridComponent } from
'@syncfusion/ej2-react-grids';
import { Filter, Inject, Page } from '@syncfusion/ej2-react-grids';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import React, { useState } from 'react';
import { data } from './datasource';
function App() {
    let grid: GridComponent | null;
    const [message, setMessage] = useState('');
    let persistedGridSettings: object;
    const saveBtn = () => {
        persistedGridSettings = JSON.parse(((grid as
GridComponent)).getPersistData());
        var gridColumns = Object.assign([], ((grid as
GridComponent)).getColumns());
        (persistedGridSettings as any).columns.forEach((persistedColumn: Column)
=> {
            const column = gridColumns.find((col: Column) => col.field ===
persistedColumn.field);
            if (column) {
                persistedColumn.headerText = 'Text Changed';
                persistedColumn.template = (column as Column).template;
                persistedColumn.headerTemplate = (column as Column).headerTemplate;
            }
        });
    });
```

```

    window.localStorage.setItem('gridOrders1',
JSON.stringify(persistedGridSettings));
    (grid as GridComponent).setProperties(persistedGridSettings as object);
    setMessage('Saved the headerText, template column, and headerTemplate
properties in the persisted settings');
  }
  const restoreBtn = () => {
    const savedSettings = window.localStorage.getItem("gridOrders1");
    if (savedSettings) {
      (grid as GridComponent).setProperties(JSON.parse(savedSettings));
      setMessage('Restored the headerText, template column, and
headerTemplate');
    } else {
      setMessage('No saved settings found.');
```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  }
];
```

```

    },
    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
  },

```

```

    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
  ];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),

```

```

        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),

```

```

        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),

```



```

    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
    ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
    Freight: 48.29, Verified: !0
  }];

```

Toolbar in React Grid component

The toolbar in the Syncfusion React Grid component offers several general use cases to enhance data manipulation and overall experience. Actions such as adding, editing, and deleting records within the grid can be performed, providing efficient data manipulation capabilities. The toolbar also facilitates data export and import functionality, allowing you to generate downloadable files in formats like Excel, CSV, or PDF.

To enable the toolbar functionality, you need to inject the **Toolbar** module in the grid. This service provides the necessary methods to interact with the toolbar items. The toolbar can be customized with built-in toolbar items or custom toolbar items using the [toolbar](#) property. The `toolbar` property accepts an array of strings representing the built-in toolbar items or an array of [ItemModel](#) objects for custom toolbar items.

The following example demonstrates how to enable toolbar items in the grid.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Toolbar }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const toolbarOptions = ['Search', 'Print'];
  return (
    <GridComponent dataSource={data} toolbar={toolbarOptions}
    height={270}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID'
        width='100' textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
        width='100' />
        <ColumnDirective field='ShipCity' headerText='Ship City'
        width='100' />
        <ColumnDirective field='ShipName' headerText='Ship Name'
        width='100' />
      </ColumnsDirective>
      <Inject services={[Toolbar]} />
    </GridComponent>);
}
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Toolbar,
ToolbarItems } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const toolbarOptions: ToolbarItems[] = ['Search', 'Print'];

```

```

    return (<GridComponent dataSource={data} toolbar={toolbarOptions}
height={270}>
    <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID'
width='100' textAlign="Right"/>
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
        <ColumnDirective field='ShipCity' headerText='Ship City'
width='100' />
        <ColumnDirective field='ShipName' headerText='Ship Name'
width='100' />
    </ColumnsDirective>
    <Inject services={[ Toolbar ]} />
    </GridComponent>)
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    }
]

```

```

        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),

```

```

        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
        Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',

```

```

        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',

```

```

        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ];

```

Enable or disable toolbar items

Enabling or disabling toolbar items dynamically in Syncfusion React Grid is to provide control over the availability of specific functionality based on application logic. This feature allows you to customize the toolbar based on various conditions or individuals interactions.

You can enable or disable toolbar items dynamically by using the [enableToolbarItems](#) method. This method allows you to control the availability of specific toolbar items based on your application logic.

In the following example, the [EJ2 Toggle Switch Button component](#) is added to enable and disable the toolbar items using [enableToolbarItems](#) method. When the switch is toggled, the [change](#) event is triggered and the toolbar items are updated accordingly.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Group,
Toolbar, GroupSettingsModel, ToolbarItems } from '@syncfusion/ej2-react-
grids';
import * as React from 'react';
import { data } from '../datasource';
import { SwitchComponent } from '@syncfusion/ej2-react-buttons';
function App() {
    let grid;
    const groupSettings = { columns: ['CustomerID'] };
    const toolbar = ['Expand', 'Collapse'];
    const toolbarClick = (args) => {
        if (args.item.id === 'Grid_Collapse') {
            grid.groupModule.collapseAll();
        }
        if (args.item.id === 'Grid_Expand') {
            grid.groupModule.expandAll();
        }
    }
    const onChange = (args) => {
        grid.toolbarModule.enableItems(['Grid_Collapse', 'Grid_Expand'],
args.checked); // Enable or Disable toolbar items.
    }
    return (<div>
        <label style={{ padding: "30px 17px 0 0" }}> Enable or disable
toolbar items </label>
        <SwitchComponent change={onChange}></SwitchComponent>
        <GridComponent id="Grid" dataSource={data} ref={g => grid = g}
allowGrouping={true} groupSettings={groupSettings} toolbar={toolbar}
toolbarClick={toolbarClick}>
            <ColumnsDirective>
                <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign="Right" />
                <ColumnDirective field='CustomerID' headerText='Customer ID'
width='140' />
                <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
                <ColumnDirective field='ShipName' headerText='ShipName'
width='150' />
            </ColumnsDirective>
            <Inject services={[Group, Toolbar]} />
        </GridComponent></div>)
};
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Group,
Toolbar, GroupSettingsModel, ToolbarItems } from '@syncfusion/ej2-react-
grids';
import * as React from 'react';
import { data } from '../datasource';
import { ChangeEventArgs, SwitchComponent } from '@syncfusion/ej2-react-
buttons';
import { ClickEventArgs } from '@syncfusion/ej2-react-navigations';

```

```
function App() {
  let grid: GridComponent | null;
  const groupSettings: GroupSettingsModel = { columns: ['CustomerID'] };
  const toolbar: ToolbarItems[] = ['Expand', 'Collapse'];
  const toolbarClick = (args: ClickEventArgs) => {
    if (args.item.id === 'Grid_Collapse') {
      (grid as GridComponent).groupModule.collapseAll();
    }
    if (args.item.id === 'Grid_Expand') {
      (grid as GridComponent).groupModule.expandAll();
    }
  }
  const onChange = (args: ChangeEventArgs) => {
    (grid as GridComponent).toolbarModule.enableItems(['Grid_Collapse', 'Grid_Expand'], !args.checked); // Enable or Disable toolbar items.
  }
  return (<div>
    <label style={{ padding: "30px 17px 0 0" }}> Enable or disable toolbar items </label>
    <SwitchComponent change={onChange}></SwitchComponent>
    <GridComponent id="Grid" dataSource={data} ref={g => grid = g} allowGrouping={true} groupSettings={groupSettings} toolbar={toolbar} toolbarClick={toolbarClick}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='120' textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID' width='140' />
        <ColumnDirective field='ShipCity' headerText='Ship City' width='150' />
        <ColumnDirective field='ShipName' headerText='ShipName' width='150' />
      </ColumnsDirective>
      <Inject services={[Group, Toolbar]} />
    </GridComponent></div>);
};
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress: 'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  }
];
```



```

    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    },

```

```

    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
  ];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),

```

```

      ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
      ShipAddress: '59 rue de l Abbaye',
      ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
      Freight: 32.38, Verified: !0
    },
    {
      OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
      Date(836505e6),
      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
      'Luisenstr. 48',
      ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
      Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
      Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
      Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),

```

```

        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),

```

```

        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }];

```

Add toolbar at the bottom of grid

By adding the toolbar at the bottom of the Syncfusion React Grid, important actions and functionality remain consistently visible and easily accessible, providing easy access to actions and operations without the need for scrolling.

To add the toolbar at the bottom of the Grid, you can utilize the [created](#) event. By handling this event, you can dynamically insert the toolbar items at the desired position in the grid layout.

The following example shows how to add the toolbar items at the bottom using `created` event of the grid.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject } from
'@syncfusion/ej2-react-grids';
import { Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    let grid;
    const toolbarOptions = ['Print', 'Search'];
    const created = () => {
        let toolbar = grid.element.querySelector('.e-toolbar');
        grid.element.appendChild(toolbar);
    };
    return (
        <div className="control-pane">
            <div className="control-section row">
                <GridComponent id="Grid" dataSource={data.slice(0, 8)} ref={(g) =>
                    (grid = g)} toolbar={toolbarOptions} created={created}>
                    <ColumnsDirective>
                        <ColumnDirective field='OrderID' headerText='Order ID'
                            textAlign="Right" type='number' isPrimaryKey={true} width='120' />
                        <ColumnDirective field='CustomerID' headerText='Customer ID'
                            type='string' width='140' />
                        <ColumnDirective field='Freight' headerText='Freight'
                            textAlign="Right" type='number' format='C2' width='120' />
                        <ColumnDirective field='OrderDate' headerText='Order Date'
                            textAlign="Right" type='date' format='yMd' width='140' />
                    </ColumnsDirective>
                    <Inject services={[Toolbar]} />
                </GridComponent>
            </div>
        </div>);
}
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject } from
 '@syncfusion/ej2-react-grids';
import { Grid, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid: Grid | null;
  const toolbarOptions: string[] = ['Print', 'Search'];
  const created = () => {
    let toolbar = grid?.element?.querySelector('.e-toolbar');
    grid?.element?.appendChild(toolbar);
  }

  return (
    <div className="control-pane">
      <div className="control-section row">
        <GridComponent id="Grid" dataSource={data.slice(0, 8)} ref={g =>
          (grid = g)} toolbar={toolbarOptions} created={created}>
          <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID'
              textAlign="Right" type='number' isPrimaryKey={true} width='120' />
            <ColumnDirective field='CustomerID' headerText='Customer ID'
              type='string' width='140' />
            <ColumnDirective field='Freight' headerText='Freight'
              type='number' format='C2' width='120' />
            <ColumnDirective field='OrderDate' headerText='Order Date'
              type='date' format='yMd' width='140' />
          </ColumnsDirective>
          <Inject services={[ Toolbar ]} />
        </GridComponent>
      </div>
    </div>
  )
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),

```

```

        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),

```

```

      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
      'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
      'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
      Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
      Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
      'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
      Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }
  ]
};

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',

```



```

        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
      },
      {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
      },
      {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',

```

```

    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
    Freight: 48.29, Verified: !0
  }];

```

Customize toolbar buttons using CSS

Customizing toolbar buttons in Syncfusion React Grid using CSS involves modifying the appearance of built-in toolbar buttons by applying CSS styles. This provides a flexible and customizable way to enhance the visual presentation of the toolbar and create a cohesive interface.

The appearance of the built-in toolbar buttons can be modified by applying the following CSS styles.

```

`css
.e-grid .e-toolbar .e-tbar-btn .e-icons,
.e-grid .e-toolbar .e-toolbar-items .e-toolbar-item .e-tbar-btn {
background: #add8e6;
}
`

```

The following example demonstrates how to change the background color of the **Add**, **Edit**, **Delete**, **Update** and **Cancel** toolbar buttons by applying CSS styles

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Edit,
Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const editSettings = { allowAdding: true, allowDeleting: true,
allowEditing: true };
  const toolbar = ['Add', 'Edit', 'Delete', 'Update', 'Cancel'];
  return (<div>
    <GridComponent dataSource={data} editSettings={editSettings}
toolbar={toolbar}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign="Right" isPrimaryKey={true} />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='140' />
        <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
        <ColumnDirective field='ShipName' headerText='ShipName'
width='150' />
      </ColumnsDirective>
      <Inject services={[Edit, Toolbar]} />
    </GridComponent></div>)
};
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Edit,
Toolbar, ToolbarItems, EditSettingsModel } from '@syncfusion/ej2-react-
grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  const editSettings: EditSettingsModel = { allowAdding: true, allowDeleting:
true, allowEditing: true };
  const toolbar: ToolbarItems[] = ['Add', 'Edit', 'Delete', 'Update',
'Cancel'];
  return (<div>
    <GridComponent dataSource={data} editSettings={editSettings}
toolbar={toolbar}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" isPrimaryKey={true} />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='140' />
        <ColumnDirective field='ShipCity' headerText='Ship City' width='150'
/>
        <ColumnDirective field='ShipName' headerText='ShipName' width='150'
/>
      </ColumnsDirective>
      <Inject services={[Edit, Toolbar]} />
    </GridComponent></div>
  );
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {

```

```

    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {

```

```

    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),

```

```

        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),

```

```

        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]];

```


See also

- [Toolbar Component](#)

Pdf export in React Grid component

The PDF export feature in the Syncfusion React Grid allows you to export grid data to a PDF document, providing the ability to generate printable reports or share data in a standardized format.

To enable PDF export in the grid, you need to set the [allowPdfExport](#) property to **true** and use the [pdfExport](#) method for exporting.

To use PDF export, inject the **PdfExport** module in the grid.

The following example demonstrates how to perform a PDF export action in the grid.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Inject, PdfExport, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  const toolbar = ['PdfExport'];
  const toolbarClick = (args) => {
    if (grid && args.item.id === 'Grid_pdfexport') {
      grid.pdfExport();
    }
  }
  return (
    <div>
      <GridComponent id='Grid' dataSource={data} height={270}
        toolbar={toolbar} allowPdfExport={true} toolbarClick={toolbarClick} ref={g =>
        grid = g}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='120'
            textAlign='Right' />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
            width='150' />
          <ColumnDirective field='ShipCity' headerText='Ship City'
            width='150' />
          <ColumnDirective field='ShipName' headerText='Ship Name'
            width='150' />
        </ColumnsDirective>
        <Inject services={[Toolbar, PdfExport]} />
      </GridComponent>
    </div>
  );
}
export default App;
```

APP.TSX

```
import { ClickEventArgs } from '@syncfusion/ej2-navigations';
```

```

import { ColumnDirective, ColumnsDirective, GridComponent, ToolbarItems }
from '@syncfusion/ej2-react-grids';
import { Inject, PdfExport, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid: GridComponent | null;
  const toolbar: ToolbarItems[] = ['PdfExport'];
  const toolbarClick = (args: ClickEventArgs) => {
    if (grid && args.item.id === 'Grid_pdfexport') {
      grid.pdfExport();
    }
  }
  return (
    <div>
      <GridComponent id='Grid' dataSource={data} height={270}
        toolbar={toolbar} allowPdfExport={true} toolbarClick={toolbarClick} ref={g =>
        grid = g}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='120'
            textAlign='Right' />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
            width='150' />
          <ColumnDirective field='ShipCity' headerText='Ship City'
            width='150' />
          <ColumnDirective field='ShipName' headerText='Ship Name'
            width='150' />
        </ColumnsDirective>
        <Inject services={[Toolbar, PdfExport]} />
      </GridComponent>
    </div>
  );
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {

```

```
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
```

```

    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),

```

```

      ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
      ShipAddress: '59 rue de l Abbaye',
      ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
      Freight: 32.38, Verified: !0
    },
    {
      OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
      Date(836505e6),
      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
      'Luisenstr. 48',
      ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
      Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
      Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
      Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),

```

```

      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),

```

```

        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }];

```

Show spinner while exporting

Showing a spinner while exporting in the Syncfusion React Grid enhances the experience by displaying a spinner during the export process. This feature provides a visual indication of the export progress, improving the understanding of the exporting process.

To show or hide a spinner while exporting the grid, you can utilize the [showSpinner](#) and [hideSpinner](#) methods provided by the Grid within the [toolbarClick](#) event.

The `toolbarClick` event is triggered when a toolbar item in the Grid is clicked. Within the event handler, the code checks if the clicked **item** is related with PDF export, specifically the **Grid_pdfexport** item. If a match is found, the `showSpinner` method is used on the Grid instance to display the spinner.

To hide the spinner after the exporting is completed, bind the [pdfExportComplete](#) event and use the `hideSpinner` method on the Grid instance to hide the spinner.

The following example demonstrates how to show and hide the spinner during PDF export in a grid.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject } from
 '@syncfusion/ej2-react-grids';
import { Page, PdfExport, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    let grid;
    const toolbar = ['PdfExport'];
    const toolbarClick = (args) => {
        if (args.item.id === 'Grid_pdfexport') {
            grid.showSpinner();
            grid.pdfExport();
        }
    }
    const pdfExportComplete = () => {
        grid.hideSpinner();
    }
    return (<GridComponent id='Grid' dataSource={data} allowPdfExport={true}
    pdfExportComplete={pdfExportComplete} toolbar={toolbar}
    toolbarClick={toolbarClick}
    ref={g => grid = g}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID' width='100'
            textAlign="Right" isPrimaryKey={true}/>
            <ColumnDirective field='CustomerID' headerText='Customer ID'
            width='120' />
            <ColumnDirective field='ProductName' headerText='ProductName'
            width='120' />
            <ColumnDirective field='Quantity' headerText='Quantity' width='150' />
        </ColumnsDirective>
        <Inject services={[Page, Toolbar, PdfExport]} />
    </GridComponent>

```

```

    </GridComponent>)
  };
  export default App;

```

APP.TSX

```

import { ClickEventArgs } from '@syncfusion/ej2-navigations';
import { ColumnDirective, ColumnsDirective, GridComponent, Inject } from
 '@syncfusion/ej2-react-grids';
import { Page, PdfExport, Toolbar, ToolbarItems } from '@syncfusion/ej2-
react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid: GridComponent | null;
  const toolbar: ToolbarItems[] = ['PdfExport'];
  const toolbarClick = (args: ClickEventArgs) => {
    if (args.item.id === 'Grid_pdfexport') {
      (grid as GridComponent).showSpinner();
      (grid as GridComponent).pdfExport();
    }
  }
  const pdfExportComplete = () => {
    (grid as GridComponent).hideSpinner();
  }
  return (<GridComponent id='Grid' dataSource={data} allowPdfExport={true}
pdfExportComplete={pdfExportComplete} toolbar={toolbar}
toolbarClick={toolbarClick}
ref={g => grid = g}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" isPrimaryKey={true}/>
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='120' />
      <ColumnDirective field='ProductName' headerText='ProductName'
width='120' />
      <ColumnDirective field='Quantity' headerText='Quantity' width='150' />
    </ColumnsDirective>
    <Inject services={[Page, Toolbar, PdfExport]} />
  </GridComponent>)
};
export default App;

```

DATASOURCE.JSX

```

export let data = createLazyLoadData();
function createLazyLoadData() {
  let lazyLoadData = [];
  let customerid = ['VINET', 'TOMSP', 'HANAR', 'VICTE', 'SUPRD', 'HANAR',
'CHOPS', 'RICSU', 'WELLI', 'HILAA', 'ERNSH', 'CENTC',
'OTTIK', 'QUEDE', 'RATTC', 'ERNSH', 'FOLKO', 'BLONP', 'WARTH', 'FRANK',
'GROSR', 'WHITC', 'WARTH', 'SPLIR', 'RATTC', 'QUICK', 'VINET',
'MAGAA', 'TORTU', 'MORGK', 'BERGS', 'LEHMS', 'BERGS', 'ROMEY', 'ROMEY',
'LILAS', 'LEHMS', 'QUICK', 'QUICK', 'RICAR', 'REGGC', 'BSBEV',
'COMMI', 'QUEDE', 'TRADH', 'TORTU', 'RATTC', 'VINET', 'LILAS', 'BLONP',
'HUNGO', 'RICAR', 'MAGAA', 'WANDK', 'SUPRD', 'GODOS', 'TORTU',

```



```
'OLDWO', 'ROMEY', 'LONEP', 'ANATR', 'HUNGO', 'THEBI', 'DUMON', 'WANDK',
'QUICK', 'RATTC', 'ISLAT', 'RATTC', 'LONEP', 'ISLAT', 'TORTU',
'WARTH', 'ISLAT', 'PERIC', 'KOENE', 'SAVEA', 'KOENE', 'BOLID', 'FOLKO',
'FURIB', 'SPLIR', 'LILAS', 'BONAP', 'MEREP', 'WARTH', 'VICTE',
'HUNGO', 'PRINI', 'FRANK', 'OLDWO', 'MEREP', 'BONAP', 'SIMOB', 'FRANK',
'LEHMS', 'WHITC', 'QUICK', 'RATTC', 'FAMIA'];
let product = ['Chai', 'Chang', 'Aniseed Syrup', 'Chef Anton\'s Cajun
Seasoning', 'Chef Anton\'s Gumbo Mix', 'Grandma\'s Boysenberry Spread',
'Uncle Bob\'s Organic Dried Pears', 'Northwoods Cranberry Sauce', 'Mishi
Kobe Niku', 'Ikura', 'Queso Cabrales', 'Queso Manchego La Pastora', 'Konbu',
'Tofu', 'Genen Shouyu', 'Pavlova', 'Alice Mutton', 'Carnarvon Tigers',
'Teatime Chocolate Biscuits', 'Sir Rodney\'s Marmalade', 'Sir Rodney\'s
Scones',
'Gustaf\'s Knäckebröd', 'Tunnbröd', 'Guaraná Fantástica', 'NuNuCa Nuß-
Nougat-Creme', 'Gumbär Gummibärchen', 'Schoggi Schokolade', 'Rössle
Sauerkraut',
'Thüringer Rostbratwurst', 'Nord-Ost Matjeshering', 'Gorgonzola Telino',
'Mascarpone Fabioli', 'Geitost', 'Sasquatch Ale', 'Steeleye Stout', 'Inlagd
Sill',
'Gravad lax', 'Côte de Blaye', 'Chartreuse verte', 'Boston Crab Meat',
'Jack\'s New England Clam Chowder', 'Singaporean Hokkien Fried Mee', 'Ipoh
Coffee',
'Gula Malacca', 'Rogede sild', 'Spegesild', 'Zaanse koeken', 'Chocolade',
'Maxilaku', 'Valkoinen suklaa', 'Manjimup Dried Apples', 'Filo Mix', 'Perth
Pasties',
'Tourtière', 'Pâté chinois', 'Gnocchi di nonna Alice', 'Ravioli Angelo',
'Escargots de Bourgogne', 'Raclette Courdavault', 'Camembert Pierrot', 'Sirop
d\'érable',
'Tarte au sucre', 'Veggie-spread', 'Wimmers gute Semmelknödel', 'Louisiana
Fiery Hot Pepper Sauce', 'Louisiana Hot Spiced Okra', 'Laughing Lumberjack
Lager', 'Scottish Longbreads',
'Gudbrandsdalsost', 'Outback Lager', 'Flotemysost', 'Mozzarella di
Giovanni', 'Röd Kaviar', 'Longlife Tofu', 'Rhönbräu Klosterbier',
'Lakkalikööri', 'Original Frankfurter grüne Soße'];
let customername = ['Maria', 'Ana Trujillo', 'Antonio Moreno', 'Thomas
Hardy', 'Christina Berglund', 'Hanna Moos', 'Frédérique Citeaux', 'Martín
Sommer', 'Laurence Lebihan', 'Elizabeth Lincoln',
'Victoria Ashworth', 'Patricio Simpson', 'Francisco Chang', 'Yang Wang',
'Pedro Afonso', 'Elizabeth Brown', 'Sven Ottlieb', 'Janine Labrune', 'Ann
Devon', 'Roland Mendel', 'Aria Cruz', 'Diego Roel',
'Martine Rancé', 'Maria Larsson', 'Peter Franken', 'Carine Schmitt',
'Paolo Accorti', 'Lino Rodriguez', 'Eduardo Saavedra', 'José Pedro Freyre',
'André Fonseca', 'Howard Snyder', 'Manuel Pereira',
'Mario Pontes', 'Carlos Hernández', 'Yoshi Latimer', 'Patricia McKenna',
'Helen Bennett', 'Philip Cramer', 'Daniel Tonini', 'Annette Roulet', 'Yoshi
Tannamuri', 'John Steel', 'Renate Messner', 'Jaime Yorres',
'Carlos González', 'Felipe Izquierdo', 'Fran Wilson', 'Giovanni Rovelli',
'Catherine Dewey', 'Jean Fresnière', 'Alexander Feuer', 'Simon Crowther',
'Yvonne Moncada', 'Rene Phillips', 'Henriette Pfalzheim',
'Marie Bertrand', 'Guillermo Fernández', 'Georg Pippis', 'Isabel de
Castro', 'Bernardo Batista', 'Lúcia Carvalho', 'Horst Kloss', 'Sergio
Gutiérrez', 'Paula Wilson', 'Maurizio Moroni', 'Janete Limeira', 'Michael
Holz',
'Alejandra Camino', 'Jonas Bergulfsen', 'Jose Pavarotti', 'Hari Kumar',
'Jytte Petersen', 'Dominique Perrier', 'Art Braunschweiger', 'Pascale
Cartrain', 'Liz Nixon', 'Liu Wong', 'Karin Josephs', 'Miguel Angel Paolino',
```

```

    'Anabela Domingues', 'Helvetius Nagy', 'Palle Ibsen', 'Mary Saveley',
    'Paul Henriot', 'Rita Müller', 'Pirkko Koskitalo', 'Paula Parente', 'Karl
    Jablonski', 'Matti Karttunen', 'Zbyszek Piestrzeniewicz'];
    let customeraddress = ['507 - 20th Ave. E.\r\nApt. 2A', '908 W. Capital
    Way', '722 Moss Bay Blvd.', '4110 Old Redmond Rd.', '14 Garrett Hill',
    'Coventry House\r\nMiner Rd.', 'Edgeham Hollow\r\nWinchester Way',
    '4726 - 11th Ave. N.E.', '7 Houndstooth Rd.', '59 rue de l\'Abbaye',
    'Luisenstr. 48', '908 W. Capital Way', '722 Moss Bay Blvd.', '4110 Old
    Redmond Rd.', '14 Garrett Hill', 'Coventry House\r\nMiner Rd.', 'Edgeham
    Hollow\r\nWinchester Way',
    '7 Houndstooth Rd.', '2817 Milton Dr.', 'Kirchgasse 6', 'Sierras de
    Granada 9993', 'Mehrheimerstr. 369', 'Rua da Panificadora, 12', '2817 Milton
    Dr.', 'Mehrheimerstr. 369'];
    let quantityperunit = ['10 boxes x 20 bags', '24 - 12 oz bottles', '12 -
    550 ml bottles', '48 - 6 oz jars', '36 boxes', '12 - 8 oz jars', '12 - 1 lb
    pkgs.', '12 - 12 oz jars', '18 - 500 g pkgs.', '12 - 200 ml jars',
    '1 kg pkg.', '10 - 500 g pkgs.', '2 kg box', '40 - 100 g pkgs.', '24 -
    250 ml bottles', '32 - 500 g boxes', '20 - 1 kg tins', '16 kg pkg.', '10
    boxes x 12 pieces', '30 gift boxes', '24 pkgs. x 4 pieces', '24 - 500 g
    pkgs.', '12 - 250 g pkgs.',
    '12 - 355 ml cans', '20 - 450 g glasses', '100 - 250 g bags'];
    let OrderID = 10248;
    for (let i = 0; i < 20000; i++) {
        lazyLoadData.push({
            'OrderID': OrderID + i,
            'CustomerID': customerid[Math.floor(Math.random() *
customerid.length)],
            'CustomerName': customername[Math.floor(Math.random() *
customername.length)],
            'CustomerAddress': customeraddress[Math.floor(Math.random() *
customeraddress.length)],
            'ProductName': product[Math.floor(Math.random() *
product.length)],
            'ProductID': i,
            'Quantity': quantityperunit[Math.floor(Math.random() *
quantityperunit.length)]
        })
    }
    return lazyLoadData;
}

```

DATASOURCE.TSX

```

export let data: Object[] = createLazyLoadData();
function createLazyLoadData(): Object[] {
    let lazyLoadData: Object[] = [];
    let customerid: string[] = ['VINET', 'TOMSP', 'HANAR', 'VICTE', 'SUPRD',
    'HANAR', 'CHOPS', 'RICSU', 'WELLI', 'HILAA', 'ERNSH', 'CENTC',
    'OTTIK', 'QUEDE', 'RATTC', 'ERNSH', 'FOLKO', 'BLONP', 'WARTH', 'FRANK',
    'GROSR', 'WHITC', 'WARTH', 'SPLIR', 'RATTC', 'QUICK', 'VINET',
    'MAGAA', 'TORTU', 'MORGK', 'BERGS', 'LEHMS', 'BERGS', 'ROMEY', 'ROMEY',
    'LILAS', 'LEHMS', 'QUICK', 'QUICK', 'RICAR', 'REGGC', 'BSBEV',
    'COMMI', 'QUEDE', 'TRADH', 'TORTU', 'RATTC', 'VINET', 'LILAS', 'BLONP',
    'HUNGO', 'RICAR', 'MAGAA', 'WANDK', 'SUPRD', 'GODOS', 'TORTU',
    'OLDWO', 'ROMEY', 'LONEP', 'ANATR', 'HUNGO', 'THEBI', 'DUMON', 'WANDK',
    'QUICK', 'RATTC', 'ISLAT', 'RATTC', 'LONEP', 'ISLAT', 'TORTU',

```

```
'WARTH', 'ISLAT', 'PERIC', 'KOENE', 'SAVEA', 'KOENE', 'BOLID', 'FOLKO',
'FURIB', 'SPLIR', 'LILAS', 'BONAP', 'MEREP', 'WARTH', 'VICTE',
'HUNGO', 'PRINI', 'FRANK', 'OLDWO', 'MEREP', 'BONAP', 'SIMOB', 'FRANK',
'LEHMS', 'WHITC', 'QUICK', 'RATTC', 'FAMIA'];
let product: string[] = ['Chai', 'Chang', 'Aniseed Syrup', 'Chef Anton\'s
Cajun Seasoning', 'Chef Anton\'s Gumbo Mix', 'Grandma\'s Boysenberry Spread',
'Uncle Bob\'s Organic Dried Pears', 'Northwoods Cranberry Sauce', 'Mishi
Kobe Niku', 'Ikura', 'Queso Cabrales', 'Queso Manchego La Pastora', 'Konbu',
'Tofu', 'Genen Shouyu', 'Pavlova', 'Alice Mutton', 'Carnarvon Tigers',
'Teatime Chocolate Biscuits', 'Sir Rodney\'s Marmalade', 'Sir Rodney\'s
Scones',
'Gustaf\'s Knäckebröd', 'Tunnbröd', 'Guaraná Fantástica', 'NuNuCa Nuß-
Nougat-Creme', 'Gumbär Gummibärchen', 'Schoggi Schokolade', 'Rössle
Sauerkraut',
'Thüringer Rostbratwurst', 'Nord-Ost Matjeshering', 'Gorgonzola Telino',
'Mascarpone Fabioli', 'Geitost', 'Sasquatch Ale', 'Steeleye Stout', 'Inlagd
Sill',
'Gravad lax', 'Côte de Blaye', 'Chartreuse verte', 'Boston Crab Meat',
'Jack\'s New England Clam Chowder', 'Singaporean Hokkien Fried Mee', 'Ipoh
Coffee',
'Gula Malacca', 'Rogede sild', 'Spegesild', 'Zaanse koeken', 'Chocolade',
'Maxilaku', 'Valkoinen suklaa', 'Manjimup Dried Apples', 'Filo Mix', 'Perth
Pasties',
'Tourtière', 'Pâté chinois', 'Gnocchi di nonna Alice', 'Ravioli Angelo',
'Escargots de Bourgogne', 'Raclette Courdavault', 'Camembert Pierrot', 'Sirop
d\'érable',
'Tarte au sucre', 'Veggie-spread', 'Wimmers gute Semmelknödel', 'Louisiana
Fiery Hot Pepper Sauce', 'Louisiana Hot Spiced Okra', 'Laughing Lumberjack
Lager', 'Scottish Longbreads',
'Gudbrandsdalsost', 'Outback Lager', 'Flotemysost', 'Mozzarella di
Giovanni', 'Röd Kaviar', 'Longlife Tofu', 'Rhönbräu Klosterbier',
'Lakkalikööri', 'Original Frankfurter grüne Soße'];
let customername: string[] = ['Maria', 'Ana Trujillo', 'Antonio Moreno',
'Thomas Hardy', 'Christina Berglund', 'Hanna Moos', 'Frédérique Citeaux',
'Martín Sommer', 'Laurence Lebihan', 'Elizabeth Lincoln',
'Victoria Ashworth', 'Patricio Simpson', 'Francisco Chang', 'Yang Wang',
'Pedro Afonso', 'Elizabeth Brown', 'Sven Ottlieb', 'Janine Labrune', 'Ann
Devon', 'Roland Mendel', 'Aria Cruz', 'Diego Roel',
'Martine Rancé', 'Maria Larsson', 'Peter Franken', 'Carine Schmitt',
'Paolo Accorti', 'Lino Rodriguez', 'Eduardo Saavedra', 'José Pedro Freyre',
'André Fonseca', 'Howard Snyder', 'Manuel Pereira',
'Mario Pontes', 'Carlos Hernández', 'Yoshi Latimer', 'Patricia McKenna',
'Helen Bennett', 'Philip Cramer', 'Daniel Tonini', 'Annette Roulet', 'Yoshi
Tannamuri', 'John Steel', 'Renate Messner', 'Jaime Yorres',
'Carlos González', 'Felipe Izquierdo', 'Fran Wilson', 'Giovanni Rovelli',
'Catherine Dewey', 'Jean Fresnière', 'Alexander Feuer', 'Simon Crowther',
'Yvonne Moncada', 'Rene Phillips', 'Henriette Pfalzheim',
'Marie Bertrand', 'Guillermo Fernández', 'Georg Pippis', 'Isabel de
Castro', 'Bernardo Batista', 'Lúcia Carvalho', 'Horst Kloss', 'Sergio
Gutiérrez', 'Paula Wilson', 'Maurizio Moroni', 'Janete Limeira', 'Michael
Holz',
'Alejandra Camino', 'Jonas Bergulfsen', 'Jose Pavarotti', 'Hari Kumar',
'Jytte Petersen', 'Dominique Perrier', 'Art Braunschweiger', 'Pascale
Cartrain', 'Liz Nixon', 'Liu Wong', 'Karin Josephs', 'Miguel Angel Paolino',
'Anabela Domingues', 'Helvetius Nagy', 'Palle Ibsen', 'Mary Saveley',
'Paul Henriot', 'Rita Müller', 'Pirkko Koskitalo', 'Paula Parente', 'Karl
Jablonski', 'Matti Karttunen', 'Zbyszek Piestrzeniewicz'];
```

```

    let customeraddress: string[] = ['507 - 20th Ave. E.\r\nApt. 2A', '908 W.
    Capital Way', '722 Moss Bay Blvd.', '4110 Old Redmond Rd.', '14 Garrett
    Hill', 'Coventry House\r\nMiner Rd.', 'Edgeham Hollow\r\nWinchester Way',
    '4726 - 11th Ave. N.E.', '7 Houndstooth Rd.', '59 rue de l\'Abbaye',
    'Luisenstr. 48', '908 W. Capital Way', '722 Moss Bay Blvd.', '4110 Old
    Redmond Rd.', '14 Garrett Hill', 'Coventry House\r\nMiner Rd.', 'Edgeham
    Hollow\r\nWinchester Way',
    '7 Houndstooth Rd.', '2817 Milton Dr.', 'Kirchgasse 6', 'Sierras de
    Granada 9993', 'Mehrheimerstr. 369', 'Rua da Panificadora, 12', '2817 Milton
    Dr.', 'Mehrheimerstr. 369'];
    let quantityperunit: string[] = ['10 boxes x 20 bags', '24 - 12 oz
    bottles', '12 - 550 ml bottles', '48 - 6 oz jars', '36 boxes', '12 - 8 oz
    jars', '12 - 1 lb pkgs.', '12 - 12 oz jars', '18 - 500 g pkgs.', '12 - 200 ml
    jars',
    '1 kg pkg.', '10 - 500 g pkgs.', '2 kg box', '40 - 100 g pkgs.', '24 -
    250 ml bottles', '32 - 500 g boxes', '20 - 1 kg tins', '16 kg pkg.', '10
    boxes x 12 pieces', '30 gift boxes', '24 pkgs. x 4 pieces', '24 - 500 g
    pkgs.', '12 - 250 g pkgs.',
    '12 - 355 ml cans', '20 - 450 g glasses', '100 - 250 g bags'];
    let OrderID: number = 10248;
    for (let i: number = 0; i < 20000; i++) {
        lazyLoadData.push({
            'OrderID': OrderID + i,
            'CustomerID': customerid[Math.floor(Math.random() *
customerid.length)],
            'CustomerName': customername[Math.floor(Math.random() *
customername.length)],
            'CustomerAddress': customeraddress[Math.floor(Math.random() *
customeraddress.length)],
            'ProductName': product[Math.floor(Math.random() *
product.length)],
            'ProductID': i,
            'Quantity': quantityperunit[Math.floor(Math.random() *
quantityperunit.length)]
        })
    }
    return lazyLoadData;
}

```

Binding custom data source while exporting

The Syncfusion React Grid component provides a convenient way to export data to a PDF format. With the PDF export feature, you can define a custom data source while exporting. This allows you to export data that is not necessarily bind to the grid, which can be generated or retrieved based on your application logic.

To export data, you need to define the [dataSource](#) property within the [pdfExportProperties](#) object. This property represents the data source that will be used for the PDF export.

The following example demonstrates how to render custom data source during PDF export. By utilizing the [pdfExport](#) method and passing the [pdfExportProperties](#) object through the grid instance, the grid data will be exported to a PDF using the dynamically defined data source.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Page } from
 '@syncfusion/ej2-react-grids';
import { Inject, PdfExport, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { changedData, data } from './datasource';
function App() {
  let grid;
  const toolbar = ['PdfExport'];
  const toolbarClick = (args) => {
    if (grid && args.item.id === 'Grid_pdfexport') {
      const exportProperties = {
        dataSource: changedData
      };
      grid.pdfExport(exportProperties);
    }
  }
  return (
    <div>
      <GridComponent id='Grid' dataSource={data} toolbar={toolbar}
allowPaging={true} allowPdfExport={true}
        toolbarClick={toolbarClick} ref={g => grid = g}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign='Right' />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
          <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
          <ColumnDirective field='ShipName' headerText='Ship Name'
width='150' />
        </ColumnsDirective>
        <Inject services={[Toolbar, PdfExport, Page]} />
      </GridComponent>
    </div>
  );
}
export default App;

```

APP.TSX

```

import { ClickEventArgs } from '@syncfusion/ej2-navigations';
import { ColumnDirective, ColumnsDirective, GridComponent, Page, ToolbarItems
} from '@syncfusion/ej2-react-grids';
import { Inject, PdfExport, PdfExportProperties, Toolbar } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { changedData, data } from './datasource';
function App() {
  let grid: GridComponent | null;
  const toolbar: ToolbarItems[] = ['PdfExport'];
  const toolbarClick = (args: ClickEventArgs) => {
    if (grid && args.item.id === 'Grid_pdfexport') {
      const exportProperties: PdfExportProperties = {
        dataSource: changedData
      };
      grid.pdfExport(exportProperties);
    }
  }
}

```

```

    }
  }
  return (
    <div>
      <GridComponent id='Grid' dataSource={data} toolbar={toolbar}
allowPaging={true} allowPdfExport={true}
      toolbarClick={toolbarClick} ref={g => grid = g}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign='Right' />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
          <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
          <ColumnDirective field='ShipName' headerText='Ship Name'
width='150' />
        </ColumnsDirective>
        <Inject services={[Toolbar, PdfExport, Page]} />
      </GridComponent>
    </div>
  );
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',

```

```
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
      'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
      Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
      'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
      Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
      'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
      'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
      Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
```

```
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
      Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
      'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
      Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }
  ]];
export let changedData = [
  {
    OrderID: 1001,
    CustomerID: 'John Doe',
    ShipCity: 'New York',
    ShipName: 'John Doe',
  },
  {
    OrderID: 1002,
    CustomerID: 'Jane Smith',
    ShipCity: 'Los Angeles',
    ShipName: 'Jane Smith',
  },
  {
    OrderID: 1003,
    CustomerID: 'Robert Johnson',
    ShipCity: 'Chicago',
    ShipName: 'Robert Johnson',
  },
  {
    OrderID: 1004,
    CustomerID: 'Maria Garcia',
```



```
      ShipCity: 'Houston',
      ShipName: 'Maria Garcia',
    },
    {
      OrderID: 1005,
      CustomerID: 'William Brown',
      ShipCity: 'Miami',
      ShipName: 'William Brown',
    },
    {
      OrderID: 1006,
      CustomerID: 'Linda Wilson',
      ShipCity: 'San Francisco',
      ShipName: 'Linda Wilson',
    },
    {
      OrderID: 1007,
      CustomerID: 'Michael Miller',
      ShipCity: 'Seattle',
      ShipName: 'Michael Miller',
    },
    {
      OrderID: 1008,
      CustomerID: 'Karen Davis',
      ShipCity: 'Boston',
      ShipName: 'Karen Davis',
    },
    {
      OrderID: 1009,
      CustomerID: 'James Anderson',
      ShipCity: 'Dallas',
      ShipName: 'James Anderson',
    },
    {
      OrderID: 1010,
      CustomerID: 'Elizabeth Martinez',
      ShipCity: 'Atlanta',
      ShipName: 'Elizabeth Martinez',
    },
  ],
];
```

DATASOURCE.TSX

```
export let data: object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
```

```
      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
      ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
```

```

      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
      'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
      Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
      'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
      'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
      Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
      Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
      'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
      Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }
  ];
export let changedData: object[] = [
  {
    OrderID: 1001,
    CustomerID: 'John Doe',

```

```
    ShipCity: 'New York',
    ShipName: 'John Doe',
  },
  {
    OrderID: 1002,
    CustomerID: 'Jane Smith',
    ShipCity: 'Los Angeles',
    ShipName: 'Jane Smith',
  },
  {
    OrderID: 1003,
    CustomerID: 'Robert Johnson',
    ShipCity: 'Chicago',
    ShipName: 'Robert Johnson',
  },
  {
    OrderID: 1004,
    CustomerID: 'Maria Garcia',
    ShipCity: 'Houston',
    ShipName: 'Maria Garcia',
  },
  {
    OrderID: 1005,
    CustomerID: 'William Brown',
    ShipCity: 'Miami',
    ShipName: 'William Brown',
  },
  {
    OrderID: 1006,
    CustomerID: 'Linda Wilson',
    ShipCity: 'San Francisco',
    ShipName: 'Linda Wilson',
  },
  {
    OrderID: 1007,
    CustomerID: 'Michael Miller',
    ShipCity: 'Seattle',
    ShipName: 'Michael Miller',
  },
  {
    OrderID: 1008,
    CustomerID: 'Karen Davis',
    ShipCity: 'Boston',
    ShipName: 'Karen Davis',
  },
  {
    OrderID: 1009,
    CustomerID: 'James Anderson',
    ShipCity: 'Dallas',
    ShipName: 'James Anderson',
  },
  {
    OrderID: 1010,
    CustomerID: 'Elizabeth Martinez',
    ShipCity: 'Atlanta',
    ShipName: 'Elizabeth Martinez',
  },
},
```

```
];
```

Make sure to utilize the [field](#) property that you have declared in the grid columns when modifying the data source for exporting.

Exporting with custom aggregate

Custom aggregates in the Syncfusion React Grid involves exporting grid data that includes additional calculated values based on specific requirements. This feature enables you to show the comprehensive view of the data in the exported file by incorporating the specific aggregated information you need for analysis or reporting purposes.

In order to utilize custom aggregation, you need to specify the [type](#) property as **Custom** and provide the custom aggregate function in the [customAggregate](#) property.

Within the **customAggregateFn** function, it takes an input data that contains a result property. The function calculates the count of objects in this data where the **ShipCountry** field value is equal to **Brazil** and returns the count with a descriptive label.

The following example shows how to export the grid with a custom aggregate that shows the calculation of the **Brazil** count of the **ShipCountry** column.

APP.JSX

```
import { ClickEventArgs } from '@syncfusion/ej2-navigations';
import { Aggregate, AggregateColumnDirective, AggregateColumnsDirective,
AggregateDirective, AggregatesDirective, ColumnDirective, ColumnsDirective,
GridComponent, Page, ToolbarItems } from '@syncfusion/ej2-react-grids';
import { Inject, PdfExport, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  let grid;
  const toolbar = ['PdfExport'];
  const toolbarClick = (args) => {
    if (args.item.id === 'Grid_pdfexport') {
      grid.pdfExport();
    }
  }
  const customAggregateFn = (data) => {
    const brazilCount = data.result ? data.result.filter((item) =>
item['ShipCountry'] === 'Brazil').length
: data.filter((item) => item['ShipCountry'] === 'Brazil').length;
    return `Brazil count: ${brazilCount}`;
  }
  const custom = (props) => {
    return (<span>{props.Custom}</span>)
  }
  return (
    <div>
      <GridComponent id='Grid' dataSource={data} toolbar={toolbar}
allowPaging={true} allowPdfExport={true}
      toolbarClick={toolbarClick} ref={g => grid = g}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign='Right' />

```

```

        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
        <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' />
    </ColumnsDirective>
    <AggregatesDirective>
        <AggregateDirective>
            <AggregateColumnsDirective>
                <AggregateColumnDirective columnName="ShipCountry"
type="Custom" customAggregate={customAggregateFn}
footerTemplate={custom}></AggregateColumnDirective>
            </AggregateColumnsDirective>
        </AggregateDirective>
    </AggregatesDirective>
    <Inject services={[Toolbar, PdfExport, Page, Aggregate]} />
</GridComponent>
</div>
);
}
export default App;

```

APP.TSX

```

import { ClickEventArgs } from '@syncfusion/ej2-navigations';
import { Aggregate, AggregateColumnDirective, AggregateColumnsDirective,
AggregateDirective, AggregatesDirective, ColumnDirective, ColumnsDirective,
GridComponent, Page, ToolbarItems } from '@syncfusion/ej2-react-grids';
import { Inject, PdfExport, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
    let grid: GridComponent | null;
    const toolbar: ToolbarItems[] = ['PdfExport'];
    const toolbarClick = (args: ClickEventArgs) => {
        if (args.item.id === 'Grid_pdfexport') {
            (grid as GridComponent).pdfExport();
        }
    }
    const customAggregateFn = (data: { result: { filter: (arg0: (item: { [x:
string]: string; }) => boolean) => { (): any; new(): any; length: any; }; }
filter: (arg0: (item: { [x: string]: string; }) => boolean) => { (): any;
new(): any; length: any; }; }) => {
        const brazilCount = data.result ? data.result.filter((item: { [x:
string]: string }) => item['ShipCountry'] === 'Brazil').length
            : data.filter((item: { [x: string]: string }) => item['ShipCountry']
=== 'Brazil').length;
        return `Brazil count: ${brazilCount}`;
    }
    const custom = (props) => {
        return (<span>{props.Custom}</span>)
    }
    return (
        <div>

```

```

    <GridComponent id='Grid' dataSource={data} toolbar={toolbar}
    allowPaging={true} allowPdfExport={true}
      toolbarClick={toolbarClick} ref={g => grid = g}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='120'
        textAlign='Right' />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
        width='150' />
        <ColumnDirective field='ShipCity' headerText='Ship City'
        width='150' />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
        width='150' />
      </ColumnsDirective>
      <AggregatesDirective>
        <AggregateDirective>
          <AggregateColumnsDirective>
            <AggregateColumnDirective columnName="ShipCountry"
            type="Custom" customAggregate={customAggregateFn}
            footerTemplate={custom}></AggregateColumnDirective>
          </AggregateColumnsDirective>
        </AggregateDirective>
      </AggregatesDirective>
      <Inject services={[Toolbar, PdfExport, Page, Aggregate]} />
    </GridComponent>
  </div>
);
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims', ShipAddress:
    '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },

```

```
{
  OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
  ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
  ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
},
{
  OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
  ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
  ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
},
{
  OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
  ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
  ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
},
{
  OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
  ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
  ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
},
{
  OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
  ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
  ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
},
{
  OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
  ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
  ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
},
{
  OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
  ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
  ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
},
{
```



```

    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua
da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA', Freight:
48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims', ShipAddress:
'59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',

```

```
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
    Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
    Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
```

```

        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua
        da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA', Freight:
        48.29, Verified: !0
    }
    ];

```

Exporting with cell and row spanning

Exporting data from the Syncfusion React Grid with cell and row spanning enables you to maintain cell and row layout in the exported data. This feature is useful when you have merged cells or rows in the Grid and you want to maintain the same structure in the exported file.

To achieve this, you can utilize the [rowSpan](#) and [colSpan](#) properties in the [queryCellInfo](#) event of the Grid. This event allows you to define the span values for specific cells. Additionally, you can customize the appearance of the grid cells during the export using the [pdfQueryCellInfo](#) event of the Grid.

The following example demonstrates how to perform export with cell and row spanning using `queryCellInfo` and `pdfQueryCellInfo` events of the Grid.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Inject, PdfExport, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  const toolbar = ['PdfExport'];
  const toolbarClick = (args) => {
    if (args.item.id === 'Grid_pdfexport') {
      grid.pdfExport();
    }
  }
  const queryCellInfo = (args) => {
    let data = args.data.OrderID;
    switch (data) {
      case 10248:
        if (args.column.field === 'CustomerID') {
          args.rowSpan = 2;
        }
        break;
      case 10250:
        if (args.column.field === 'CustomerID') {
          args.colSpan = 2;
        }
        break;
      case 10252:
        if (args.column.field === 'OrderID') {
          args.rowSpan = 3;
        }
        break;
      case 10256:
        if (args.column.field === 'CustomerID') {
          args.colSpan = 3;
        }
        break;
      case 10261:
        if (args.column.field === 'Freight') {
          args.colSpan = 2;
        }
        break;
    }
  }
}
```

```
}
const pdfQueryCellInfo = (args) => {
  let data = args.data.OrderID;
  switch (data) {
    case 10248:
      if (args.column.field === 'CustomerID') {
        args.cell.rowSpan = 2;
      }
      break;
    case 10250:
      if (args.column.field === 'CustomerID') {
        args.colSpan = 2;
      }
      break;
    case 10252:
      if (args.column.field === 'OrderID') {
        args.cell.rowSpan = 3;
      }
      break;
    case 10256:
      if (args.column.field === 'CustomerID') {
        args.colSpan = 3;
      }
      break;
    case 10261:
      if (args.column.field === 'Freight') {
        args.colSpan = 2;
      }
      break;
  }
};
return (
  <div>
    <GridComponent id='Grid' gridLines='Both' dataSource={data}
      toolbar={toolbar} allowPdfExport={true}
      toolbarClick={toolbarClick} ref={g => grid = g}
      pdfQueryCellInfo={pdfQueryCellInfo} queryCellInfo={queryCellInfo}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='120'
          textAlign='Right' />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
          width='150' />
        <ColumnDirective field='Freight' headerText='Freight' width='150'
        />
        <ColumnDirective field='ShipCity' headerText='Ship City'
          width='150' />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
          width='150' />
      </ColumnsDirective>
      <Inject services={[Toolbar, PdfExport]} />
    </GridComponent>
  </div>
);
}
export default App;
```

APP.TSX

```
import { ClickEventArgs } from '@syncfusion/ej2-navigations';
import { ColumnDirective, ColumnsDirective, GridComponent,
PdfQueryCellInfoEventArgs, QueryCellInfoEventArgs, ToolbarItems } from
 '@syncfusion/ej2-react-grids';
import { Inject, PdfExport, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';

function App() {
    let grid: GridComponent | null;
    const toolbar: ToolbarItems[] = ['PdfExport'];
    const toolbarClick = (args: ClickEventArgs) => {
        if (args.item.id === 'Grid_pdfexport') {
            (grid as GridComponent).pdfExport();
        }
    }
    const queryCellInfo = (args: QueryCellInfoEventArgs) => {
        let data = args.data.OrderID;
        switch (data) {
            case 10248:
                if (args.column.field === 'CustomerID') {
                    args.rowSpan = 2;
                }
                break;
            case 10250:
                if (args.column.field === 'CustomerID') {
                    args.colSpan = 2;
                }
                break;
            case 10252:
                if (args.column.field === 'OrderID') {
                    args.rowSpan = 3;
                }
                break;
            case 10256:
                if (args.column.field === 'CustomerID') {
                    args.colSpan = 3;
                }
                break;
            case 10261:
                if (args.column.field === 'Freight') {
                    args.colSpan = 2;
                }
                break;
        }
    }
    const pdfQueryCellInfo = (args: PdfQueryCellInfoEventArgs) => {
        let data = args.data.OrderID;
        switch (data) {
            case 10248:
                if (args.column.field === 'CustomerID') {
                    args.cell.rowSpan = 2;
                }
                break;
            case 10250:
                if (args.column.field === 'CustomerID') {
```

```

        args.colSpan = 2;
    }
    break;
case 10252:
    if (args.column.field === 'OrderID') {
        args.cell.rowSpan = 3;
    }
    break;
case 10256:
    if (args.column.field === 'CustomerID') {
        args.colSpan = 3;
    }
    break;
case 10261:
    if (args.column.field === 'Freight') {
        args.colSpan = 2;
    }
    break;
}
};
return (
    <div>
        <GridComponent id='Grid' gridLines='Both' dataSource={data}
        toolbar={toolbar} allowPdfExport={true}
        toolbarClick={toolbarClick} ref={g => grid = g}
        pdfQueryCellInfo={pdfQueryCellInfo} queryCellInfo={queryCellInfo}>
            <ColumnsDirective>
                <ColumnDirective field='OrderID' headerText='Order ID' width='120'
                textAlign='Right' />
                <ColumnDirective field='CustomerID' headerText='Customer ID'
                width='150' />
                <ColumnDirective field='Freight' headerText='Freight' width='150'
                />
                <ColumnDirective field='ShipCity' headerText='Ship City'
                width='150' />
                <ColumnDirective field='ShipCountry' headerText='Ship Country'
                width='150' />
            </ColumnsDirective>
            <Inject services={[Toolbar, PdfExport]} />
        </GridComponent>
    </div>
);
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
        Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims', ShipAddress:
        '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },

```

```

{
  OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
  ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
  ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
},
{
  OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
  ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
  ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
},
{
  OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
  ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
  ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
},
{
  OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
  ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
  ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
},
{
  OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
  ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
  ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
},
{
  OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
  ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
  ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
},
{
  OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
  ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
  ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
},
{

```



```

    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua
da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA', Freight:
48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```
export let data: object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims', ShipAddress:
    '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
```

```

    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
    Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
    Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
    Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
    'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
    'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
    Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
    6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
    Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
    Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
    ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
    Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
    Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
    'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
    Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
    Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua
    da Panificadora, 12',

```

```

        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA', Freight:
        48.29, Verified: !0
      }
    ];

```

Exporting with custom date format

The exporting functionality in the Syncfusion React Grid allows you to export grid data, including custom date format. This feature is useful when you need to export grid data with customized date values.

To apply a custom date format to grid columns during the export, you can utilize the [format](#) property. This property allows you to define a custom format using format options.

The following example demonstrates how to export the grid data with custom date format. In this example, the `formatOptions` object is used as the `format` property for the **OrderDate** column. This custom date format displays the date in the format of day-of-the-week, month abbreviation, day, and 2-digit year (e.g., Thu, Jul 4, '96).

APP.JSX

```

import { ClickEventArgs } from '@syncfusion/ej2-navigations';
import { ColumnDirective, ColumnsDirective, GridComponent,
PdfQueryCellInfoEventArgs, QueryCellInfoEventArgs, ToolbarItems } from
 '@syncfusion/ej2-react-grids';
import { Inject, PdfExport, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  const toolbar = ['PdfExport'];
  const formatOptions = { type: 'date', format: "EEE, MMM d, 'yy" };
  const toolbarClick = (args) => {
    if (args.item.id === 'Grid_pdfexport') {
      grid.pdfExport();
    }
  }
  return (
    <div>
      <GridComponent id='Grid' dataSource={data} toolbar={toolbar}
allowPdfExport={true}
        toolbarClick={toolbarClick} ref={g => grid = g} >
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign='Right' />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
          <ColumnDirective field='OrderDate' headerText='OrderDate'
format={formatOptions} width='150' />
          <ColumnDirective field='Freight' headerText='Freight' format='C2'
width='150' />

```

```

        </ColumnsDirective>
        <Inject services={[Toolbar, PdfExport]} />
    </GridComponent>
</div>
);
}
export default App;

```

APP.TSX

```

import { ClickEventArgs } from '@syncfusion/ej2-navigations';
import { ColumnDirective, ColumnsDirective, GridComponent,
PdfQueryCellInfoEventArgs, QueryCellInfoEventArgs, ToolbarItems } from
 '@syncfusion/ej2-react-grids';
import { Inject, PdfExport, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    let grid: GridComponent | null;
    const toolbar: ToolbarItems[] = ['PdfExport'];
    const formatOptions = { type: 'date', format: "EEE, MMM d, 'yy" };
    const toolbarClick = (args: ClickEventArgs) => {
        if (args.item.id === 'Grid_pdfexport') {
            (grid as GridComponent).pdfExport();
        }
    }
    return (
        <div>
            <GridComponent id='Grid' dataSource={data} toolbar={toolbar}
allowPdfExport={true}
            toolbarClick={toolbarClick} ref={g => grid = g} >
                <ColumnsDirective>
                    <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign='Right' />
                    <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
                    <ColumnDirective field='OrderDate' headerText='OrderDate'
format={formatOptions} width='150' />
                    <ColumnDirective field='Freight' headerText='Freight' format='C2'
width='150' />
                </ColumnsDirective>
                <Inject services={[Toolbar, PdfExport]} />
            </GridComponent>
        </div>
    );
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims', ShipAddress:
'59 rue de l Abbaye',
    }
]

```

```
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
    Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
```

```
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
    Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
    Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
    'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
    'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
    Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
    6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
    Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
    Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
    ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
    Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
    Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
    'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
    Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
    Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua
    da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
    Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
    Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
    ShipAddress: '2817 Milton Dr.',
```

```
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA', Freight:
48.29, Verified: !0
  }];
```

DATASOURCE.TSX

```
export let data: object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims', ShipAddress:
'59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
```



```
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
```

```

    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua
da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA', Freight:
48.29, Verified: !0
  }
];

```

Exporting multiple grids

Exporting multiple grids in the Syncfusion React Grid component allows you to export different grids to compare them side by side in external applications on the same or different pages of a PDF file. Each grid is identified by its unique ID. You can specify which grid to export by listing their IDs in the [exportGrids](#) property.

Same page

PDF exporting provides support for exporting multiple grids on the same page. To export the grids on the same page, define [multipleExport.type](#) as **AppendToPage** in [pdfExportProperties](#). It also has an option to provide blank space between the grids. This blank space can be defined by using [multipleExport.blankSpace](#) property.

The following example demonstrates how to export multiple grids to the same page in a PDF file when a toolbar item is clicked.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
'@syncfusion/ej2-react-grids';
import { Inject, PdfExport, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data, employeeData } from './datasource';
function App() {
  const toolbar = ['PdfExport'];
  const gridsToExport = ['FirstGrid', 'SecondGrid'];
  let firstGrid;
  let secondGrid;
  const toolbarClick = (args) => {
    if (firstGrid && args.item.id === 'FirstGrid_pdfexport') {
      const appendPdfExportProperties = {
        multipleExport: { type: "AppendToPage", blankSpace: 10 }
      };
      firstGrid.pdfExport(appendPdfExportProperties, true);
    }
  };
  return (
    <div>
      <div><b>First Grid:</b></div>

```

```

    <GridComponent id='FirstGrid' dataSource={data} toolbar={toolbar}
    allowPdfExport={true} toolbarClick={toolbarClick} exportGrids={gridstoExport}
    ref={g => firstGrid = g}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign='Right' />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
        <ColumnDirective field='ShipName' headerText='Ship Name'
width='150' />
        <ColumnDirective field='ShipCountry' headerText='Ship
Country' width='150' />
      </ColumnsDirective>
      <Inject services={[Toolbar, PdfExport]} />
    </GridComponent>
    <div><b>Second Grid:</b></div>
    <GridComponent id='SecondGrid' dataSource={employeeData}
    allowPdfExport={true} ref={g => secondGrid = g}>
      <ColumnsDirective>
        <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='120' textAlign="Right" />
        <ColumnDirective field='FirstName' headerText='First Name'
width='120' />
        <ColumnDirective field='LastName' headerText='Last Name'
width='120' />
        <ColumnDirective field='City' headerText='City' width='150' />
      </ColumnsDirective>
      <Inject services={[PdfExport]} />
    </GridComponent>
  </div>;
}
export default App;

```

APP.TSX

```

import { ClickEventArgs } from '@syncfusion/ej2-navigations';
import { ColumnDirective, ColumnsDirective, GridComponent, ToolbarItems,
PdfExportProperties } from '@syncfusion/ej2-react-grids';
import { Grid, Inject, PdfExport, Toolbar } from '@syncfusion/ej2-react-
grids';
import * as React from 'react';
import { data, employeeData } from './datasource';
function App() {
  const toolbar: ToolbarItems[] = ['PdfExport'];
  const gridsToExport: string[] = ['FirstGrid', 'SecondGrid'];
  let firstGrid: Grid | null;
  let secondGrid: Grid | null;
  const toolbarClick = (args: ClickEventArgs) => {
    if (firstGrid && args.item.id === 'FirstGrid_pdfexport') {
      const appendPdfExportProperties: PdfExportProperties = {
        multipleExport: { type: "AppendToPage", blankSpace: 10 }
      };
      firstGrid.pdfExport(appendPdfExportProperties, true);
    }
  }
  return (

```

```

<div>
  <div><b>First Grid:</b></div>
  <GridComponent id='FirstGrid' dataSource={data} toolbar={toolbar}
    allowPdfExport={true} toolbarClick={toolbarClick}
exportGrids={gridsToExport}
    ref={g => firstGrid = g}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign='Right' />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
      <ColumnDirective field='ShipName' headerText='Ship Name'
width='150' />
      <ColumnDirective field='ShipCountry' headerText='Ship
Country' width='150' />
    </ColumnsDirective>
    <Inject services={[Toolbar, PdfExport]} />
  </GridComponent>
  <div><b>Second Grid:</b></div>
  <GridComponent id='SecondGrid' dataSource={employeeData}
allowPdfExport={true}
    ref={g => secondGrid = g}>
    <ColumnsDirective>
      <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='120' textAlign="Right" />
      <ColumnDirective field='FirstName' headerText='First Name'
width='120' />
      <ColumnDirective field='LastName' headerText='Last Name'
width='120' />
      <ColumnDirective field='City' headerText='City' width='150' />
    </ColumnsDirective>
    <Inject services={[PdfExport]} />
  </GridComponent>
</div>
);
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  }
]

```

```

    },
    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
  ],
};
export let employeeData = [{
  'EmployeeID': 1,
  'LastName': 'Davolio',
  'FirstName': 'Nancy',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-664743600000),
  'HireDate': new Date(704692800000),
  'Address': '507 - 20th Ave. E.\r\nApt. 2A',
  'City': 'Seattle',
  'Region': 'WA',
  'PostalCode': '98122',
  'Country': 'USA',
  'HomePhone': '(206) 555-9857',
  'Extension': '5467',
  'Photo': { 'Length': 21626 },
  'Notes': 'Education includes a BA in psychology from Colorado State
University in 1970. She also completed\
\'The Art of the Cold Call.\' Nancy is a member of Toastmasters
International.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
  'EmployeeID': 2,
  'LastName': 'Fuller',
  'FirstName': 'Andrew',
  'Title': 'Vice President, Sales',
  'TitleOfCourtesy': 'Dr.',
  'BirthDate': new Date(-563828400000),
  'HireDate': new Date(713764800000),
  'Address': '908 W. Capital Way',

```

```

    'City': 'Tacoma',
    'Region': 'WA',
    'PostalCode': '98401',
    'Country': 'USA',
    'HomePhone': '(206) 555-9482',
    'Extension': '3457',
    'Photo': { 'Length': 21626 },
    'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
    Dallas in 1981. He is fluent in French and Italian and reads German. He
joined the company as a sales representative, \
    was promoted to sales manager in January 1992 and to vice president of
sales in March 1993. Andrew is a member of the \
    Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.',
    'ReportsTo': 0,
    'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
  },
  {
    'EmployeeID': 3,
    'LastName': 'Leverling',
    'FirstName': 'Janet',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-200088000000),
    'HireDate': new Date(702104400000),
    'Address': '722 Moss Bay Blvd.',
    'City': 'Kirkland',
    'Region': 'WA',
    'PostalCode': '98033',
    'Country': 'USA',
    'HomePhone': '(206) 555-3412',
    'Extension': '3355',
    'Photo': { 'Length': 21722 },
    'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
\
    She has also completed a certificate program in food retailing
management.\
    Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
  },
  {
    'EmployeeID': 4,
    'LastName': 'Peacock',
    'FirstName': 'Margaret',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mrs.',
    'BirthDate': new Date(-1018814400000),
    'HireDate': new Date(736401600000),
    'Address': '4110 Old Redmond Rd.',
    'City': 'Redmond',
    'Region': 'WA',
    'PostalCode': '98052',
    'Country': 'USA',
    'HomePhone': '(206) 555-8122',

```

```

      'Extension': '5176',
      'Photo': { 'Length': 21626 },
      'Notes': 'Margaret holds a BA in English literature from Concordia
College (1958) and an MA from the American \
Institute of Culinary Arts (1966). She was assigned to the London office
temporarily from July through November 1992.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
    },
    {
      'EmployeeID': 5,
      'LastName': 'Buchanan',
      'FirstName': 'Steven',
      'Title': 'Sales Manager',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-468010800000),
      'HireDate': new Date(750830400000),
      'Address': '14 Garrett Hill',
      'City': 'London',
      'Region': null,
      'PostalCode':
      'SW1 8JR',
      'Country': 'UK',
      'HomePhone': '(71) 555-4848',
      'Extension': '3453',
      'Photo': { 'Length': 21626 },
      'Notes': 'Steven Buchanan graduated from St. Andrews University,
Scotland, with a BSC degree in 1976. Upon joining the company as \
a sales representative in 1992, he spent 6 months in an orientation
program at the Seattle office and then returned to his permanent \
post in London. He was promoted to sales manager in March 1993. Mr.
Buchanan has completed the courses \'Successful \
Telemarketing\' and \'International Sales Management.\' He is fluent in
French.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
    },
  ],
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  }
];

```

```

    },
    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
  ],
};
export let employeeData: Object[] = [{
  'EmployeeID': 1,
  'LastName': 'Davolio',
  'FirstName': 'Nancy',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-664743600000),
  'HireDate': new Date(704692800000),
  'Address': '507 - 20th Ave. E.\r\nApt. 2A',
  'City': 'Seattle',
  'Region': 'WA',
  'PostalCode': '98122',
  'Country': 'USA',
  'HomePhone': '(206) 555-9857',
  'Extension': '5467',
  'Photo': { 'Length': 21626 },
  'Notes': 'Education includes a BA in psychology from Colorado State
University in 1970. She also completed\
\'The Art of the Cold Call.\' Nancy is a member of Toastmasters
International.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
  'EmployeeID': 2,
  'LastName': 'Fuller',
  'FirstName': 'Andrew',
  'Title': 'Vice President, Sales',
  'TitleOfCourtesy': 'Dr.',
  'BirthDate': new Date(-563828400000),
  'HireDate': new Date(713764800000),
  'Address': '908 W. Capital Way',

```



```

    'City': 'Tacoma',
    'Region': 'WA',
    'PostalCode': '98401',
    'Country': 'USA',
    'HomePhone': '(206) 555-9482',
    'Extension': '3457',
    'Photo': { 'Length': 21626 },
    'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
Dallas in 1981. He is fluent in French and Italian and reads German. He
joined the company as a sales representative, \
was promoted to sales manager in January 1992 and to vice president of
sales in March 1993. Andrew is a member of the \
Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.',
    'ReportsTo': 0,
    'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
  },
  {
    'EmployeeID': 3,
    'LastName': 'Leverling',
    'FirstName': 'Janet',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-200088000000),
    'HireDate': new Date(702104400000),
    'Address': '722 Moss Bay Blvd.',
    'City': 'Kirkland',
    'Region': 'WA',
    'PostalCode': '98033',
    'Country': 'USA',
    'HomePhone': '(206) 555-3412',
    'Extension': '3355',
    'Photo': { 'Length': 21722 },
    'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
\
She has also completed a certificate program in food retailing
management.\
Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
  },
  {
    'EmployeeID': 4,
    'LastName': 'Peacock',
    'FirstName': 'Margaret',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mrs.',
    'BirthDate': new Date(-1018814400000),
    'HireDate': new Date(736401600000),
    'Address': '4110 Old Redmond Rd.',
    'City': 'Redmond',
    'Region': 'WA',
    'PostalCode': '98052',
    'Country': 'USA',
    'HomePhone': '(206) 555-8122',

```

```

      'Extension': '5176',
      'Photo': { 'Length': 21626 },
      'Notes': 'Margaret holds a BA in English literature from Concordia
College (1958) and an MA from the American \
Institute of Culinary Arts (1966). She was assigned to the London office
temporarily from July through November 1992.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
    },
    {
      'EmployeeID': 5,
      'LastName': 'Buchanan',
      'FirstName': 'Steven',
      'Title': 'Sales Manager',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-468010800000),
      'HireDate': new Date(750830400000),
      'Address': '14 Garrett Hill',
      'City': 'London',
      'Region': null,
      'PostalCode':
      'SW1 8JR',
      'Country': 'UK',
      'HomePhone': '(71) 555-4848',
      'Extension': '3453',
      'Photo': { 'Length': 21626 },
      'Notes': 'Steven Buchanan graduated from St. Andrews University,
Scotland, with a BSC degree in 1976. Upon joining the company as \
a sales representative in 1992, he spent 6 months in an orientation
program at the Seattle office and then returned to his permanent \
post in London. He was promoted to sales manager in March 1993. Mr.
Buchanan has completed the courses \'Successful \
Telemarketing\' and \'International Sales Management.\' He is fluent in
French.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
    },
  ],
];

```

New page

PDF export functionality enables the exporting of multiple grids into separate pages (each grid on a new page) within the PDF file.

To achieve this, you can follow these steps:

1. Access the [pdfExportProperties](#) of the Grid component.
2. Set the [multipleExport.type](#) property to **NewPage**.
3. Trigger the PDF export operation.

The following example demonstrates how to export multiple grids to a PDF file when a toolbar item is clicked.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
'@syncfusion/ej2-react-grids';

```

```

import { Inject, PdfExport, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data, employeeData } from './datasource';
function App() {
  const toolbar = ['PdfExport'];
  const gridsToExport = ['FirstGrid', 'SecondGrid'];
  let firstGrid;
  let secondGrid;
  const toolbarClick = (args) => {
    if (firstGrid && args.item.id === 'FirstGrid_pdfexport') {
      const appendPdfExportProperties = {
        multipleExport: { type: 'NewPage' }
      };
      firstGrid.pdfExport(appendPdfExportProperties, true);
    }
  };
  return (
    <div>
      <div><b>First Grid:</b></div>
      <GridComponent id='FirstGrid' dataSource={data} toolbar={toolbar}
        allowPdfExport={true} toolbarClick={toolbarClick} exportGrids={gridsToExport}
        ref={g => firstGrid = g}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID'
            width='120' textAlign='Right' />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
            width='150' />
          <ColumnDirective field='ShipName' headerText='Ship Name'
            width='150' />
          <ColumnDirective field='ShipCountry' headerText='Ship
            Country' width='150' />
        </ColumnsDirective>
        <Inject services={[Toolbar, PdfExport]} />
      </GridComponent>
      <div><b>Second Grid:</b></div>
      <GridComponent id='SecondGrid' dataSource={employeeData}
        allowPdfExport={true} ref={g => secondGrid = g}>
        <ColumnsDirective>
          <ColumnDirective field='EmployeeID' headerText='Employee ID'
            width='120' textAlign="Right" />
          <ColumnDirective field='FirstName' headerText='First Name'
            width='120' />
          <ColumnDirective field='LastName' headerText='Last Name'
            width='120' />
          <ColumnDirective field='City' headerText='City' width='150' />
        </ColumnsDirective>
        <Inject services={[PdfExport]} />
      </GridComponent>
    </div>
  );
}
export default App;

```

APP.TSX

```

import { ClickEventArgs } from '@syncfusion/ej2-navigations';
import { ColumnDirective, ColumnsDirective, GridComponent, ToolbarItems,
  PdfExportProperties } from '@syncfusion/ej2-react-grids';

```

```

import { Grid, Inject, PdfExport, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data, employeeData } from '../datasource';
function App() {
  const toolbar: ToolbarItems[] = ['PdfExport'];
  const gridsToExport: string[] = ['FirstGrid', 'SecondGrid'];
  let firstGrid: Grid | null;
  let secondGrid: Grid | null;
  const toolbarClick = (args: ClickEventArgs) => {
    if (firstGrid && args.item.id === 'FirstGrid_pdfexport') {
      const appendPdfExportProperties: PdfExportProperties = {
        multipleExport: { type: 'NewPage' }
      };
      firstGrid.pdfExport(appendPdfExportProperties, true);
    }
  }
  return (
    <div>
      <div><b>First Grid:</b></div>
      <GridComponent id='FirstGrid' dataSource={data} toolbar={toolbar}
        allowPdfExport={true} toolbarClick={toolbarClick}
        exportGrids={gridsToExport}
        ref={g => firstGrid = g}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign='Right' />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
          <ColumnDirective field='ShipName' headerText='Ship Name'
width='150' />
          <ColumnDirective field='ShipCountry' headerText='Ship
Country' width='150' />
        </ColumnsDirective>
        <Inject services={[Toolbar, PdfExport]} />
      </GridComponent>
      <div><b>Second Grid:</b></div>
      <GridComponent id='SecondGrid' dataSource={employeeData}
        allowPdfExport={true}
        ref={g => secondGrid = g}>
        <ColumnsDirective>
          <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='120' textAlign="Right" />
          <ColumnDirective field='FirstName' headerText='First Name'
width='120' />
          <ColumnDirective field='LastName' headerText='Last Name'
width='120' />
          <ColumnDirective field='City' headerText='City' width='150' />
        </ColumnsDirective>
        <Inject services={[PdfExport]} />
      </GridComponent>
    </div>
  );
}
export default App;

```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
];
export let employeeData = [{
  'EmployeeID': 1,
  'LastName': 'Davolio',
  'FirstName': 'Nancy',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-664743600000),
  'HireDate': new Date(704692800000),
  'Address': '507 - 20th Ave. E.\r\nApt. 2A',
  'City': 'Seattle',
  'Region': 'WA',
  'PostalCode': '98122',
  'Country': 'USA',
  'HomePhone': '(206) 555-9857',
```

```

      'Extension': '5467',
      'Photo': { 'Length': 21626 },
      'Notes': 'Education includes a BA in psychology from Colorado State
University in 1970. She also completed\
      \'The Art of the Cold Call.\' Nancy is a member of Toastmasters
International.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 2,
      'LastName': 'Fuller',
      'FirstName': 'Andrew',
      'Title': 'Vice President, Sales',
      'TitleOfCourtesy': 'Dr.',
      'BirthDate': new Date(-563828400000),
      'HireDate': new Date(713764800000),
      'Address': '908 W. Capital Way',
      'City': 'Tacoma',
      'Region': 'WA',
      'PostalCode': '98401',
      'Country': 'USA',
      'HomePhone': '(206) 555-9482',
      'Extension': '3457',
      'Photo': { 'Length': 21626 },
      'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
      Dallas in 1981. He is fluent in French and Italian and reads German. He
joined the company as a sales representative, \
      was promoted to sales manager in January 1992 and to vice president of
sales in March 1993. Andrew is a member of the \
      Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.',
      'ReportsTo': 0,
      'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
    },
    {
      'EmployeeID': 3,
      'LastName': 'Leverling',
      'FirstName': 'Janet',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-200088000000),
      'HireDate': new Date(702104400000),
      'Address': '722 Moss Bay Blvd.',
      'City': 'Kirkland',
      'Region': 'WA',
      'PostalCode': '98033',
      'Country': 'USA',
      'HomePhone': '(206) 555-3412',
      'Extension': '3355',
      'Photo': { 'Length': 21722 },
      'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
\
      She has also completed a certificate program in food retailing
management.\

```

```

    Janet was hired as a sales associate in 1991 and promoted to sales
    representative in February 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
  },
  {
    'EmployeeID': 4,
    'LastName': 'Peacock',
    'FirstName': 'Margaret',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mrs.',
    'BirthDate': new Date(-1018814400000),
    'HireDate': new Date(736401600000),
    'Address': '4110 Old Redmond Rd.',
    'City': 'Redmond',
    'Region': 'WA',
    'PostalCode': '98052',
    'Country': 'USA',
    'HomePhone': '(206) 555-8122',
    'Extension': '5176',
    'Photo': { 'Length': 21626 },
    'Notes': 'Margaret holds a BA in English literature from Concordia
    College (1958) and an MA from the American \
    Institute of Culinary Arts (1966). She was assigned to the London office
    temporarily from July through November 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
  },
  {
    'EmployeeID': 5,
    'LastName': 'Buchanan',
    'FirstName': 'Steven',
    'Title': 'Sales Manager',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-468010800000),
    'HireDate': new Date(750830400000),
    'Address': '14 Garrett Hill',
    'City': 'London',
    'Region': null,
    'PostalCode':
    'SW1 8JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-4848',
    'Extension': '3453',
    'Photo': { 'Length': 21626 },
    'Notes': 'Steven Buchanan graduated from St. Andrews University,
    Scotland, with a BSC degree in 1976. Upon joining the company as \
    a sales representative in 1992, he spent 6 months in an orientation
    program at the Seattle office and then returned to his permanent \
    post in London. He was promoted to sales manager in March 1993. Mr.
    Buchanan has completed the courses \'Successful \
    Telemarketing\' and \'International Sales Management.\' He is fluent in
    French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
  },
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
];
export let employeeData: Object[] = [{
  'EmployeeID': 1,
  'LastName': 'Davolio',
  'FirstName': 'Nancy',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-664743600000),
  'HireDate': new Date(704692800000),
  'Address': '507 - 20th Ave. E.\r\nApt. 2A',
  'City': 'Seattle',
  'Region': 'WA',
  'PostalCode': '98122',

```



```

    'Country': 'USA',
    'HomePhone': '(206) 555-9857',
    'Extension': '5467',
    'Photo': { 'Length': 21626 },
    'Notes': 'Education includes a BA in psychology from Colorado State
University in 1970. She also completed\
    \'The Art of the Cold Call.\' Nancy is a member of Toastmasters
International.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 2,
    'LastName': 'Fuller',
    'FirstName': 'Andrew',
    'Title': 'Vice President, Sales',
    'TitleOfCourtesy': 'Dr.',
    'BirthDate': new Date(-563828400000),
    'HireDate': new Date(713764800000),
    'Address': '908 W. Capital Way',
    'City': 'Tacoma',
    'Region': 'WA',
    'PostalCode': '98401',
    'Country': 'USA',
    'HomePhone': '(206) 555-9482',
    'Extension': '3457',
    'Photo': { 'Length': 21626 },
    'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
    Dallas in 1981. He is fluent in French and Italian and reads German. He
joined the company as a sales representative, \
    was promoted to sales manager in January 1992 and to vice president of
sales in March 1993. Andrew is a member of the \
    Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.',
    'ReportsTo': 0,
    'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
  },
  {
    'EmployeeID': 3,
    'LastName': 'Leverling',
    'FirstName': 'Janet',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-200088000000),
    'HireDate': new Date(702104400000),
    'Address': '722 Moss Bay Blvd.',
    'City': 'Kirkland',
    'Region': 'WA',
    'PostalCode': '98033',
    'Country': 'USA',
    'HomePhone': '(206) 555-3412',
    'Extension': '3355',
    'Photo': { 'Length': 21722 },
    'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
\

```

```

    She has also completed a certificate program in food retailing
    management.\
    Janet was hired as a sales associate in 1991 and promoted to sales
    representative in February 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
  },
  {
    'EmployeeID': 4,
    'LastName': 'Peacock',
    'FirstName': 'Margaret',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mrs.',
    'BirthDate': new Date(-1018814400000),
    'HireDate': new Date(736401600000),
    'Address': '4110 Old Redmond Rd.',
    'City': 'Redmond',
    'Region': 'WA',
    'PostalCode': '98052',
    'Country': 'USA',
    'HomePhone': '(206) 555-8122',
    'Extension': '5176',
    'Photo': { 'Length': 21626 },
    'Notes': 'Margaret holds a BA in English literature from Concordia
    College (1958) and an MA from the American \
    Institute of Culinary Arts (1966). She was assigned to the London office
    temporarily from July through November 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
  },
  {
    'EmployeeID': 5,
    'LastName': 'Buchanan',
    'FirstName': 'Steven',
    'Title': 'Sales Manager',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-468010800000),
    'HireDate': new Date(750830400000),
    'Address': '14 Garrett Hill',
    'City': 'London',
    'Region': null,
    'PostalCode':
    'SW1 8JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-4848',
    'Extension': '3453',
    'Photo': { 'Length': 21626 },
    'Notes': 'Steven Buchanan graduated from St. Andrews University,
    Scotland, with a BSC degree in 1976. Upon joining the company as \
    a sales representative in 1992, he spent 6 months in an orientation
    program at the Seattle office and then returned to his permanent \
    post in London. He was promoted to sales manager in March 1993. Mr.
    Buchanan has completed the courses \'Successful \
    Telemarketing\' and \'International Sales Management.\' He is fluent in
    French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
  }

```

```
}, ],;
```

Limitations

- Multiple grids exporting feature is not supported with server side exporting.

Exporting hierarchy grid

Exporting a hierarchy grid in the Syncfusion React Grid component allows you to generate a PDF document that includes the master grid along with its child grids. This feature is useful when you need to export hierarchical data with its related details.

To achieve this, you can customize the exporting behavior by using the `pdfExportProperties.hierarchyExportMode` property of the Grid.

The `hierarchyExportMode` property allows you to specify the exporting behavior for the hierarchy grid. The following options are available:

Mode	Behavior
Expanded	Exports the master grid with expanded child grids.
All	Exports the master grid with all child grids, expanded or not.
None	Exports only the master grid without any child grids.

The following example demonstrates how to export hierarchical grid to PDF document. Also change the `pdfExportProperties.hierarchyExportMode` property by using `value` property of the `DropDownList` component.

APP.JSX

```
import { ClickEventArgs } from '@syncfusion/ej2-navigations';
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { ColumnDirective, ColumnsDirective, DetailRow, GridComponent,
  ToolbarItems } from '@syncfusion/ej2-react-grids';
import { GridModel, Inject, PdfExport, PdfExportProperties, Toolbar } from
  '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data, employeeData } from './datasource';
function App() {
  let grid;
  let dropDown;
  const toolbar = ['PdfExport'];
  const ddlData = [
    { text: 'Expanded', value: 'Expanded' },
    { text: 'All', value: 'All' },
    { text: 'None', value: 'None' },
  ];
  const childGridOptions = {
    columns: [
      { field: 'OrderID', headerText: 'Order ID', textAlign: 'Right',
width: 120 },
      { field: 'CustomerID', headerText: 'Customer ID', width: 150 },
      { field: 'ShipCity', headerText: 'Ship City', width: 150 },
```

```

        { field: 'ShipName', headerText: 'Ship Name', width: 150 }
    ],
    dataSource: data,
    queryString: 'EmployeeID'
  });
  const toolbarClick = (args) => {
    if (args.item.id === 'Grid_pdfexport') {
      const exportProperties = {
        hierarchyExportMode: dropDown.value
      };
      grid.pdfExport(exportProperties);
    }
  }
  return (
    <div>
      <label style={{ padding: "10px 10px 26px 0" }}> Change the
      hierarchy export mode: </label>
      <DropDownListComponent ref={d => dropDown = d} index={0}
      width={200} dataSource={ddlData}></DropDownListComponent>
      <GridComponent id='Grid' dataSource={employeeData}
      toolbar={toolbar} allowPdfExport={true}
      toolbarClick={toolbarClick} ref={g => grid = g}
      childGrid={childGridOptions}>
        <ColumnsDirective>
          <ColumnDirective field='EmployeeID' headerText='Employee
          ID' width='120' textAlign="Right" />
          <ColumnDirective field='FirstName' headerText='First
          Name' width='150' />
          <ColumnDirective field='City' headerText='City'
          width='150' />
          <ColumnDirective field='Country' headerText='Country'
          width='150' />
        </ColumnsDirective>
        <Inject services={[DetailRow, Toolbar, PdfExport]} />
      </GridComponent>
    </div>
  );
}
export default App;

```

APP.TSX

```

import { ClickEventArgs } from '@syncfusion/ej2-navigations';
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { ColumnDirective, ColumnsDirective, DetailRow, GridComponent,
ToolbarItems } from '@syncfusion/ej2-react-grids';
import { GridModel, Inject, PdfExport, PdfExportProperties, Toolbar } from
'@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data, employeeData } from '../datasource';
function App() {
  let grid: GridComponent | null;
  let dropDown: DropDownListComponent | null;
  const toolbar: ToolbarItems[] = ['PdfExport'];
  const ddlData: { [key: string]: Object; }[] = [
    { text: 'Expanded', value: 'Expanded' },
  ];

```

```

    { text: 'All', value: 'All' },
    { text: 'None', value: 'None' },
  ];
  const childGridOptions: GridModel = {
    columns: [
      { field: 'OrderID', headerText: 'Order ID', textAlign: 'Right', width:
120 },
      { field: 'CustomerID', headerText: 'Customer ID', width: 150 },
      { field: 'ShipCity', headerText: 'Ship City', width: 150 },
      { field: 'ShipName', headerText: 'Ship Name', width: 150 }
    ],
    dataSource: data,
    queryString: 'EmployeeID'
  };
  const toolbarClick = (args: ClickEventArgs) => {
    if (args.item.id === 'Grid_pdfexport') {
      const exportProperties: PdfExportProperties = {
        hierarchyExportMode: (dropDown as DropDownListComponent).value
      };
      (grid as GridComponent).pdfExport(exportProperties);
    }
  }
  return (
    <div>
      <label style={{ padding: "10px 10px 26px 0" }}> Change the hierarchy
export mode: </label>
      <DropDownListComponent ref={d => dropDown = d} index={0} width={200}
dataSource={ddlData}></DropDownListComponent>
      <GridComponent id='Grid' dataSource={employeeData} toolbar={toolbar}
allowPdfExport={true}
        toolbarClick={toolbarClick} ref={g => grid = g}
childGrid={childGridOptions}>
        <ColumnsDirective>
          <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='120' textAlign="Right" />
          <ColumnDirective field='FirstName' headerText='First Name'
width='150' />
          <ColumnDirective field='City' headerText='City' width='150' />
          <ColumnDirective field='Country' headerText='Country' width='150'
/>>
        </ColumnsDirective>
        <Inject services={[DetailRow, Toolbar, PdfExport]} />
      </GridComponent>
    </div>
  );
}
export default App;

```

DATASOURCE.JSX

```

export let employeeData = [{
  'EmployeeID': 1,
  'LastName': 'Davolio',
  'FirstName': 'Nancy',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',

```

```

      'BirthDate': new Date(-664743600000),
      'HireDate': new Date(704692800000),
      'Address': '507 - 20th Ave. E.\r\nApt. 2A',
      'City': 'Seattle',
      'Region': 'WA',
      'PostalCode': '98122',
      'Country': 'USA',
      'HomePhone': '(206) 555-9857',
      'Extension': '5467',
      'Photo': { 'Length': 21626 },
      'Notes': 'Education includes a BA in psychology from Colorado State
University in 1970. She also completed\
\'The Art of the Cold Call.\' Nancy is a member of Toastmasters
International.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 2,
      'LastName': 'Fuller',
      'FirstName': 'Andrew',
      'Title': 'Vice President, Sales',
      'TitleOfCourtesy': 'Dr.',
      'BirthDate': new Date(-563828400000),
      'HireDate': new Date(713764800000),
      'Address': '908 W. Capital Way',
      'City': 'Tacoma',
      'Region': 'WA',
      'PostalCode': '98401',
      'Country': 'USA',
      'HomePhone': '(206) 555-9482',
      'Extension': '3457',
      'Photo': { 'Length': 21626 },
      'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
Dallas in 1981. He is fluent in French and Italian and reads German. He
joined the company as a sales representative, \
was promoted to sales manager in January 1992 and to vice president of
sales in March 1993. Andrew is a member of the \
Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.',
      'ReportsTo': 0,
      'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
    },
    {
      'EmployeeID': 3,
      'LastName': 'Leverling',
      'FirstName': 'Janet',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-200088000000),
      'HireDate': new Date(702104400000),
      'Address': '722 Moss Bay Blvd.',
      'City': 'Kirkland',
      'Region': 'WA',
      'PostalCode': '98033',
      'Country': 'USA',

```

```

      'HomePhone': '(206) 555-3412',
      'Extension': '3355',
      'Photo': { 'Length': 21722 },
      'Notes': 'Janet has a BS degree in chemistry from Boston College
(1984). \
      She has also completed a certificate program in food retailing
management.\
      Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
    },
    {
      'EmployeeID': 4,
      'LastName': 'Peacock',
      'FirstName': 'Margaret',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mrs.',
      'BirthDate': new Date(-1018814400000),
      'HireDate': new Date(736401600000),
      'Address': '4110 Old Redmond Rd.',
      'City': 'Redmond',
      'Region': 'WA',
      'PostalCode': '98052',
      'Country': 'USA',
      'HomePhone': '(206) 555-8122',
      'Extension': '5176',
      'Photo': { 'Length': 21626 },
      'Notes': 'Margaret holds a BA in English literature from Concordia
College (1958) and an MA from the American \
      Institute of Culinary Arts (1966). She was assigned to the London office
temporarily from July through November 1992.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
    },
    {
      'EmployeeID': 5,
      'LastName': 'Buchanan',
      'FirstName': 'Steven',
      'Title': 'Sales Manager',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-468010800000),
      'HireDate': new Date(750830400000),
      'Address': '14 Garrett Hill',
      'City': 'London',
      'Region': null,
      'PostalCode': 'SW1 8JR',
      'Country': 'UK',
      'HomePhone': '(71) 555-4848',
      'Extension': '3453',
      'Photo': { 'Length': 21626 },
      'Notes': 'Steven Buchanan graduated from St. Andrews University,
Scotland, with a BSC degree in 1976. Upon joining the company as \
      a sales representative in 1992, he spent 6 months in an orientation
program at the Seattle office and then returned to his permanent \
      post in London. He was promoted to sales manager in March 1993. Mr.
Buchanan has completed the courses \'Successful \

```

```

    Telemarketing\' and \'International Sales Management.\' He is fluent in
    French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
  },
  {
    'EmployeeID': 6,
    'LastName': 'Suyama',
    'FirstName': 'Michael',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-205185600000),
    'HireDate': new Date(750830400000),
    'Address': 'Coventry House\r\nMiner Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'EC2 7JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-7773',
    'Extension': '428',
    'Photo': { 'Length': 21626 },
    'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese, and
Spanish.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 7,
    'LastName': 'King',
    'FirstName': 'Robert',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-302731200000),
    'HireDate': new Date(757486800000),
    'Address': 'Edgeham Hollow\r\nWinchester Way',
    'City': 'London',
    'Region': null,
    'PostalCode': 'RG1 9SP',
    'Country': 'UK',
    'HomePhone': '(71) 555-5598',
    'Extension': '465',
    'Photo': { 'Length': 21626 },
    'Notes': 'Robert King served in the Peace Corps and traveled
extensively before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 8,
    'LastName': 'Callahan',

```



```

        'FirstName': 'Laura',
        'Title': 'Inside Sales Coordinator',
        'TitleOfCourtesy': 'Ms.',
        'BirthDate': new Date(-377982000000),
        'HireDate': new Date(762843600000),
        'Address': '4726 - 11th Ave. N.E.',
        'City': 'Seattle',
        'Region': 'WA',
        'PostalCode': '98105',
        'Country': 'USA',
        'HomePhone': '(206) 555-1189',
        'Extension': '2344',
        'Photo': { 'Length': 21626 },
        'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
        'ReportsTo': 2,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
        'EmployeeID': 9,
        'LastName': 'Dodsworth',
        'FirstName': 'Anne',
        'Title': 'Sales Representative',
        'TitleOfCourtesy': 'Ms.',
        'BirthDate': new Date(-123966000000),
        'HireDate': new Date(784875600000),
        'Address': '7 Houndstooth Rd.',
        'City': 'London',
        'Region': null,
        'PostalCode': 'WG2 7LT',
        'Country': 'UK',
        'HomePhone': '(71) 555-4444',
        'Extension': '452',
        'Photo': { 'Length': 21626 },
        'Notes': 'Anne has a BA degree in English from St. Lawrence College.
She is fluent in French and German.',
        'ReportsTo': 5,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    }
    ];
export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },

```

```

    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {

```

```

    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let employeeData: Object[] = [{
  'EmployeeID': 1,
  'LastName': 'Davolio',
  'FirstName': 'Nancy',
  'Title': 'Sales Representative',

```

```

    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-664743600000),
    'HireDate': new Date(704692800000),
    'Address': '507 - 20th Ave. E.\r\nApt. 2A',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98122',
    'Country': 'USA',
    'HomePhone': '(206) 555-9857',
    'Extension': '5467',
    'Photo': { 'Length': 21626 },
    'Notes': 'Education includes a BA in psychology from Colorado State University in 1970. She also completed\r\n\r\nThe Art of the Cold Call.\r\n\r\nNancy is a member of Toastmasters International.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 2,
    'LastName': 'Fuller',
    'FirstName': 'Andrew',
    'Title': 'Vice President, Sales',
    'TitleOfCourtesy': 'Dr.',
    'BirthDate': new Date(-563828400000),
    'HireDate': new Date(713764800000),
    'Address': '908 W. Capital Way',
    'City': 'Tacoma',
    'Region': 'WA',
    'PostalCode': '98401',
    'Country': 'USA',
    'HomePhone': '(206) 555-9482',
    'Extension': '3457',
    'Photo': { 'Length': 21626 },
    'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in international marketing from the University of \r\n\r\nDallas in 1981. He is fluent in French and Italian and reads German. He joined the company as a sales representative, \r\n\r\nwas promoted to sales manager in January 1992 and to vice president of sales in March 1993. Andrew is a member of the \r\n\r\nSales Management Roundtable, the Seattle Chamber of Commerce, and the Pacific Rim Importers Association.',
    'ReportsTo': 0,
    'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
  },
  {
    'EmployeeID': 3,
    'LastName': 'Leverling',
    'FirstName': 'Janet',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-200088000000),
    'HireDate': new Date(702104400000),
    'Address': '722 Moss Bay Blvd.',
    'City': 'Kirkland',
    'Region': 'WA',
    'PostalCode': '98033',

```

```

    'Country': 'USA',
    'HomePhone': '(206) 555-3412',
    'Extension': '3355',
    'Photo': { 'Length': 21722 },
    'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
\
    She has also completed a certificate program in food retailing
management.\
    Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
},
{
    'EmployeeID': 4,
    'LastName': 'Peacock',
    'FirstName': 'Margaret',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mrs.',
    'BirthDate': new Date(-1018814400000),
    'HireDate': new Date(736401600000),
    'Address': '4110 Old Redmond Rd.',
    'City': 'Redmond',
    'Region': 'WA',
    'PostalCode': '98052',
    'Country': 'USA',
    'HomePhone': '(206) 555-8122',
    'Extension': '5176',
    'Photo': { 'Length': 21626 },
    'Notes': 'Margaret holds a BA in English literature from Concordia
College (1958) and an MA from the American \
    Institute of Culinary Arts (1966). She was assigned to the London office
temporarily from July through November 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
},
{
    'EmployeeID': 5,
    'LastName': 'Buchanan',
    'FirstName': 'Steven',
    'Title': 'Sales Manager',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-468010800000),
    'HireDate': new Date(750830400000),
    'Address': '14 Garrett Hill',
    'City': 'London',
    'Region': null,
    'PostalCode':
    'SW1 8JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-4848',
    'Extension': '3453',
    'Photo': { 'Length': 21626 },
    'Notes': 'Steven Buchanan graduated from St. Andrews University,
Scotland, with a BSC degree in 1976. Upon joining the company as \
    a sales representative in 1992, he spent 6 months in an orientation
program at the Seattle office and then returned to his permanent \

```

```

    post in London. He was promoted to sales manager in March 1993. Mr.
    Buchanan has completed the courses \'Successful \'
    Telemarketing\' and \'International Sales Management.\' He is fluent in
    French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
  },
  {
    'EmployeeID': 6,
    'LastName': 'Suyama',
    'FirstName': 'Michael',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-205185600000),
    'HireDate': new Date(750830400000),
    'Address': 'Coventry House\r\nMiner Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'EC2 7JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-7773',
    'Extension': '428',
    'Photo': { 'Length': 21626 },
    'Notes': 'Michael is a graduate of Sussex University (MA, economics,
    1983) and the University of California at Los Angeles \'
    (MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
    Selling\' and \'Time Management for the Sales Professional.\' \'
    He is fluent in Japanese and can read and write French, Portuguese, and
    Spanish.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 7,
    'LastName': 'King',
    'FirstName': 'Robert',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-302731200000),
    'HireDate': new Date(757486800000),
    'Address': 'Edgeham Hollow\r\nWinchester Way',
    'City': 'London',
    'Region': null,
    'PostalCode': 'RG1 9SP',
    'Country': 'UK',
    'HomePhone': '(71) 555-5598',
    'Extension': '465',
    'Photo': { 'Length': 21626 },
    'Notes': 'Robert King served in the Peace Corps and traveled extensively
    before completing his degree in English at the \'
    University of Michigan in 1992, the year he joined the company. After
    completing a course entitled \'Selling in Europe,\' \'
    he was transferred to the London office in March 1993.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {

```

```

      'EmployeeID': 8,
      'LastName': 'Callahan',
      'FirstName': 'Laura',
      'Title': 'Inside Sales Coordinator',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-377982000000),
      'HireDate': new Date(762843600000),
      'Address': '4726 - 11th Ave. N.E.',
      'City': 'Seattle',
      'Region': 'WA',
      'PostalCode': '98105',
      'Country': 'USA',
      'HomePhone': '(206) 555-1189',
      'Extension': '2344',
      'Photo': { 'Length': 21626 },
      'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 9,
      'LastName': 'Dodsworth',
      'FirstName': 'Anne',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-123966000000),
      'HireDate': new Date(784875600000),
      'Address': '7 Houndstooth Rd.',
      'City': 'London',
      'Region': null,
      'PostalCode': 'WG2 7LT',
      'Country': 'UK',
      'HomePhone': '(71) 555-4444',
      'Extension': '452',
      'Photo': { 'Length': 21626 },
      'Notes': 'Anne has a BA degree in English from St. Lawrence College. She
is fluent in French and German.',
      'ReportsTo': 5,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    }
  ]];
export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',

```

```
      ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
      Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
      Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
      Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
      'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
      Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
      'Rua do Mercado, 12',
```



```

        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ];

```

Remove header row while exporting

When exporting data from the Syncfusion React Grid, you have an option to remove the header row from the exported file. This can be useful when you want to export grid data without including the header values in the exported document.

To achieve this, you can utilize the [pdfHeaderQueryCellInfo](#) event of the Grid. This event allows you to customize the header cells during the PDF export process. By handling this event, you can remove the header row from the exported file by not providing any content and height for the header cells. This ensures that the exported file contains only the data rows without including the header information.

The following example demonstrates how to perform export without header using `pdfHeaderQueryCellInfo` event of the Grid.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Inject, PdfExport, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  const toolbar = ['PdfExport'];
  const toolbarClick = (args) => {
    if (grid && args.item.id === 'Grid_pdfexport') {
      grid.pdfExport();
    }
  }
  const pdfHeaderQueryCellInfo = (args) => {
    args.cell.value = '';
    if (args.cell.value === '') {
      args.cell.height = '';
    }
  }
  return (
    <div>
      <GridComponent id='Grid' dataSource={data} height={270}
        toolbar={toolbar} allowPdfExport={true} toolbarClick={toolbarClick} ref={g =>
          grid = g} pdfHeaderQueryCellInfo={pdfHeaderQueryCellInfo}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='120'
            textAlign='Right' />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
            width='150' />
          <ColumnDirective field='ShipCity' headerText='Ship City'
            width='150' />
          <ColumnDirective field='ShipCountry' headerText='Ship Country'
            width='150' />
        </ColumnsDirective>
        <Inject services={[Toolbar, PdfExport]} />
      </GridComponent>
    </div>
  );
}
export default App;
```

APP.TSX

```

import { ClickEventArgs } from '@syncfusion/ej2-navigations';
import { ColumnDirective, ColumnsDirective, GridComponent, ToolbarItems,
PdfHeaderQueryCellInfoEventArgs } from '@syncfusion/ej2-react-grids';
import { Inject, PdfExport, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid: GridComponent | null;
  const toolbar: ToolbarItems[] = ['PdfExport'];
  const toolbarClick = (args: ClickEventArgs) => {
    if (grid && args.item.id === 'Grid_pdfexport') {
      grid.pdfExport();
    }
  }
  const pdfHeaderQueryCellInfo = (args: PdfHeaderQueryCellInfoEventArgs) => {
    args.cell.value = '';
    if (args.cell.value === '') {
      args.cell.height = '';
    }
  }
  return (
    <div>
      <GridComponent id='Grid' dataSource={data} height={270}
toolbar={toolbar} allowPdfExport={true} toolbarClick={toolbarClick} ref={g =>
grid = g} pdfHeaderQueryCellInfo={pdfHeaderQueryCellInfo}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign='Right' />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
          <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
          <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' />
        </ColumnsDirective>
        <Inject services={[Toolbar, PdfExport]} />
      </GridComponent>
    </div>
  );
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {

```

```

    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {

```

```

    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```
export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
```

```

      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),

```

```
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
  ]];
```

See also

- [Exporting Grid in Cordova application](#)

Excel exporting in React Grid component

The Excel or CSV exporting feature in the React Grid component allows you to export the Grid data to an Excel or CSV document. This can be useful when you need to share or analyze the data in a spreadsheet format.

To enable Excel export in the Grid component, you need to set the [allowExcelExport](#) property to **true**. This property is responsible for enabling the Excel or CSV export option in the Grid.

To initiate the excel export process, you need to use the [excelExport](#) method provided by the Grid component. This method is responsible for exporting the Grid data to an Excel document.

To use the Excel or CSV export feature, you need to inject the **ExcelExport** module in the grid. This allows the Grid component to access the necessary services for exporting data to Excel or CSV.

To initiate the CSV export process, you need to use the [csvExport](#) method provided by the Grid component. This method is responsible for exporting the Grid data to an CSV document.

The following example demonstrates how to perform a Excel or CSV export action in the grid:

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
'@syncfusion/ej2-react-grids';
import { ExcelExport, Inject, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  let grid;
  const toolbar = ['ExcelExport'];
  const toolbarClick = (args) => {
    if (grid && args.item.id === 'Grid_excelexport') {
      grid.excelExport();
    }
  };
  return (<div>
```



```

    <GridComponent id='Grid' dataSource={data} height={270}
    toolbar={toolbar} allowExcelExport={true} toolbarClick={toolbarClick} ref={g
=> grid = g}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign='Right' />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
        <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
        <ColumnDirective field='ShipName' headerText='Ship Name'
width='150' />
      </ColumnsDirective>
      <Inject services={[Toolbar, ExcelExport]} />
    </GridComponent>
  </div>);
}
export default App;

```

APP.TSX

```

import { ClickEventArgs } from '@syncfusion/ej2-navigations';
import { ColumnDirective, ColumnsDirective, GridComponent, ToolbarItems }
from '@syncfusion/ej2-react-grids';
import { ExcelExport, Inject, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid: GridComponent | null;
  const toolbar: ToolbarItems[] = ['ExcelExport'];
  const toolbarClick = (args: ClickEventArgs) => {
    if (grid && args.item.id === 'Grid_excelexport') {
      grid.excelExport();
    }
  }
  return (
    <div>
      <GridComponent id='Grid' dataSource={data} height={270}
toolbar={toolbar}
      allowExcelExport={true} toolbarClick={toolbarClick} ref={g=> grid =
g}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign='Right' />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
          <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
          <ColumnDirective field='ShipName' headerText='Ship Name'
width='150' />
        </ColumnsDirective>
        <Inject services={[Toolbar, ExcelExport]} />
      </GridComponent>
    </div>
  );
}

```

```
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
```

```

        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),

```

```

        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
        Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',

```

```

        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]];

```

Show spinner while exporting

Showing a spinner while exporting in the Grid enhances the experience by displaying a spinner during the export process. This feature provides a visual indication of the export progress, improving the understanding of the exporting process.

To show or hide a spinner while exporting the grid, you can utilize the [showSpinner](#) and [hideSpinner](#) methods provided by the Grid within the `toolbarClick` event.

The `toolbarClick` event is triggered when a toolbar item in the Grid is clicked. Within the event handler, the code checks if the clicked `item` is related with Excel or CSV export, specifically the **Gridexcelexport** or **Gridcsvexport** item. If a match is found, the `showSpinner` method is used on the Grid instance to display the spinner.

To hide the spinner after the exporting is completed, bind the [excelExportComplete](#) event and use the `hideSpinner` method on the Grid instance to hide the spinner.

The following example demonstrates how to show and hide the spinner during Excel export in a grid.

APP.JSX

```

import { ClickEventArgs } from '@syncfusion/ej2-navigations';
import { ColumnDirective, ColumnsDirective, ExcelExport, GridComponent,
Inject, Toolbar, ToolbarItems } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  const toolbar = ['ExcelExport'];

```

```

const toolbarClick = (args) => {
  if (grid && args.item.id === 'Grid_excelexport') {
    grid.showSpinner();
    grid.excelExport();
  }
}

const excelExportComplete = () => {
  grid.hideSpinner();
}

return (<GridComponent id='Grid' dataSource={data}
excelExportComplete={excelExportComplete}
allowExcelExport={true} toolbar={toolbar} toolbarClick={toolbarClick}
ref={g => grid = g}>
  <ColumnsDirective>
    <ColumnDirective field='OrderID' headerText='Order ID'
width='100' textAlign="Right" />
    <ColumnDirective field='ProductName' headerText='ProductName'
width='120' />
    <ColumnDirective field='ProductID' headerText='Product ID'
width='120' />
    <ColumnDirective field='CustomerName' headerText='CustomerName'
width='150' />
  </ColumnsDirective>
  <Inject services={[Toolbar, ExcelExport]} />
</GridComponent>)
);
export default App;

```

APP.TSX

```

import { ClickEventArgs } from '@syncfusion/ej2-navigations';
import { ColumnDirective, ColumnsDirective, ExcelExport, GridComponent,
Inject, Toolbar, ToolbarItems } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';

function App() {
  let grid: GridComponent | null;
  const toolbar: ToolbarItems[] = ['ExcelExport'];
  const toolbarClick = (args: ClickEventArgs) => {
    if (grid && args.item.id === 'Grid_excelexport') {
      grid.showSpinner();
      grid.excelExport();
    }
  }

  const excelExportComplete = (): void => {
    (grid as GridComponent).hideSpinner();
  }

  return (<GridComponent id='Grid' dataSource={data}
excelExportComplete={excelExportComplete}
allowExcelExport={true} toolbar={toolbar} toolbarClick={toolbarClick}
ref={g => grid = g}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
      <ColumnDirective field='ProductName' headerText='ProductName'
width='120' />

```

```

    <ColumnDirective field='ProductID' headerText='Product ID' width='120'
  />
    <ColumnDirective field='CustomerName' headerText='CustomerName'
width='150' />
  </ColumnsDirective>
  <Inject services={[Toolbar, ExcelExport]} />
  </GridComponent>
};
export default App;

```

DATASOURCE.JSX

```

export let data = createLazyLoadData();
function createLazyLoadData() {
  let lazyLoadData = [];
  let customerid = ['VINET', 'TOMSP', 'HANAR', 'VICTE', 'SUPRD', 'HANAR',
'CHOPS', 'RICSU', 'WELLI', 'HILAA', 'ERNSH', 'CENTC',
'OTTIK', 'QUEDE', 'RATTC', 'ERNSH', 'FOLKO', 'BLONP', 'WARTH', 'FRANK',
'GROSR', 'WHITC', 'WARTH', 'SPLIR', 'RATTC', 'QUICK', 'VINET',
'MAGAA', 'TORTU', 'MORGK', 'BERGS', 'LEHMS', 'BERGS', 'ROMEY', 'ROMEY',
'LILAS', 'LEHMS', 'QUICK', 'QUICK', 'RICAR', 'REGGC', 'BSBEV',
'COMMI', 'QUEDE', 'TRADH', 'TORTU', 'RATTC', 'VINET', 'LILAS', 'BLONP',
'HUNGO', 'RICAR', 'MAGAA', 'WANDK', 'SUPRD', 'GODOS', 'TORTU',
'OLDWO', 'ROMEY', 'LONEP', 'ANATR', 'HUNGO', 'THEBI', 'DUMON', 'WANDK',
'QUICK', 'RATTC', 'ISLAT', 'RATTC', 'LONEP', 'ISLAT', 'TORTU',
'WARTH', 'ISLAT', 'PERIC', 'KOENE', 'SAVEA', 'KOENE', 'BOLID', 'FOLKO',
'FURIB', 'SPLIR', 'LILAS', 'BONAP', 'MEREP', 'WARTH', 'VICTE',
'HUNGO', 'PRINI', 'FRANK', 'OLDWO', 'MEREP', 'BONAP', 'SIMOB', 'FRANK',
'LEHMS', 'WHITC', 'QUICK', 'RATTC', 'FAMIA'];
  let product = ['Chai', 'Chang', 'Aniseed Syrup', 'Chef Anton\'s Cajun
Seasoning', 'Chef Anton\'s Gumbo Mix', 'Grandma\'s Boysenberry Spread',
'Uncle Bob\'s Organic Dried Pears', 'Northwoods Cranberry Sauce', 'Mishi
Kobe Niku', 'Ikura', 'Queso Cabrales', 'Queso Manchego La Pastora', 'Konbu',
'Tofu', 'Genen Shouyu', 'Pavlova', 'Alice Mutton', 'Carnarvon Tigers',
'Teatime Chocolate Biscuits', 'Sir Rodney\'s Marmalade', 'Sir Rodney\'s
Scones',
'Gustaf\'s Knäckebröd', 'Tunnbröd', 'Guaraná Fantástica', 'NuNuCa Nuß-
Nougat-Creme', 'Gumbär Gummibärchen', 'Schoggi Schokolade', 'Rössle
Sauerkraut',
'Thüringer Rostbratwurst', 'Nord-Ost Matjeshering', 'Gorgonzola Telino',
'Mascarpone Fabioli', 'Geitost', 'Sasquatch Ale', 'Steeleye Stout', 'Inlagd
Sill',
'Gravad lax', 'Côte de Blaye', 'Chartreuse verte', 'Boston Crab Meat',
'Jack\'s New England Clam Chowder', 'Singaporean Hokkien Fried Mee', 'Ipoh
Coffee',
'Gula Malacca', 'Rogede sild', 'Spegesild', 'Zaanse koeken', 'Chocolade',
'Maxilaku', 'Valkoinen suklaa', 'Manjimup Dried Apples', 'Filo Mix', 'Perth
Pasties',
'Tourtière', 'Pâté chinois', 'Gnocchi di nonna Alice', 'Ravioli Angelo',
'Escargots de Bourgogne', 'Raclette Courdavault', 'Camembert Pierrot', 'Sirop
d\'érable',
'Tarte au sucre', 'Veggie-spread', 'Wimmers gute Semmelknödel', 'Louisiana
Fiery Hot Pepper Sauce', 'Louisiana Hot Spiced Okra', 'Laughing Lumberjack
Lager', 'Scottish Longbreads',

```



```

    'Gudbrandsdalsost', 'Outback Lager', 'Flotemysost', 'Mozzarella di
    Giovanni', 'Röd Kaviar', 'Longlife Tofu', 'Rhönbräu Klosterbier',
    'Lakkaalikööri', 'Original Frankfurter grüne Soße'];
    let customername = ['Maria', 'Ana Trujillo', 'Antonio Moreno', 'Thomas
    Hardy', 'Christina Berglund', 'Hanna Moos', 'Frédérique Citeaux', 'Martin
    Sommer', 'Laurence Lebihan', 'Elizabeth Lincoln',
    'Victoria Ashworth', 'Patricio Simpson', 'Francisco Chang', 'Yang Wang',
    'Pedro Afonso', 'Elizabeth Brown', 'Sven Ottlieb', 'Janine Labrune', 'Ann
    Devon', 'Roland Mendel', 'Aria Cruz', 'Diego Roel',
    'Martine Rancé', 'Maria Larsson', 'Peter Franken', 'Carine Schmitt',
    'Paolo Accorti', 'Lino Rodriguez', 'Eduardo Saavedra', 'José Pedro Freyre',
    'André Fonseca', 'Howard Snyder', 'Manuel Pereira',
    'Mario Pontes', 'Carlos Hernández', 'Yoshi Latimer', 'Patricia McKenna',
    'Helen Bennett', 'Philip Cramer', 'Daniel Tonini', 'Annette Roulet', 'Yoshi
    Tannamuri', 'John Steel', 'Renate Messner', 'Jaime Yorres',
    'Carlos González', 'Felipe Izquierdo', 'Fran Wilson', 'Giovanni Rovelli',
    'Catherine Dewey', 'Jean Fresnière', 'Alexander Feuer', 'Simon Crowther',
    'Yvonne Moncada', 'Rene Phillips', 'Henriette Pfalzheim',
    'Marie Bertrand', 'Guillermo Fernández', 'Georg Pippis', 'Isabel de
    Castro', 'Bernardo Batista', 'Lúcia Carvalho', 'Horst Kloss', 'Sergio
    Gutiérrez', 'Paula Wilson', 'Maurizio Moroni', 'Janete Limeira', 'Michael
    Holz',
    'Alejandra Camino', 'Jonas Bergulfsen', 'Jose Pavarotti', 'Hari Kumar',
    'Jytte Petersen', 'Dominique Perrier', 'Art Braunschweiger', 'Pascale
    Cartrain', 'Liz Nixon', 'Liu Wong', 'Karin Josephs', 'Miguel Angel Paolino',
    'Anabela Domingues', 'Helvetius Nagy', 'Palle Ibsen', 'Mary Saveley',
    'Paul Henriot', 'Rita Müller', 'Pirkko Koskitalo', 'Paula Parente', 'Karl
    Jablonski', 'Matti Karttunen', 'Zbyszek Piestrzeniewicz'];
    let customeraddress = ['507 - 20th Ave. E.\r\nApt. 2A', '908 W. Capital
    Way', '722 Moss Bay Blvd.', '4110 Old Redmond Rd.', '14 Garrett Hill',
    'Coventry House\r\nMiner Rd.', 'Edgeham Hollow\r\nWinchester Way',
    '4726 - 11th Ave. N.E.', '7 Houndstooth Rd.', '59 rue de l\'Abbaye',
    'Luisenstr. 48', '908 W. Capital Way', '722 Moss Bay Blvd.', '4110 Old
    Redmond Rd.', '14 Garrett Hill', 'Coventry House\r\nMiner Rd.', 'Edgeham
    Hollow\r\nWinchester Way',
    '7 Houndstooth Rd.', '2817 Milton Dr.', 'Kirchgasse 6', 'Sierras de
    Granada 9993', 'Mehrheimerstr. 369', 'Rua da Panificadora, 12', '2817 Milton
    Dr.', 'Mehrheimerstr. 369'];
    let quantityperunit = ['10 boxes x 20 bags', '24 - 12 oz bottles', '12 -
    550 ml bottles', '48 - 6 oz jars', '36 boxes', '12 - 8 oz jars', '12 - 1 lb
    pkgs.', '12 - 12 oz jars', '18 - 500 g pkgs.', '12 - 200 ml jars',
    '1 kg pkg.', '10 - 500 g pkgs.', '2 kg box', '40 - 100 g pkgs.', '24 -
    250 ml bottles', '32 - 500 g boxes', '20 - 1 kg tins', '16 kg pkg.', '10
    boxes x 12 pieces', '30 gift boxes', '24 pkgs. x 4 pieces', '24 - 500 g
    pkgs.', '12 - 250 g pkgs.',
    '12 - 355 ml cans', '20 - 450 g glasses', '100 - 250 g bags'];
    let OrderID = 10248;
    for (let i = 0; i < 5000; i++) {
        lazyLoadData.push({
            'OrderID': OrderID + i,
            'CustomerID': customerid[Math.floor(Math.random() *
            customerid.length)],
            'CustomerName': customername[Math.floor(Math.random() *
            customername.length)],
            'CustomerAddress': customeraddress[Math.floor(Math.random() *
            customeraddress.length)],

```

```

        'ProductName': product[Math.floor(Math.random() *
product.length)],
        'ProductID': i,
        'Quantity': quantityperunit[Math.floor(Math.random() *
quantityperunit.length)]
    })
}
return lazyLoadData;
}

```

DATASOURCE.TSX

```

export let data: Object[] = createLazyLoadData();
function createLazyLoadData(): Object[] {
    let lazyLoadData: Object[] = [];
    let customerid: string[] = ['VINET', 'TOMSP', 'HANAR', 'VICTE', 'SUPRD',
'HANAR', 'CHOPS', 'RICSU', 'WELLI', 'HILAA', 'ERNSH', 'CENTC',
'OTTIK', 'QUEDE', 'RATTC', 'ERNSH', 'FOLKO', 'BLONP', 'WARTH', 'FRANK',
'GROSR', 'WHITC', 'WARTH', 'SPLIR', 'RATTC', 'QUICK', 'VINET',
'MAGAA', 'TORTU', 'MORGK', 'BERGS', 'LEHMS', 'BERGS', 'ROMEY', 'ROMEY',
'LILAS', 'LEHMS', 'QUICK', 'QUICK', 'RICAR', 'REGGC', 'BSBEV',
'COMMI', 'QUEDE', 'TRADH', 'TORTU', 'RATTC', 'VINET', 'LILAS', 'BLONP',
'HUNGO', 'RICAR', 'MAGAA', 'WANDK', 'SUPRD', 'GODOS', 'TORTU',
'OLDWO', 'ROMEY', 'LONEP', 'ANATR', 'HUNGO', 'THEBI', 'DUMON', 'WANDK',
'QUICK', 'RATTC', 'ISLAT', 'RATTC', 'LONEP', 'ISLAT', 'TORTU',
'WARTH', 'ISLAT', 'PERIC', 'KOENE', 'SAVEA', 'KOENE', 'BOLID', 'FOLKO',
'FURIB', 'SPLIR', 'LILAS', 'BONAP', 'MEREPE', 'WARTH', 'VICTE',
'HUNGO', 'PRINI', 'FRANK', 'OLDWO', 'MEREPE', 'BONAP', 'SIMOB', 'FRANK',
'LEHMS', 'WHITC', 'QUICK', 'RATTC', 'FAMIA'];
    let product: string[] = ['Chai', 'Chang', 'Aniseed Syrup', 'Chef Anton\'s
Cajun Seasoning', 'Chef Anton\'s Gumbo Mix', 'Grandma\'s Boysenberry Spread',
'Uncle Bob\'s Organic Dried Pears', 'Northwoods Cranberry Sauce', 'Mishi
Kobe Niku', 'Ikura', 'Queso Cabrales', 'Queso Manchego La Pastora', 'Konbu',
'Tofu', 'Genen Shouyu', 'Pavlova', 'Alice Mutton', 'Carnarvon Tigers',
'Teatime Chocolate Biscuits', 'Sir Rodney\'s Marmalade', 'Sir Rodney\'s
Scones',
'Gustaf\'s Knäckebröd', 'Tunnbröd', 'Guaraná Fantástica', 'NuNuCa Nuß-
Nougat-Creme', 'Gumbär Gummibärchen', 'Schoggi Schokolade', 'Rössle
Sauerkraut',
'Thüringer Rostbratwurst', 'Nord-Ost Matjeshering', 'Gorgonzola Telino',
'Mascarpone Fabioli', 'Geitost', 'Sasquatch Ale', 'Steeleye Stout', 'Inlagd
Sill',
'Gravad lax', 'Côte de Blaye', 'Chartreuse verte', 'Boston Crab Meat',
'Jack\'s New England Clam Chowder', 'Singaporean Hokkien Fried Mee', 'Ipoh
Coffee',
'Gula Malacca', 'Rogede sild', 'Spegesild', 'Zaanse koeken', 'Chocolade',
'Maxilaku', 'Valkoinen suklaa', 'Manjimup Dried Apples', 'Filo Mix', 'Perth
Pasties',
'Tourtière', 'Pâté chinois', 'Gnocchi di nonna Alice', 'Ravioli Angelo',
'Escargots de Bourgogne', 'Raclette Courdavault', 'Camembert Pierrot', 'Sirop
d\'érable',
'Tarte au sucre', 'Veggie-spread', 'Wimmers gute Semmelknödel', 'Louisiana
Fiery Hot Pepper Sauce', 'Louisiana Hot Spiced Okra', 'Laughing Lumberjack
Lager', 'Scottish Longbreads',

```

```

    'Gudbrandsdalsost', 'Outback Lager', 'Flotemysost', 'Mozzarella di
    Giovanni', 'Röd Kaviar', 'Longlife Tofu', 'Rhönbräu Klosterbier',
    'Lakkaalikööri', 'Original Frankfurter grüne Soße'];
    let customername: string[] = ['Maria', 'Ana Trujillo', 'Antonio Moreno',
    'Thomas Hardy', 'Christina Berglund', 'Hanna Moos', 'Frédérique Citeaux',
    'Martín Sommer', 'Laurence Lebihan', 'Elizabeth Lincoln',
    'Victoria Ashworth', 'Patricio Simpson', 'Francisco Chang', 'Yang Wang',
    'Pedro Afonso', 'Elizabeth Brown', 'Sven Ottlieb', 'Janine Labrune', 'Ann
    Devon', 'Roland Mendel', 'Aria Cruz', 'Diego Roel',
    'Martine Rancé', 'Maria Larsson', 'Peter Franken', 'Carine Schmitt',
    'Paolo Accorti', 'Lino Rodriguez', 'Eduardo Saavedra', 'José Pedro Freyre',
    'André Fonseca', 'Howard Snyder', 'Manuel Pereira',
    'Mario Pontes', 'Carlos Hernández', 'Yoshi Latimer', 'Patricia McKenna',
    'Helen Bennett', 'Philip Cramer', 'Daniel Tonini', 'Annette Roulet', 'Yoshi
    Tannamuri', 'John Steel', 'Renate Messner', 'Jaime Yorres',
    'Carlos González', 'Felipe Izquierdo', 'Fran Wilson', 'Giovanni Rovelli',
    'Catherine Dewey', 'Jean Fresnière', 'Alexander Feuer', 'Simon Crowther',
    'Yvonne Moncada', 'Rene Phillips', 'Henriette Pfalzheim',
    'Marie Bertrand', 'Guillermo Fernández', 'Georg Pippis', 'Isabel de
    Castro', 'Bernardo Batista', 'Lúcia Carvalho', 'Horst Kloss', 'Sergio
    Gutiérrez', 'Paula Wilson', 'Maurizio Moroni', 'Janete Limeira', 'Michael
    Holz',
    'Alejandra Camino', 'Jonas Bergulfsen', 'Jose Pavarotti', 'Hari Kumar',
    'Jytte Petersen', 'Dominique Perrier', 'Art Braunschweiger', 'Pascale
    Cartrain', 'Liz Nixon', 'Liu Wong', 'Karin Josephs', 'Miguel Angel Paolino',
    'Anabela Domingues', 'Helvetius Nagy', 'Palle Ibsen', 'Mary Saveley',
    'Paul Henriot', 'Rita Müller', 'Pirkko Koskitalo', 'Paula Parente', 'Karl
    Jablonski', 'Matti Karttunen', 'Zbyszek Piestrzeniewicz'];
    let customeraddress: string[] = ['507 - 20th Ave. E.\r\nApt. 2A', '908 W.
    Capital Way', '722 Moss Bay Blvd.', '4110 Old Redmond Rd.', '14 Garrett
    Hill', 'Coventry House\r\nMiner Rd.', 'Edgeham Hollow\r\nWinchester Way',
    '4726 - 11th Ave. N.E.', '7 Houndstooth Rd.', '59 rue de l\'Abbaye',
    'Luisenstr. 48', '908 W. Capital Way', '722 Moss Bay Blvd.', '4110 Old
    Redmond Rd.', '14 Garrett Hill', 'Coventry House\r\nMiner Rd.', 'Edgeham
    Hollow\r\nWinchester Way',
    '7 Houndstooth Rd.', '2817 Milton Dr.', 'Kirchgasse 6', 'Sierras de
    Granada 9993', 'Mehrheimerstr. 369', 'Rua da Panificadora, 12', '2817 Milton
    Dr.', 'Mehrheimerstr. 369'];
    let quantityperunit: string[] = ['10 boxes x 20 bags', '24 - 12 oz
    bottles', '12 - 550 ml bottles', '48 - 6 oz jars', '36 boxes', '12 - 8 oz
    jars', '12 - 1 lb pkgs.', '12 - 12 oz jars', '18 - 500 g pkgs.', '12 - 200 ml
    jars',
    '1 kg pkg.', '10 - 500 g pkgs.', '2 kg box', '40 - 100 g pkgs.', '24 -
    250 ml bottles', '32 - 500 g boxes', '20 - 1 kg tins', '16 kg pkg.', '10
    boxes x 12 pieces', '30 gift boxes', '24 pkgs. x 4 pieces', '24 - 500 g
    pkgs.', '12 - 250 g pkgs.',
    '12 - 355 ml cans', '20 - 450 g glasses', '100 - 250 g bags'];
    let OrderID: number = 10248;
    for (let i: number = 0; i < 5000; i++) {
        lazyLoadData.push({
            'OrderID': OrderID + i,
            'CustomerID': customerid[Math.floor(Math.random() *
            customerid.length)],
            'CustomerName': customername[Math.floor(Math.random() *
            customername.length)],
            'CustomerAddress': customeraddress[Math.floor(Math.random() *
            customeraddress.length)],

```

```

        'ProductName': product[Math.floor(Math.random() *
product.length)],
        'ProductID': i,
        'Quantity': quantityperunit[Math.floor(Math.random() *
quantityperunit.length)]
    })
}
return lazyLoadData;
}

```

Binding custom data source while exporting

The Grid component provides a convenient way to export data to a Excel or CSV format. With the Excel or CSV export feature, you can define a custom data source while exporting. This allows you to export data that is not necessarily bind to the grid, which can be generated or retrieved based on your application logic.

To export data, you need to define the [dataSource](#) property within the [excelExportProperties](#) object. This property represents the data source that will be used for the Excel or CSV export.

The following example demonstrates how to render custom dataSource during Excel export. By calling the [excelExport](#) method and passing the [excelExportProperties](#) object through the grid instance, the grid data will be exported to a Excel using the dynamically defined data source.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
'@syncfusion/ej2-react-grids';
import { ExcelExport, Inject, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    let grid;
    const toolbar = ['ExcelExport'];
    const toolbarClick = (args) => {
        if (grid && args.item.id === 'Grid_excelexport') {
            const excelExportProperties = {
                dataSource: data
            };
            grid.excelExport(excelExportProperties);
        }
    };
    return (<div>
        <GridComponent id='Grid' dataSource={data} height={270}
        toolbar={toolbar} allowExcelExport={true} toolbarClick={toolbarClick} ref={g
=> grid = g}>
            <ColumnsDirective>
                <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign='Right' />
                <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
                <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
                <ColumnDirective field='ShipName' headerText='Ship Name'
width='150' />
            </ColumnsDirective>

```

```

        <Inject services={[Toolbar, ExcelExport]} />
      </GridComponent>
    </div>);
  }
  export default App;

```

APP.TSX

```

import { ClickEventArgs } from '@syncfusion/ej2-navigations';
import { ColumnDirective, ColumnsDirective, GridComponent, ToolbarItems }
  from '@syncfusion/ej2-react-grids';
import { ExcelExport, ExcelExportProperties, Inject, Toolbar } from
  '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  let grid: GridComponent | null;
  const toolbar: ToolbarItems[] = ['ExcelExport'];
  const toolbarClick = (args: ClickEventArgs) => {
    if (grid && args.item.id === 'Grid_excelexport') {
      const excelExportProperties: ExcelExportProperties = {
        dataSource: data
      };
      grid.excelExport(excelExportProperties);
    }
  }
  return (
    <div>
      <GridComponent id='Grid' dataSource={data} height={270}
        toolbar={toolbar}
        allowExcelExport={true} toolbarClick={toolbarClick} ref={g => grid =
        g}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='120'
            textAlign='Right' />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
            width='150' />
          <ColumnDirective field='ShipCity' headerText='Ship City'
            width='150' />
          <ColumnDirective field='ShipName' headerText='Ship Name'
            width='150' />
        </ColumnsDirective>
        <Inject services={[Toolbar, ExcelExport]} />
      </GridComponent>
    </div>
  );
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),

```

```

      ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
      ShipAddress: '59 rue de l Abbaye',
      ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
      Freight: 32.38, Verified: !0
    },
    {
      OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
      Date(836505e6),
      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
      'Luisenstr. 48',
      ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
      Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
      Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
      Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),

```

```

        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),

```

```
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',  
    ShipAddress: '2817 Milton Dr.',  
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',  
    Freight: 48.29, Verified: !0  
  }  
];
```

DATASOURCE.TSX

```
export let data: Object[] = [  
  {  
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new  
Date(8364186e5),  
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',  
    ShipAddress: '59 rue de l Abbaye',  
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',  
    Freight: 32.38, Verified: !0  
  },  
  {  
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new  
Date(836505e6),  
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:  
'Luisenstr. 48',  
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',  
    Freight: 11.61, Verified: !1  
  },  
  {  
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new  
Date(8367642e5),  
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:  
'Rua do Paço, 67',  
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',  
    Freight: 65.83, Verified: !0  
  },  
  {  
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new  
Date(8367642e5),  
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,  
rue du Commerce',  
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',  
    Freight: 41.34, Verified: !0  
  },  
  {  
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new  
Date(8368506e5),  
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:  
'Boulevard Tirou, 255',  
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',  
    Freight: 51.3, Verified: !0  
  },  
  {  
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new  
Date(836937e6),  
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:  
'Rua do Paço, 67',
```



```

        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]];

```

Exporting with custom aggregate

Exporting grid data with custom aggregates allows you to include additional calculated values in the exported file based on specific requirements. This feature is highly valuable for providing a comprehensive view of the data in the exported file, incorporating specific aggregated information for analysis or reporting purposes.

In order to utilize custom aggregation, you need to specify the [type](#) property as **Custom** and provide the custom aggregate function in the [customAggregate](#) property.

Within the **customAggregateFn** function, it takes an input data that contains a result property. The function calculates the count of objects in this data where the **ShipCountry** field value is equal to **Brazil** and returns the count with a descriptive label.

The following example shows how to export the grid with a custom aggregate that shows the calculation of the **Brazil** count of the **ShipCountry** column.

APP.JSX

```

import { Aggregate, AggregateColumnDirective, AggregateColumnsDirective,
AggregateDirective, AggregatesDirective, ColumnDirective, ColumnsDirective,
GridComponent } from '@syncfusion/ej2-react-grids';
import { ExcelExport, Inject, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  let grid;
  const toolbar = ['ExcelExport'];
  const toolbarClick = (args) => {
    if (grid && args.item.id === 'Grid_excelexport') {
      grid.excelExport();
    }
  }
  const customAggregateFn = (customData) => {
    const brazilCount = customData.result ?
    customData.result.filter((item) => item['ShipCountry'] === 'Brazil').length :
    customData.filter((item) => item['ShipCountry'] === 'Brazil').length;

```

```

        return `Brazil Count::${brazilCount}`;
    };
    const footerTemplate = (props) => {
        return (<span>{props.Custom}</span>)
    }
    return (
        <div>
            <GridComponent id='Grid' dataSource={data} height={270}
toolbar={toolbar}
allowExcelExport={true} toolbarClick={toolbarClick} ref={g =>
grid = g}>
                <ColumnsDirective>
                    <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign='Right' />
                    <ColumnDirective field='CustomerID' headerText='Customer
ID' width='150' />
                    <ColumnDirective field='Freight' headerText='Freight'
width='100' />
                    <ColumnDirective field='OrderDate' headerText='Order
Date' width='150' format='yMd' type='date' />
                    <ColumnDirective field='ShipCountry' headerText='Ship
Country' width='150' />
                </ColumnsDirective>
                <AggregatesDirective>
                    <AggregateDirective>
                        <AggregateColumnsDirective>
                            <AggregateColumnDirective
columnName='ShipCountry' type='Custom' customAggregate={customAggregateFn}
footerTemplate={footerTemplate}></AggregateColumnDirective>
                        </AggregateColumnsDirective>
                    </AggregateDirective>
                </AggregatesDirective>
                <Inject services={[Toolbar, ExcelExport, Aggregate]} />
            </GridComponent>
        </div>
    );
}
export default App;

```

APP.TSX

```

import { ClickEventArgs } from '@syncfusion/ej2-navigations';
import { Aggregate, AggregateColumnDirective, AggregateColumnsDirective,
AggregateDirective, AggregatesDirective, ColumnDirective, ColumnsDirective,
GridComponent, ToolbarItems } from '@syncfusion/ej2-react-grids';
import { ExcelExport, Inject, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    let grid: GridComponent | null;
    const toolbar: ToolbarItems[] = ['ExcelExport'];
    const toolbarClick = (args: ClickEventArgs) => {
        if (grid && args.item.id === 'Grid_excelexport') {
            grid.excelExport();
        }
    }
}

```

```

const customAggregateFn = (customData) => {
  const brazilCount = customData.result ? customData.result.filter((item:
object) => item['ShipCountry'] === 'Brazil').length :
customData.filter((item: object) => item['ShipCountry'] === 'Brazil').length;
  return `Brazil Count::${brazilCount}`;
};

const footerTemplate = (props) => {
  return (<span>{props.Custom}</span>)
}

return (
  <div>
    <GridComponent id='Grid' dataSource={data} height={270}
toolbar={toolbar}
      allowExcelExport={true} toolbarClick={toolbarClick} ref={g => grid =
g}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign='Right' />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
        <ColumnDirective field='Freight' headerText='Freight' width='100'
/>
        <ColumnDirective field='OrderDate' headerText='Order Date'
width='150' format='yMd' type='date' />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' />
      </ColumnsDirective>
      <AggregatesDirective>
        <AggregateDirective>
          <AggregateColumnsDirective>
            <AggregateColumnDirective columnName='ShipCountry'
type='Custom' customAggregate={customAggregateFn}
footerTemplate={footerTemplate}></AggregateColumnDirective>
          </AggregateColumnsDirective>
        </AggregateDirective>
      </AggregatesDirective>
      <Inject services={[Toolbar, ExcelExport, Aggregate]} />
    </GridComponent>
  </div>
);
}

export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {

```

```

    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {

```

```

    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```
export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
```

```

        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),

```



```

        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]];

```

Exporting with cell and row spanning

Exporting data from the Grid with cell and row spanning enables you to maintain cell and row layout in the exported data. This feature is useful when you have merged cells or rows in the Grid and you want to maintain the same structure in the exported file.

To achieve this, you can utilize the [rowSpan](#) and [colSpan](#) properties in the `queryCellInfo` event of the Grid. This event allows you to define the span values for specific cells. Additionally, you can customize the appearance of the grid cells during the export using the [excelQueryCellInfo](#) event of the Grid.

The following example demonstrates how to perform export with cell and row spanning using `queryCellInfo` and `excelQueryCellInfo` events of the Grid.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, ExcelExport, GridComponent,
Inject, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    let grid;
    const toolbar = ['ExcelExport'];
    const toolbarClick = (args) => {
        if (args.item.id === 'Grid_excelexport') {
            grid.excelExport();
        }
    }
    const queryCellInfo = (args) => {
        let data = args.data.OrderID;
        switch (data) {
            case 10248:
                if (args.column.field === 'CustomerID') {
                    args.rowSpan = 2;
                }
                break;
            case 10250:
                if (args.column.field === 'CustomerID') {
                    args.colSpan = 2;
                }
                break;
            case 10252:
                if (args.column.field === 'OrderID') {
                    args.rowSpan = 3;
                }
                break;
        }
    }
}

```

```

        }
        break;
    case 10256:
        if (args.column.field === 'CustomerID') {
            args.colSpan = 3;
        }
        break;
    case 10261:
        if (args.column.field === 'Freight') {
            args.colSpan = 2;
        }
        break;
    }
}
const excelQueryCellInfo = (args) => {
    let data = args.data.OrderID;
    switch (data) {
        case 10248:
            if (args.column.field === 'CustomerID') {
                args.cell.rowSpan = 2;
            }
            break;
        case 10250:
            if (args.column.field === 'CustomerID') {
                args.colSpan = 2;
            }
            break;
        case 10252:
            if (args.column.field === 'OrderID') {
                args.cell.rowSpan = 3;
            }
            break;
        case 10256:
            if (args.column.field === 'CustomerID') {
                args.colSpan = 3;
            }
            break;
        case 10261:
            if (args.column.field === 'Freight') {
                args.colSpan = 2;
            }
            break;
    }
};
return (
    <div>
        <GridComponent id='Grid' gridLines='Both' dataSource={data}
        toolbar={toolbar} allowExcelExport={true}
            toolbarClick={toolbarClick} ref={g => grid = g}
            excelQueryCellInfo={excelQueryCellInfo} queryCellInfo={queryCellInfo}>
            <ColumnsDirective>
                <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign='Right' />
                <ColumnDirective field='CustomerID' headerText='Customer
ID' width='150' />
                <ColumnDirective field='Freight' headerText='Freight'
width='150' />
            </ColumnsDirective>
        </GridComponent>
    </div>
);

```

```

        <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
        <ColumnDirective field='ShipCountry' headerText='Ship
Country' width='150' />
    </ColumnsDirective>
    <Inject services={[Toolbar, ExcelExport]} />
    </GridComponent>
</div>

);
}
export default App;

```

APP.TSX

```

import { ClickEventArgs } from '@syncfusion/ej2-navigations';
import { ColumnDirective, ColumnsDirective, ExcelExport, GridComponent,
QueryCellInfoEventArgs, ToolbarItems, Inject, Toolbar,
ExcelQueryCellInfoEventArgs } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';

function App() {
    let grid: GridComponent | null;
    const toolbar: ToolbarItems[] = ['ExcelExport'];
    const toolbarClick = (args: ClickEventArgs) => {
        if (args.item.id === 'Grid_excelexport') {
            (grid as GridComponent).excelExport();
        }
    }
    const queryCellInfo = (args: QueryCellInfoEventArgs) => {
        let data = args.data.OrderID;
        switch (data) {
            case 10248:
                if (args.column.field === 'CustomerID') {
                    args.rowSpan = 2;
                }
                break;
            case 10250:
                if (args.column.field === 'CustomerID') {
                    args.colSpan = 2;
                }
                break;
            case 10252:
                if (args.column.field === 'OrderID') {
                    args.rowSpan = 3;
                }
                break;
            case 10256:
                if (args.column.field === 'CustomerID') {
                    args.colSpan = 3;
                }
                break;
            case 10261:
                if (args.column.field === 'Freight') {
                    args.colSpan = 2;
                }
                break;
        }
    }
}

```

```

    }
  }
  const excelQueryCellInfo = (args: ExcelQueryCellInfoEventArgs) => {
    let data = args.data.OrderID;
    switch (data) {
      case 10248:
        if (args.column.field === 'CustomerID') {
          args.cell.rowSpan = 2;
        }
        break;
      case 10250:
        if (args.column.field === 'CustomerID') {
          args.colSpan = 2;
        }
        break;
      case 10252:
        if (args.column.field === 'OrderID') {
          args.cell.rowSpan = 3;
        }
        break;
      case 10256:
        if (args.column.field === 'CustomerID') {
          args.colSpan = 3;
        }
        break;
      case 10261:
        if (args.column.field === 'Freight') {
          args.colSpan = 2;
        }
        break;
    }
  };
  return (
    <div>
      <GridComponent id='Grid' gridLines='Both' dataSource={data}
        toolbar={toolbar} allowExcelExport={true}
        toolbarClick={toolbarClick} ref={g => grid = g}
        excelQueryCellInfo={excelQueryCellInfo} queryCellInfo={queryCellInfo}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='120'
            textAlign='Right' />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
            width='150' />
          <ColumnDirective field='Freight' headerText='Freight' width='150'
            />
          <ColumnDirective field='ShipCity' headerText='Ship City'
            width='150' />
          <ColumnDirective field='ShipCountry' headerText='Ship Country'
            width='150' />
        </ColumnsDirective>
        <Inject services={[Toolbar, ExcelExport]} />
      </GridComponent>
    </div>
  );
}
export default App;

```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
```

```

        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),

```

```

      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }
  ]
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',

```

```

        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',

```



```

        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]];

```

Exporting with custom date format

The exporting functionality in the Syncfusion React Grid allows you to export grid data, including custom date format. This feature is useful when you need to export grid data with customized date values.

To apply a custom date format to grid columns during the export, you can utilize the [format](#) property. This property allows you to define a custom format using format options.

The following example demonstrates how to export the grid with custom date format. In the example, the `formatOptions` object is used as the `format` property for the **OrderDate** column. This custom date format displays the date in the format of day-of-the-week, month abbreviation, day, and 2-digit year (e.g., Sun, May 8, '23).

APP.JSX

```

import { ColumnDirective, ColumnsDirective, ExcelExport, GridComponent,
Inject, PageSettingsModel, Toolbar, ToolbarItems, Page } from
'@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  const pageOptions = { pageSize: 5 };
  const toolbar = ['ExcelExport'];
  const formatOptions = { type: 'date', format: "EEE, MMM d, 'yy" };
  const toolbarClick = (args) => {
    if (args.item.text === 'Excel Export') {
      grid.excelExport();
    }
  }
}

```

```

    }
    return (
      <div>
        <GridComponent dataSource={data} toolbar={toolbar}
allowExcelExport={true} allowPaging={true} pageSettings={pageOptions}
        toolbarClick={toolbarClick} ref={g => grid = g} >
          <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign='Right' />
            <ColumnDirective field='CustomerID' headerText='Customer
ID' width='150' />
            <ColumnDirective field='OrderDate' headerText='OrderDate'
format={formatOptions} width='150' />
            <ColumnDirective field='Freight' headerText='Freight'
format='C2' width='150' />
            <ColumnDirective field='ShipCountry' headerText='Ship
Country' width='150' />
          </ColumnsDirective>
          <Inject services={[Toolbar, Page, ExcelExport]} />
        </GridComponent>
      </div>
    );
  }
}
export default App;

```

APP.TSX

```

import { ClickEventArgs } from '@syncfusion/ej2-navigations';
import { ColumnDirective, ColumnsDirective, ExcelExport, GridComponent,
Inject, PageSettingsModel, Toolbar, ToolbarItems, Page } from
'@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid: GridComponent | null;
  const pageOptions: PageSettingsModel = { pageSize: 5 };
  const toolbar: ToolbarItems[] = ['ExcelExport'];
  const formatOptions = { type: 'date', format: "EEE, MMM d, 'yy" };
  const toolbarClick = (args: ClickEventArgs) => {
    if (args.item.text === 'Excel Export') {
      (grid as GridComponent).excelExport();
    }
  }
  return (
    <div>
      <GridComponent dataSource={data} toolbar={toolbar}
allowExcelExport={true} allowPaging={true} pageSettings={pageOptions}
      toolbarClick={toolbarClick} ref={g => grid = g} >
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign='Right' />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
          <ColumnDirective field='OrderDate' headerText='OrderDate'
format={formatOptions} width='150' />

```

```

        <ColumnDirective field='Freight' headerText='Freight' format='C2'
width='150' />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' />
    </ColumnsDirective>
    <Inject services={[Toolbar, Page, ExcelExport]} />
    </GridComponent>
</div>
);
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {

```

```

OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
  ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
  ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
},
{
  OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
  ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
  ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
},
{
  OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
  ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
  ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
},
{
  OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
  ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
  ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
},
{
  OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
  ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
  ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
},
{
  OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
  ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
  ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
},
{
  OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
  ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
  ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
},
{

```

```

    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),

```

```

        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),

```

```

        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]];

```

Exporting multiple grids

Exporting multiple grids in the Syncfusion React Grid component allows you to export different grids to compare them side by side in external applications on the same or different pages of a Excel. Each grid is identified by its unique ID. You can specify which grid to export by listing their IDs in the [exportGrids](#) property.

Same sheet

Excel exporting provides support for exporting multiple grids on the same page. This feature is particularly useful when you want to combine and organize data from different grids for a unified view in the exported Excel file.

To achieve this, you need to define the [multipleExport.type](#) property as **AppendToSheet** in the [excelExportProperties](#) object. This setting ensures that the data from each grid will be appended to the same Excel sheet.

Additionally, you have an option to include blank rows between the data of each grid to visually separate them in the exported Excel sheet. The number of blank rows to be inserted can be defined using the [multipleExport.blankRows](#) property.

The following example demonstrates how to export multiple grids to the same page in a Excel file when a toolbar item is clicked.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { ExcelExport, Inject, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data, employeeData } from './datasource';
function App() {
  let firstGrid;
  let secondGrid;
  const toolbar = ['ExcelExport'];
  const gridsToExport = ['FirstGrid', 'SecondGrid'];
  const toolbarClick = (args) => {
    if (firstGrid &&
      args.item.id === 'FirstGrid_excelexport') {
      const appendExcelExportProperties = {
        multipleExport: { type: 'AppendToSheet', blankRows: 2 }
      };
      firstGrid.excelExport(appendExcelExportProperties, true);
    }
  };
  return (<div>
    <p><b>First Grid:</b></p>
    <GridComponent id='FirstGrid' dataSource={data.slice(0, 5)}
      toolbar={toolbar} allowExcelExport={true} toolbarClick={toolbarClick}
      exportGrids={gridsToExport} ref={g => firstGrid = g}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID'
          width='120' textAlign='Right' />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
          width='150' />
        <ColumnDirective field='ShipName' headerText='Ship Name'
          width='150' />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
          width='150' />
      </ColumnsDirective>
      <Inject services={[Toolbar, ExcelExport]} />
    </GridComponent>
    <p><b>Second Grid:</b></p>
    <GridComponent id='SecondGrid' dataSource={employeeData.slice(0, 5)}
      allowExcelExport={true} ref={g => secondGrid = g}>
      <ColumnsDirective>
        <ColumnDirective field='EmployeeID' headerText='Employee ID'
          width='120' textAlign='Right' />
        <ColumnDirective field='FirstName' headerText='First Name'
          width='120' />
        <ColumnDirective field='LastName' headerText='Last Name'
          width='120' />
        <ColumnDirective field='City' headerText='City' width='150' />
      </ColumnsDirective>
    </GridComponent>
  </div>);
}
```



```

        <Inject services={[ExcelExport]}/>
      </GridComponent>
    </div>);
  }
  export default App;

```

APP.TSX

```

import { ClickEventArgs } from '@syncfusion/ej2-navigations';
import { ColumnDirective, ColumnsDirective, GridComponent, ToolbarItems }
from '@syncfusion/ej2-react-grids';
import { ExcelExport, ExcelExportProperties, Grid, Inject, Toolbar } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data, employeeData } from '../datasource';
function App() {
  let firstGrid: Grid | null;
  let secondGrid: Grid | null;
  const toolbar: ToolbarItems[] = ['ExcelExport'];
  const gridsToExport: string[] = ['FirstGrid', 'SecondGrid'];
  const toolbarClick = (args: ClickEventArgs) => {
    if (firstGrid &&
      args.item.id === 'FirstGrid_excelexport') {
      const appendExcelExportProperties: ExcelExportProperties = {
        multipleExport: { type: 'AppendToSheet', blankRows: 2 }
      };
      firstGrid.excelExport(appendExcelExportProperties, true);
    }
  }
  return (
    <div>
      <p><b>First Grid:</b></p>
      <GridComponent id='FirstGrid' dataSource={data.slice(0, 5)}
        toolbar={toolbar} exportGrids={gridsToExport}
        allowExcelExport={true} toolbarClick={toolbarClick} ref={g =>
          firstGrid = g}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID'
            width='120' textAlign='Right' />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
            width='150' />
          <ColumnDirective field='ShipName' headerText='Ship Name'
            width='150' />
          <ColumnDirective field='ShipCountry' headerText='Ship Country'
            width='150' />
        </ColumnsDirective>
        <Inject services={[Toolbar, ExcelExport]} />
      </GridComponent>
      <p><b>Second Grid:</b></p>
      <GridComponent id='SecondGrid' dataSource={employeeData.slice(0, 5)}
        allowExcelExport={true} ref={g => secondGrid = g}>
        <ColumnsDirective>
          <ColumnDirective field='EmployeeID' headerText='Employee ID'
            width='120' textAlign='Right' />
          <ColumnDirective field='FirstName' headerText='First Name'
            width='120' />

```

```

        <ColumnDirective field='LastName' headerText='Last Name'
width='120' />
        <ColumnDirective field='City' headerText='City' width='150' />
    </ColumnsDirective>
    <Inject services={[ExcelExport]} />
    </GridComponent>
</div>
);
}
export default App;

```

DATASOURCE.JSX

```

export let employeeData = [{
    'EmployeeID': 1,
    'LastName': 'Davolio',
    'FirstName': 'Nancy',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-664743600000),
    'HireDate': new Date(704692800000),
    'Address': '507 - 20th Ave. E.\r\nApt. 2A',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98122',
    'Country': 'USA',
    'HomePhone': '(206) 555-9857',
    'Extension': '5467',
    'Photo': { 'Length': 21626 },
    'Notes': 'Education includes a BA in psychology from Colorado State University in 1970. She also completed\'
    \'The Art of the Cold Call.\' Nancy is a member of Toastmasters International.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
    'EmployeeID': 2,
    'LastName': 'Fuller',
    'FirstName': 'Andrew',
    'Title': 'Vice President, Sales',
    'TitleOfCourtesy': 'Dr.',
    'BirthDate': new Date(-563828400000),
    'HireDate': new Date(713764800000),
    'Address': '908 W. Capital Way',
    'City': 'Tacoma',
    'Region': 'WA',
    'PostalCode': '98401',
    'Country': 'USA',
    'HomePhone': '(206) 555-9482',
    'Extension': '3457',
    'Photo': { 'Length': 21626 },
    'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in international marketing from the University of \
    Dallas in 1981. He is fluent in French and Italian and reads German. He joined the company as a sales representative, \

```

```

    was promoted to sales manager in January 1992 and to vice president of
    sales in March 1993. Andrew is a member of the \
    Sales Management Roundtable, the Seattle Chamber of Commerce, and the
    Pacific Rim Importers Association.',
    'ReportsTo': 0,
    'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
  },
  {
    'EmployeeID': 3,
    'LastName': 'Leverling',
    'FirstName': 'Janet',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-200088000000),
    'HireDate': new Date(702104400000),
    'Address': '722 Moss Bay Blvd.',
    'City': 'Kirkland',
    'Region': 'WA',
    'PostalCode': '98033',
    'Country': 'USA',
    'HomePhone': '(206) 555-3412',
    'Extension': '3355',
    'Photo': { 'Length': 21722 },
    'Notes': 'Janet has a BS degree in chemistry from Boston College
    (1984). \
    She has also completed a certificate program in food retailing
    management.\
    Janet was hired as a sales associate in 1991 and promoted to sales
    representative in February 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
  },
  {
    'EmployeeID': 4,
    'LastName': 'Peacock',
    'FirstName': 'Margaret',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mrs.',
    'BirthDate': new Date(-1018814400000),
    'HireDate': new Date(736401600000),
    'Address': '4110 Old Redmond Rd.',
    'City': 'Redmond',
    'Region': 'WA',
    'PostalCode': '98052',
    'Country': 'USA',
    'HomePhone': '(206) 555-8122',
    'Extension': '5176',
    'Photo': { 'Length': 21626 },
    'Notes': 'Margaret holds a BA in English literature from Concordia
    College (1958) and an MA from the American \
    Institute of Culinary Arts (1966). She was assigned to the London office
    temporarily from July through November 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
  },
  {
    'EmployeeID': 5,

```

```

        'LastName': 'Buchanan',
        'FirstName': 'Steven',
        'Title': 'Sales Manager',
        'TitleOfCourtesy': 'Mr.',
        'BirthDate': new Date(-468010800000),
        'HireDate': new Date(750830400000),
        'Address': '14 Garrett Hill',
        'City': 'London',
        'Region': null,
        'PostalCode': 'SW1 8JR',
        'Country': 'UK',
        'HomePhone': '(71) 555-4848',
        'Extension': '3453',
        'Photo': { 'Length': 21626 },
        'Notes': 'Steven Buchanan graduated from St. Andrews University,
Scotland, with a BSC degree in 1976. Upon joining the company as \
a sales representative in 1992, he spent 6 months in an orientation
program at the Seattle office and then returned to his permanent \
post in London. He was promoted to sales manager in March 1993. Mr.
Buchanan has completed the courses \'Successful \
Telemarketing\' and \'International Sales Management.\' He is fluent in
French.',
        'ReportsTo': 2,
        'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
    },
    {
        'EmployeeID': 6,
        'LastName': 'Suyama',
        'FirstName': 'Michael',
        'Title': 'Sales Representative',
        'TitleOfCourtesy': 'Mr.',
        'BirthDate': new Date(-205185600000),
        'HireDate': new Date(750830400000),
        'Address': 'Coventry House\r\nMiner Rd.',
        'City': 'London',
        'Region': null,
        'PostalCode': 'EC2 7JR',
        'Country': 'UK',
        'HomePhone': '(71) 555-7773',
        'Extension': '428',
        'Photo': { 'Length': 21626 },
        'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese, and
Spanish.',
        'ReportsTo': 5,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
        'EmployeeID': 7,
        'LastName': 'King',
        'FirstName': 'Robert',
        'Title': 'Sales Representative',
        'TitleOfCourtesy': 'Mr.',
        'BirthDate': new Date(-302731200000),

```

```

      'HireDate': new Date(757486800000),
      'Address': 'Edgeham Hollow\r\nWinchester Way',
      'City': 'London',
      'Region': null,
      'PostalCode': 'RG1 9SP',
      'Country': 'UK',
      'HomePhone': '(71) 555-5598',
      'Extension': '465',
      'Photo': { 'Length': 21626 },
      'Notes': 'Robert King served in the Peace Corps and traveled
extensively before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
      'ReportsTo': 5,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 8,
      'LastName': 'Callahan',
      'FirstName': 'Laura',
      'Title': 'Inside Sales Coordinator',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-377982000000),
      'HireDate': new Date(762843600000),
      'Address': '4726 - 11th Ave. N.E.',
      'City': 'Seattle',
      'Region': 'WA',
      'PostalCode': '98105',
      'Country': 'USA',
      'HomePhone': '(206) 555-1189',
      'Extension': '2344',
      'Photo': { 'Length': 21626 },
      'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 9,
      'LastName': 'Dodsworth',
      'FirstName': 'Anne',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-123966000000),
      'HireDate': new Date(784875600000),
      'Address': '7 Houndstooth Rd.',
      'City': 'London',
      'Region': null,
      'PostalCode': 'WG2 7LT',
      'Country': 'UK',
      'HomePhone': '(71) 555-4444',
      'Extension': '452',
      'Photo': { 'Length': 21626 },
      'Notes': 'Anne has a BA degree in English from St. Lawrence College.
She is fluent in French and German.',

```

```
        'ReportsTo': 5,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    }];
export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
        Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
```

```

        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',

```

```

        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]
  ];

```

DATASOURCE.TSX

```

export let employeeData: Object[] = [{
  'EmployeeID': 1,
  'LastName': 'Davolio',
  'FirstName': 'Nancy',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-664743600000),
  'HireDate': new Date(704692800000),
  'Address': '507 - 20th Ave. E.\r\nApt. 2A',
  'City': 'Seattle',
  'Region': 'WA',
  'PostalCode': '98122',
  'Country': 'USA',
  'HomePhone': '(206) 555-9857',
  'Extension': '5467',
  'Photo': { 'Length': 21626 },
  'Notes': 'Education includes a BA in psychology from Colorado State
  University in 1970. She also completed\
  \'The Art of the Cold Call.\' Nancy is a member of Toastmasters
  International.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
  'EmployeeID': 2,
  'LastName': 'Fuller',
  'FirstName': 'Andrew',
  'Title': 'Vice President, Sales',
  'TitleOfCourtesy': 'Dr.',
  'BirthDate': new Date(-563828400000),
  'HireDate': new Date(713764800000),
  'Address': '908 W. Capital Way',
  'City': 'Tacoma',
  'Region': 'WA',
  'PostalCode': '98401',
  'Country': 'USA',
  'HomePhone': '(206) 555-9482',
  'Extension': '3457',
  'Photo': { 'Length': 21626 },
  'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
  international marketing from the University of \

```



```

Dallas in 1981. He is fluent in French and Italian and reads German. He
joined the company as a sales representative, \
  was promoted to sales manager in January 1992 and to vice president of
sales in March 1993. Andrew is a member of the \
  Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.',
  'ReportsTo': 0,
  'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
},
{
  'EmployeeID': 3,
  'LastName': 'Leverling',
  'FirstName': 'Janet',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-200088000000),
  'HireDate': new Date(702104400000),
  'Address': '722 Moss Bay Blvd.',
  'City': 'Kirkland',
  'Region': 'WA',
  'PostalCode': '98033',
  'Country': 'USA',
  'HomePhone': '(206) 555-3412',
  'Extension': '3355',
  'Photo': { 'Length': 21722 },
  'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
\
  She has also completed a certificate program in food retailing
management.\
  Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
},
{
  'EmployeeID': 4,
  'LastName': 'Peacock',
  'FirstName': 'Margaret',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Mrs.',
  'BirthDate': new Date(-1018814400000),
  'HireDate': new Date(736401600000),
  'Address': '4110 Old Redmond Rd.',
  'City': 'Redmond',
  'Region': 'WA',
  'PostalCode': '98052',
  'Country': 'USA',
  'HomePhone': '(206) 555-8122',
  'Extension': '5176',
  'Photo': { 'Length': 21626 },
  'Notes': 'Margaret holds a BA in English literature from Concordia
College (1958) and an MA from the American \
  Institute of Culinary Arts (1966). She was assigned to the London office
temporarily from July through November 1992.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
},

```

```

{
  'EmployeeID': 5,
  'LastName': 'Buchanan',
  'FirstName': 'Steven',
  'Title': 'Sales Manager',
  'TitleOfCourtesy': 'Mr.',
  'BirthDate': new Date(-468010800000),
  'HireDate': new Date(750830400000),
  'Address': '14 Garrett Hill',
  'City': 'London',
  'Region': null,
  'PostalCode':
  'SW1 8JR',
  'Country': 'UK',
  'HomePhone': '(71) 555-4848',
  'Extension': '3453',
  'Photo': { 'Length': 21626 },
  'Notes': 'Steven Buchanan graduated from St. Andrews University,
Scotland, with a BSC degree in 1976. Upon joining the company as \
a sales representative in 1992, he spent 6 months in an orientation
program at the Seattle office and then returned to his permanent \
post in London. He was promoted to sales manager in March 1993. Mr.
Buchanan has completed the courses \'Successful \
Telemarketing\' and \'International Sales Management.\' He is fluent in
French.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
},
{
  'EmployeeID': 6,
  'LastName': 'Suyama',
  'FirstName': 'Michael',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Mr.',
  'BirthDate': new Date(-205185600000),
  'HireDate': new Date(750830400000),
  'Address': 'Coventry House\r\nMiner Rd.',
  'City': 'London',
  'Region': null,
  'PostalCode': 'EC2 7JR',
  'Country': 'UK',
  'HomePhone': '(71) 555-7773',
  'Extension': '428',
  'Photo': { 'Length': 21626 },
  'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese, and
Spanish.',
  'ReportsTo': 5,
  'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
  'EmployeeID': 7,
  'LastName': 'King',
  'FirstName': 'Robert',

```

```

    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-302731200000),
    'HireDate': new Date(757486800000),
    'Address': 'Edgeham Hollow\r\nWinchester Way',
    'City': 'London',
    'Region': null,
    'PostalCode': 'RG1 9SP',
    'Country': 'UK',
    'HomePhone': '(71) 555-5598',
    'Extension': '465',
    'Photo': { 'Length': 21626 },
    'Notes': 'Robert King served in the Peace Corps and traveled extensively
before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 8,
    'LastName': 'Callahan',
    'FirstName': 'Laura',
    'Title': 'Inside Sales Coordinator',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-377982000000),
    'HireDate': new Date(762843600000),
    'Address': '4726 - 11th Ave. N.E.',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98105',
    'Country': 'USA',
    'HomePhone': '(206) 555-1189',
    'Extension': '2344',
    'Photo': { 'Length': 21626 },
    'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 9,
    'LastName': 'Dodsworth',
    'FirstName': 'Anne',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-123966000000),
    'HireDate': new Date(784875600000),
    'Address': '7 Houndstooth Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'WG2 7LT',
    'Country': 'UK',
    'HomePhone': '(71) 555-4444',
    'Extension': '452',
  }

```

```

    'Photo': { 'Length': 21626 },
    'Notes': 'Anne has a BA degree in English from St. Lawrence College. She
is fluent in French and German.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  }];
export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {

```

```

    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {

```

```

    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

By default, **multipleExport.blankRows** value is 5.

New sheet

Excel export functionality enables the exporting of multiple grids into separate pages (each grid on a new page) within the Excel file.

To achieve this, you can follow these steps:

1. Access the [excelExportProperties](#) of the Grid component.
2. Set the [multipleExport.type](#) to **NewPage**.
3. Trigger the Excel export operation.

The following example demonstrates how to export multiple grids to a Excel file when a toolbar item is clicked.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
'@syncfusion/ej2-react-grids';
import { ExcelExport, Inject, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data, employeeData } from './datasource';
function App() {
  let firstGrid;
  let secondGrid;
  const toolbar = ['ExcelExport'];
  const gridsToExport = ['FirstGrid', 'SecondGrid'];
  const toolbarClick = (args) => {
    if (firstGrid &&
      args.item.id === 'FirstGrid_excelexport') {
      const appendExcelExportProperties = {
        multipleExport: { type: 'NewSheet' }
      };
      firstGrid.excelExport(appendExcelExportProperties, true);
    }
  };
  return (<div>
    <p><b>First Grid:</b></p>

```

```

    <GridComponent id='FirstGrid' dataSource={data.slice(0, 5)}
    toolbar={toolbar} allowExcelExport={true} exportGrids={gridToExport}
    toolbarClick={toolbarClick} ref={g => firstGrid = g}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign='Right' />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
        <ColumnDirective field='ShipName' headerText='Ship Name'
width='150' />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' />
      </ColumnsDirective>
      <Inject services={[Toolbar, ExcelExport]} />
    </GridComponent>
    <p><b>Second Grid:</b></p>
    <GridComponent id='SecondGrid' dataSource={employeeData.slice(0, 5)}
allowExcelExport={true} ref={g => secondGrid = g}>
      <ColumnsDirective>
        <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='120' textAlign="Right" />
        <ColumnDirective field='FirstName' headerText='First Name'
width='120' />
        <ColumnDirective field='LastName' headerText='Last Name'
width='120' />
        <ColumnDirective field='City' headerText='City' width='150' />
      </ColumnsDirective>
      <Inject services={[ExcelExport]} />
    </GridComponent>
  </div>;
}
export default App;

```

APP.TSX

```

import { ClickEventArgs } from '@syncfusion/ej2-navigations';
import { ColumnDirective, ColumnsDirective, GridComponent, ToolbarItems }
from '@syncfusion/ej2-react-grids';
import { ExcelExport, ExcelExportProperties, Grid, Inject, Toolbar } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data, employeeData } from './datasource';
function App() {
  let firstGrid: Grid | null;
  let secondGrid: Grid | null;
  const toolbar: ToolbarItems[] = ['ExcelExport'];
  const gridsToExport: string[] = ['FirstGrid', 'SecondGrid'];
  const toolbarClick = (args: ClickEventArgs) => {
    if (firstGrid &&
      args.item.id === 'FirstGrid_excelexport') {
      const appendExcelExportProperties: ExcelExportProperties = {
        multipleExport: { type: 'NewSheet' }
      };
      firstGrid.excelExport(appendExcelExportProperties, true);
    }
  }
}

```

```

    return (
      <div>
        <p><b>First Grid:</b></p>
        <GridComponent id='FirstGrid' dataSource={data.slice(0, 5)}
          toolbar={toolbar} exportGrids={gridstoExport}
          allowExcelExport={true} toolbarClick={toolbarClick} ref={g =>
            firstGrid = g}>
          <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID'
              width='120' textAlign='Right' />
            <ColumnDirective field='CustomerID' headerText='Customer ID'
              width='150' />
            <ColumnDirective field='ShipName' headerText='Ship Name'
              width='150' />
            <ColumnDirective field='ShipCountry' headerText='Ship Country'
              width='150' />
          </ColumnsDirective>
          <Inject services={[Toolbar, ExcelExport]} />
        </GridComponent>
        <p><b>Second Grid:</b></p>
        <GridComponent id='SecondGrid' dataSource={employeeData.slice(0, 5)}
          allowExcelExport={true} ref={g => secondGrid = g}>
          <ColumnsDirective>
            <ColumnDirective field='EmployeeID' headerText='Employee ID'
              width='120' textAlign="Right" />
            <ColumnDirective field='FirstName' headerText='First Name'
              width='120' />
            <ColumnDirective field='LastName' headerText='Last Name'
              width='120' />
            <ColumnDirective field='City' headerText='City' width='150' />
          </ColumnsDirective>
          <Inject services={[ExcelExport]} />
        </GridComponent>
      </div>
    );
  }
  export default App;

```

DATASOURCE.JSX

```

export let employeeData = [{
  'EmployeeID': 1,
  'LastName': 'Davolio',
  'FirstName': 'Nancy',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-664743600000),
  'HireDate': new Date(704692800000),
  'Address': '507 - 20th Ave. E.\r\nApt. 2A',
  'City': 'Seattle',
  'Region': 'WA',
  'PostalCode': '98122',
  'Country': 'USA',
  'HomePhone': '(206) 555-9857',
  'Extension': '5467',
  'Photo': { 'Length': 21626 },

```



```

      'Notes': 'Education includes a BA in psychology from Colorado State
University in 1970. She also completed\
      \'The Art of the Cold Call.\' Nancy is a member of Toastmasters
International.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 2,
      'LastName': 'Fuller',
      'FirstName': 'Andrew',
      'Title': 'Vice President, Sales',
      'TitleOfCourtesy': 'Dr.',
      'BirthDate': new Date(-563828400000),
      'HireDate': new Date(713764800000),
      'Address': '908 W. Capital Way',
      'City': 'Tacoma',
      'Region': 'WA',
      'PostalCode': '98401',
      'Country': 'USA',
      'HomePhone': '(206) 555-9482',
      'Extension': '3457',
      'Photo': { 'Length': 21626 },
      'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
      Dallas in 1981. He is fluent in French and Italian and reads German. He
joined the company as a sales representative, \
      was promoted to sales manager in January 1992 and to vice president of
sales in March 1993. Andrew is a member of the \
      Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.',
      'ReportsTo': 0,
      'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
    },
    {
      'EmployeeID': 3,
      'LastName': 'Leverling',
      'FirstName': 'Janet',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-200088000000),
      'HireDate': new Date(702104400000),
      'Address': '722 Moss Bay Blvd.',
      'City': 'Kirkland',
      'Region': 'WA',
      'PostalCode': '98033',
      'Country': 'USA',
      'HomePhone': '(206) 555-3412',
      'Extension': '3355',
      'Photo': { 'Length': 21722 },
      'Notes': 'Janet has a BS degree in chemistry from Boston College
(1984). \
      She has also completed a certificate program in food retailing
management.\
      Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
      'ReportsTo': 2,

```

```

    'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
  },
  {
    'EmployeeID': 4,
    'LastName': 'Peacock',
    'FirstName': 'Margaret',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mrs.',
    'BirthDate': new Date(-1018814400000),
    'HireDate': new Date(736401600000),
    'Address': '4110 Old Redmond Rd.',
    'City': 'Redmond',
    'Region': 'WA',
    'PostalCode': '98052',
    'Country': 'USA',
    'HomePhone': '(206) 555-8122',
    'Extension': '5176',
    'Photo': { 'Length': 21626 },
    'Notes': 'Margaret holds a BA in English literature from Concordia College (1958) and an MA from the American \
      Institute of Culinary Arts (1966). She was assigned to the London office temporarily from July through November 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
  },
  {
    'EmployeeID': 5,
    'LastName': 'Buchanan',
    'FirstName': 'Steven',
    'Title': 'Sales Manager',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-468010800000),
    'HireDate': new Date(750830400000),
    'Address': '14 Garrett Hill',
    'City': 'London',
    'Region': null,
    'PostalCode': 'SW1 8JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-4848',
    'Extension': '3453',
    'Photo': { 'Length': 21626 },
    'Notes': 'Steven Buchanan graduated from St. Andrews University, Scotland, with a BSC degree in 1976. Upon joining the company as \
      a sales representative in 1992, he spent 6 months in an orientation program at the Seattle office and then returned to his permanent \
      post in London. He was promoted to sales manager in March 1993. Mr. Buchanan has completed the courses \'Successful \
      Telemarketing\' and \'International Sales Management.\' He is fluent in French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
  },
  {
    'EmployeeID': 6,
    'LastName': 'Suyama',
    'FirstName': 'Michael',
    'Title': 'Sales Representative',

```

```

      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-205185600000),
      'HireDate': new Date(750830400000),
      'Address': 'Coventry House\r\nMiner Rd.',
      'City': 'London',
      'Region': null,
      'PostalCode': 'EC2 7JR',
      'Country': 'UK',
      'HomePhone': '(71) 555-7773',
      'Extension': '428',
      'Photo': { 'Length': 21626 },
      'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese, and
Spanish.',
      'ReportsTo': 5,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 7,
      'LastName': 'King',
      'FirstName': 'Robert',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-302731200000),
      'HireDate': new Date(757486800000),
      'Address': 'Edgeham Hollow\r\nWinchester Way',
      'City': 'London',
      'Region': null,
      'PostalCode': 'RG1 9SP',
      'Country': 'UK',
      'HomePhone': '(71) 555-5598',
      'Extension': '465',
      'Photo': { 'Length': 21626 },
      'Notes': 'Robert King served in the Peace Corps and traveled
extensively before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
      'ReportsTo': 5,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 8,
      'LastName': 'Callahan',
      'FirstName': 'Laura',
      'Title': 'Inside Sales Coordinator',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-377982000000),
      'HireDate': new Date(762843600000),
      'Address': '4726 - 11th Ave. N.E.',
      'City': 'Seattle',
      'Region': 'WA',
      'PostalCode': '98105',
      'Country': 'USA',

```

```

        'HomePhone': '(206) 555-1189',
        'Extension': '2344',
        'Photo': { 'Length': 21626 },
        'Notes': 'Laura received a BA in psychology from the University of Washington. She has also completed a course in business \
        French. She reads and writes French.',
        'ReportsTo': 2,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
        'EmployeeID': 9,
        'LastName': 'Dodsworth',
        'FirstName': 'Anne',
        'Title': 'Sales Representative',
        'TitleOfCourtesy': 'Ms.',
        'BirthDate': new Date(-123966000000),
        'HireDate': new Date(784875600000),
        'Address': '7 Houndstooth Rd.',
        'City': 'London',
        'Region': null,
        'PostalCode': 'WG2 7LT',
        'Country': 'UK',
        'HomePhone': '(71) 555-4444',
        'Extension': '452',
        'Photo': { 'Length': 21626 },
        'Notes': 'Anne has a BA degree in English from St. Lawrence College. She is fluent in French and German.',
        'ReportsTo': 5,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    }
  ]];
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress: 'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress: 'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {

```

```

    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {

```

```

    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let employeeData: Object[] = [{
  'EmployeeID': 1,
  'LastName': 'Davolio',
  'FirstName': 'Nancy',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-664743600000),
  'HireDate': new Date(704692800000),
  'Address': '507 - 20th Ave. E.\r\nApt. 2A',
  'City': 'Seattle',
  'Region': 'WA',
  'PostalCode': '98122',
  'Country': 'USA',

```

```

      'HomePhone': '(206) 555-9857',
      'Extension': '5467',
      'Photo': { 'Length': 21626 },
      'Notes': 'Education includes a BA in psychology from Colorado State
University in 1970. She also completed\
\'The Art of the Cold Call.\' Nancy is a member of Toastmasters
International.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 2,
      'LastName': 'Fuller',
      'FirstName': 'Andrew',
      'Title': 'Vice President, Sales',
      'TitleOfCourtesy': 'Dr.',
      'BirthDate': new Date(-563828400000),
      'HireDate': new Date(713764800000),
      'Address': '908 W. Capital Way',
      'City': 'Tacoma',
      'Region': 'WA',
      'PostalCode': '98401',
      'Country': 'USA',
      'HomePhone': '(206) 555-9482',
      'Extension': '3457',
      'Photo': { 'Length': 21626 },
      'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
Dallas in 1981. He is fluent in French and Italian and reads German. He
joined the company as a sales representative, \
was promoted to sales manager in January 1992 and to vice president of
sales in March 1993. Andrew is a member of the \
Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.',
      'ReportsTo': 0,
      'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
    },
    {
      'EmployeeID': 3,
      'LastName': 'Leverling',
      'FirstName': 'Janet',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-200088000000),
      'HireDate': new Date(702104400000),
      'Address': '722 Moss Bay Blvd.',
      'City': 'Kirkland',
      'Region': 'WA',
      'PostalCode': '98033',
      'Country': 'USA',
      'HomePhone': '(206) 555-3412',
      'Extension': '3355',
      'Photo': { 'Length': 21722 },
      'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
\
She has also completed a certificate program in food retailing
management.\

```

```

    Janet was hired as a sales associate in 1991 and promoted to sales
    representative in February 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
  },
  {
    'EmployeeID': 4,
    'LastName': 'Peacock',
    'FirstName': 'Margaret',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mrs.',
    'BirthDate': new Date(-1018814400000),
    'HireDate': new Date(736401600000),
    'Address': '4110 Old Redmond Rd.',
    'City': 'Redmond',
    'Region': 'WA',
    'PostalCode': '98052',
    'Country': 'USA',
    'HomePhone': '(206) 555-8122',
    'Extension': '5176',
    'Photo': { 'Length': 21626 },
    'Notes': 'Margaret holds a BA in English literature from Concordia
    College (1958) and an MA from the American \
    Institute of Culinary Arts (1966). She was assigned to the London office
    temporarily from July through November 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
  },
  {
    'EmployeeID': 5,
    'LastName': 'Buchanan',
    'FirstName': 'Steven',
    'Title': 'Sales Manager',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-468010800000),
    'HireDate': new Date(750830400000),
    'Address': '14 Garrett Hill',
    'City': 'London',
    'Region': null,
    'PostalCode':
    'SW1 8JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-4848',
    'Extension': '3453',
    'Photo': { 'Length': 21626 },
    'Notes': 'Steven Buchanan graduated from St. Andrews University,
    Scotland, with a BSC degree in 1976. Upon joining the company as \
    a sales representative in 1992, he spent 6 months in an orientation
    program at the Seattle office and then returned to his permanent \
    post in London. He was promoted to sales manager in March 1993. Mr.
    Buchanan has completed the courses \'Successful \
    Telemarketing\' and \'International Sales Management.\' He is fluent in
    French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
  },
  {

```



```

      'EmployeeID': 6,
      'LastName': 'Suyama',
      'FirstName': 'Michael',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-205185600000),
      'HireDate': new Date(750830400000),
      'Address': 'Coventry House\r\nMiner Rd.',
      'City': 'London',
      'Region': null,
      'PostalCode': 'EC2 7JR',
      'Country': 'UK',
      'HomePhone': '(71) 555-7773',
      'Extension': '428',
      'Photo': { 'Length': 21626 },
      'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese, and
Spanish.',
      'ReportsTo': 5,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 7,
      'LastName': 'King',
      'FirstName': 'Robert',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-302731200000),
      'HireDate': new Date(757486800000),
      'Address': 'Edgeham Hollow\r\nWinchester Way',
      'City': 'London',
      'Region': null,
      'PostalCode': 'RG1 9SP',
      'Country': 'UK',
      'HomePhone': '(71) 555-5598',
      'Extension': '465',
      'Photo': { 'Length': 21626 },
      'Notes': 'Robert King served in the Peace Corps and traveled extensively
before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
      'ReportsTo': 5,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 8,
      'LastName': 'Callahan',
      'FirstName': 'Laura',
      'Title': 'Inside Sales Coordinator',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-377982000000),
      'HireDate': new Date(762843600000),
      'Address': '4726 - 11th Ave. N.E.',

```

```

    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98105',
    'Country': 'USA',
    'HomePhone': '(206) 555-1189',
    'Extension': '2344',
    'Photo': { 'Length': 21626 },
    'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 9,
    'LastName': 'Dodsworth',
    'FirstName': 'Anne',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-123966000000),
    'HireDate': new Date(784875600000),
    'Address': '7 Houndstooth Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'WG2 7LT',
    'Country': 'UK',
    'HomePhone': '(71) 555-4444',
    'Extension': '452',
    'Photo': { 'Length': 21626 },
    'Notes': 'Anne has a BA degree in English from St. Lawrence College. She
is fluent in French and German.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  }
];
export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',

```

```

        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',

```

```

        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ];

```

Limitations

- Multiple grids exporting feature is not supported with server side exporting.

Exporting hierarchy grid

Exporting a hierarchy grid in the Syncfusion React Grid component allows you to generate a Excel or CSV document that includes the parent grid along with its child grids. This feature is useful when you need to export hierarchical data with its related details.

To achieve this, you can customize the exporting behavior by using the `ExcelExportProperties.hierarchyExportMode` property of the Grid. This property allows you to specify the exporting behavior for the hierarchy grid. The following options are available:

Mode	Behavior
-----	-----
Expanded	Exports the master grid with expanded child grids.
All	Exports the master grid with all child grids, expanded or not.
None	Exports only the master grid without any child grids.

The following example demonstrates how to export hierarchical grid to Excel document. Also change the `excelExportProperties.hierarchyExportMode` property by using `value` property of the DropDownList component:

APP.JSX

```
import { ClickEventArgs } from '@syncfusion/ej2-navigations';
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { ColumnDirective, ColumnsDirective, DetailRow, ExcelExport,
ExcelExportProperties, GridComponent, ToolbarItems } from '@syncfusion/ej2-
react-grids';
import { GridModel, Inject, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data, employeeData } from './datasource';
function App() {
    let grid;
    let dropDown;
    const toolbar = ['ExcelExport'];
    const ddlData = [
        { text: 'Expanded', value: 'Expanded' },
        { text: 'All', value: 'All' },
        { text: 'None', value: 'None' },
    ];
    const childGridOptions = {
        columns: [
            { field: 'OrderID', headerText: 'Order ID', textAlign: 'Right',
width: 120 },
            { field: 'CustomerID', headerText: 'Customer ID', width: 150 },
            { field: 'ShipCity', headerText: 'Ship City', width: 150 },
            { field: 'ShipName', headerText: 'Ship Name', width: 150 }
        ],
        dataSource: data,
        queryString: 'EmployeeID'
    };
    const toolbarClick = (args) => {
        if (args.item.id === 'Grid_excelexport') {
            const exportProperties = {
                hierarchyExportMode: dropDown.value
            };
            grid.excelExport(exportProperties);
        }
    }
    return (
        <div>
```

```

        <label style={{ padding: "10px 10px 26px 0" }}> Change the
        hierarchy export mode: </label>
        <DropDownListComponent ref={d => dropDown = d} index={0}
        width={200} dataSource={ddlData}></DropDownListComponent>
        <GridComponent id='Grid' dataSource={employeeData}
        toolbar={toolbar} allowExcelExport={true}
        toolbarClick={toolbarClick} ref={g => grid = g}
        childGrid={childGridOptions}>
            <ColumnsDirective>
                <ColumnDirective field='EmployeeID' headerText='Employee
                ID' width='120' textAlign="Right" />
                <ColumnDirective field='FirstName' headerText='First
                Name' width='150' />
                <ColumnDirective field='LastName' headerText='Last Name'
                width='150' />
                <ColumnDirective field='City' headerText='City'
                width='150' />
            </ColumnsDirective>
            <Inject services={[DetailRow, Toolbar, ExcelExport]} />
        </GridComponent>
    </div>
    );
}
export default App;

```

APP.TSX

```

import { ClickEventArgs } from '@syncfusion/ej2-navigations';
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { ColumnDirective, ColumnsDirective, DetailRow, ExcelExport,
ExcelExportProperties, GridComponent, ToolbarItems } from '@syncfusion/ej2-
react-grids';
import { GridModel, Inject, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data, employeeData } from './datasource';
function App() {
    let grid: GridComponent | null;
    let dropDown: DropDownListComponent | null;
    const toolbar: ToolbarItems[] = ['ExcelExport'];
    const ddlData: { [key: string]: Object; }[] = [
        { text: 'Expanded', value: 'Expanded' },
        { text: 'All', value: 'All' },
        { text: 'None', value: 'None' },
    ];
    const childGridOptions: GridModel = {
        columns: [
            { field: 'OrderID', headerText: 'Order ID', textAlign: 'Right', width:
            120 },
            { field: 'CustomerID', headerText: 'Customer ID', width: 150 },
            { field: 'ShipCity', headerText: 'Ship City', width: 150 },
            { field: 'ShipName', headerText: 'Ship Name', width: 150 }
        ],
        dataSource: data,
        queryString: 'EmployeeID'
    };
    const toolbarClick = (args: ClickEventArgs) => {

```

```

    if (args.item.id === 'Grid_excelexport') {
        const exportProperties: ExcelExportProperties = {
            hierarchyExportMode: ((dropDown as DropDownListComponent).value as
ExcelExportProperties["hierarchyExportMode"])
        };
        (grid as GridComponent).excelExport(exportProperties);
    }
}
return (
    <div>
        <label style={{ padding: "10px 10px 26px 0" }}> Change the hierarchy
export mode: </label>
        <DropDownListComponent ref={d => dropDown = d} index={0} width={200}
dataSource={ddlData}></DropDownListComponent>
        <GridComponent id='Grid' dataSource={employeeData} toolbar={toolbar}
allowExcelExport={true}
            toolbarClick={toolbarClick} ref={g => grid = g}
childGrid={childGridOptions}>
            <ColumnsDirective>
                <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='120' textAlign="Right" />
                <ColumnDirective field='FirstName' headerText='First Name'
width='150' />
                <ColumnDirective field='LastName' headerText='Last Name'
width='150' />
                <ColumnDirective field='City' headerText='City' width='150' />
            </ColumnsDirective>
            <Inject services={[DetailRow, Toolbar, ExcelExport]} />
        </GridComponent>
    </div>
);
}
export default App;

```

DATASOURCE.JSX

```

export let employeeData = [{
    'EmployeeID': 1,
    'LastName': 'Davolio',
    'FirstName': 'Nancy',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-664743600000),
    'HireDate': new Date(704692800000),
    'Address': '507 - 20th Ave. E.\r\nApt. 2A',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98122',
    'Country': 'USA',
    'HomePhone': '(206) 555-9857',
    'Extension': '5467',
    'Photo': { 'Length': 21626 },
    'Notes': 'Education includes a BA in psychology from Colorado State
University in 1970. She also completed\
    \'The Art of the Cold Call.\' Nancy is a member of Toastmasters
International.',

```

```

      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 2,
      'LastName': 'Fuller',
      'FirstName': 'Andrew',
      'Title': 'Vice President, Sales',
      'TitleOfCourtesy': 'Dr.',
      'BirthDate': new Date(-563828400000),
      'HireDate': new Date(713764800000),
      'Address': '908 W. Capital Way',
      'City': 'Tacoma',
      'Region': 'WA',
      'PostalCode': '98401',
      'Country': 'USA',
      'HomePhone': '(206) 555-9482',
      'Extension': '3457',
      'Photo': { 'Length': 21626 },
      'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
      Dallas in 1981. He is fluent in French and Italian and reads German. He
joined the company as a sales representative, \
      was promoted to sales manager in January 1992 and to vice president of
sales in March 1993. Andrew is a member of the \
      Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.',
      'ReportsTo': 0,
      'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
    },
    {
      'EmployeeID': 3,
      'LastName': 'Leverling',
      'FirstName': 'Janet',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-200088000000),
      'HireDate': new Date(702104400000),
      'Address': '722 Moss Bay Blvd.',
      'City': 'Kirkland',
      'Region': 'WA',
      'PostalCode': '98033',
      'Country': 'USA',
      'HomePhone': '(206) 555-3412',
      'Extension': '3355',
      'Photo': { 'Length': 21722 },
      'Notes': 'Janet has a BS degree in chemistry from Boston College
(1984). \
      She has also completed a certificate program in food retailing
management.\
      Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
    },
    {
      'EmployeeID': 4,

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      'LastName': 'Peacock',
      'FirstName': 'Margaret',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mrs.',
      'BirthDate': new Date(-1018814400000),
      'HireDate': new Date(736401600000),
      'Address': '4110 Old Redmond Rd.',
      'City': 'Redmond',
      'Region': 'WA',
      'PostalCode': '98052',
      'Country': 'USA',
      'HomePhone': '(206) 555-8122',
      'Extension': '5176',
      'Photo': { 'Length': 21626 },
      'Notes': 'Margaret holds a BA in English literature from Concordia College (1958) and an MA from the American \
        Institute of Culinary Arts (1966). She was assigned to the London office temporarily from July through November 1992.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
    },
    {
      'EmployeeID': 5,
      'LastName': 'Buchanan',
      'FirstName': 'Steven',
      'Title': 'Sales Manager',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-468010800000),
      'HireDate': new Date(750830400000),
      'Address': '14 Garrett Hill',
      'City': 'London',
      'Region': null,
      'PostalCode': 'SW1 8JR',
      'Country': 'UK',
      'HomePhone': '(71) 555-4848',
      'Extension': '3453',
      'Photo': { 'Length': 21626 },
      'Notes': 'Steven Buchanan graduated from St. Andrews University, Scotland, with a BSC degree in 1976. Upon joining the company as \
        a sales representative in 1992, he spent 6 months in an orientation program at the Seattle office and then returned to his permanent \
        post in London. He was promoted to sales manager in March 1993. Mr. Buchanan has completed the courses \'Successful \
        Telemarketing\' and \'International Sales Management.\' He is fluent in French.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
    },
    {
      'EmployeeID': 6,
      'LastName': 'Suyama',
      'FirstName': 'Michael',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-205185600000),
      'HireDate': new Date(750830400000),
      'Address': 'Coventry House\r\nMiner Rd.',

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        'City': 'London',
        'Region': null,
        'PostalCode': 'EC2 7JR',
        'Country': 'UK',
        'HomePhone': '(71) 555-7773',
        'Extension': '428',
        'Photo': { 'Length': 21626 },
        'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese, and
Spanish.',
        'ReportsTo': 5,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
        'EmployeeID': 7,
        'LastName': 'King',
        'FirstName': 'Robert',
        'Title': 'Sales Representative',
        'TitleOfCourtesy': 'Mr.',
        'BirthDate': new Date(-302731200000),
        'HireDate': new Date(757486800000),
        'Address': 'Edgeham Hollow\r\nWinchester Way',
        'City': 'London',
        'Region': null,
        'PostalCode': 'RG1 9SP',
        'Country': 'UK',
        'HomePhone': '(71) 555-5598',
        'Extension': '465',
        'Photo': { 'Length': 21626 },
        'Notes': 'Robert King served in the Peace Corps and traveled
extensively before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
        'ReportsTo': 5,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
        'EmployeeID': 8,
        'LastName': 'Callahan',
        'FirstName': 'Laura',
        'Title': 'Inside Sales Coordinator',
        'TitleOfCourtesy': 'Ms.',
        'BirthDate': new Date(-377982000000),
        'HireDate': new Date(762843600000),
        'Address': '4726 - 11th Ave. N.E.',
        'City': 'Seattle',
        'Region': 'WA',
        'PostalCode': '98105',
        'Country': 'USA',
        'HomePhone': '(206) 555-1189',
        'Extension': '2344',
        'Photo': { 'Length': 21626 },
    }

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```

      'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 9,
      'LastName': 'Dodsworth',
      'FirstName': 'Anne',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-123966000000),
      'HireDate': new Date(784875600000),
      'Address': '7 Houndstooth Rd.',
      'City': 'London',
      'Region': null,
      'PostalCode': 'WG2 7LT',
      'Country': 'UK',
      'HomePhone': '(71) 555-4444',
      'Extension': '452',
      'Photo': { 'Length': 21626 },
      'Notes': 'Anne has a BA degree in English from St. Lawrence College.
She is fluent in French and German.',
      'ReportsTo': 5,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    }
  ]];
export let data = [
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    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',

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        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',

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        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]
  };

```

DATASOURCE.TSX

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export let employeeData: Object[] = [{
  'EmployeeID': 1,
  'LastName': 'Davolio',
  'FirstName': 'Nancy',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-664743600000),
  'HireDate': new Date(704692800000),
  'Address': '507 - 20th Ave. E.\r\nApt. 2A',
  'City': 'Seattle',
  'Region': 'WA',
  'PostalCode': '98122',
  'Country': 'USA',
  'HomePhone': '(206) 555-9857',
  'Extension': '5467',
  'Photo': { 'Length': 21626 },

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      'Notes': 'Education includes a BA in psychology from Colorado State
University in 1970. She also completed\
      \'The Art of the Cold Call.\' Nancy is a member of Toastmasters
International.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 2,
      'LastName': 'Fuller',
      'FirstName': 'Andrew',
      'Title': 'Vice President, Sales',
      'TitleOfCourtesy': 'Dr.',
      'BirthDate': new Date(-563828400000),
      'HireDate': new Date(713764800000),
      'Address': '908 W. Capital Way',
      'City': 'Tacoma',
      'Region': 'WA',
      'PostalCode': '98401',
      'Country': 'USA',
      'HomePhone': '(206) 555-9482',
      'Extension': '3457',
      'Photo': { 'Length': 21626 },
      'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
      Dallas in 1981. He is fluent in French and Italian and reads German. He
joined the company as a sales representative, \
      was promoted to sales manager in January 1992 and to vice president of
sales in March 1993. Andrew is a member of the \
      Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.',
      'ReportsTo': 0,
      'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
    },
    {
      'EmployeeID': 3,
      'LastName': 'Leverling',
      'FirstName': 'Janet',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-200088000000),
      'HireDate': new Date(702104400000),
      'Address': '722 Moss Bay Blvd.',
      'City': 'Kirkland',
      'Region': 'WA',
      'PostalCode': '98033',
      'Country': 'USA',
      'HomePhone': '(206) 555-3412',
      'Extension': '3355',
      'Photo': { 'Length': 21722 },
      'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
\
      She has also completed a certificate program in food retailing
management.\
      Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
      'ReportsTo': 2,

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    'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
  },
  {
    'EmployeeID': 4,
    'LastName': 'Peacock',
    'FirstName': 'Margaret',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mrs.',
    'BirthDate': new Date(-1018814400000),
    'HireDate': new Date(736401600000),
    'Address': '4110 Old Redmond Rd.',
    'City': 'Redmond',
    'Region': 'WA',
    'PostalCode': '98052',
    'Country': 'USA',
    'HomePhone': '(206) 555-8122',
    'Extension': '5176',
    'Photo': { 'Length': 21626 },
    'Notes': 'Margaret holds a BA in English literature from Concordia College (1958) and an MA from the American \
    Institute of Culinary Arts (1966). She was assigned to the London office temporarily from July through November 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
  },
  {
    'EmployeeID': 5,
    'LastName': 'Buchanan',
    'FirstName': 'Steven',
    'Title': 'Sales Manager',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-468010800000),
    'HireDate': new Date(750830400000),
    'Address': '14 Garrett Hill',
    'City': 'London',
    'Region': null,
    'PostalCode': 'SW1 8JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-4848',
    'Extension': '3453',
    'Photo': { 'Length': 21626 },
    'Notes': 'Steven Buchanan graduated from St. Andrews University, Scotland, with a BSC degree in 1976. Upon joining the company as \
    a sales representative in 1992, he spent 6 months in an orientation program at the Seattle office and then returned to his permanent \
    post in London. He was promoted to sales manager in March 1993. Mr. Buchanan has completed the courses \'Successful \
    Telemarketing\' and \'International Sales Management.\' He is fluent in French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
  },
  {
    'EmployeeID': 6,
    'LastName': 'Suyama',
    'FirstName': 'Michael',

```

```

    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-205185600000),
    'HireDate': new Date(750830400000),
    'Address': 'Coventry House\r\nMiner Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'EC2 7JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-7773',
    'Extension': '428',
    'Photo': { 'Length': 21626 },
    'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese, and
Spanish.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 7,
    'LastName': 'King',
    'FirstName': 'Robert',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-302731200000),
    'HireDate': new Date(757486800000),
    'Address': 'Edgeham Hollow\r\nWinchester Way',
    'City': 'London',
    'Region': null,
    'PostalCode': 'RG1 9SP',
    'Country': 'UK',
    'HomePhone': '(71) 555-5598',
    'Extension': '465',
    'Photo': { 'Length': 21626 },
    'Notes': 'Robert King served in the Peace Corps and traveled extensively
before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 8,
    'LastName': 'Callahan',
    'FirstName': 'Laura',
    'Title': 'Inside Sales Coordinator',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-377982000000),
    'HireDate': new Date(762843600000),
    'Address': '4726 - 11th Ave. N.E.',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98105',

```



```

    'Country': 'USA',
    'HomePhone': '(206) 555-1189',
    'Extension': '2344',
    'Photo': { 'Length': 21626 },
    'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 9,
    'LastName': 'Dodsworth',
    'FirstName': 'Anne',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-123966000000),
    'HireDate': new Date(784875600000),
    'Address': '7 Houndstooth Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'WG2 7LT',
    'Country': 'UK',
    'HomePhone': '(71) 555-4444',
    'Extension': '452',
    'Photo': { 'Length': 21626 },
    'Notes': 'Anne has a BA degree in English from St. Lawrence College. She
is fluent in French and German.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  }
];
export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {

```

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    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {

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    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
    ]];

```

Limitations

- Microsoft Excel permits up to seven nested levels in outlines. So that in the grid we can able to provide only up to seven nested levels and if it exceeds more than seven levels then the document will be exported without outline option. Please refer the [Microsoft Limitation](#).

Remove header row while exporting

When exporting data from the Syncfusion React Grid, you have an option to remove the header row from the exported file. This can be useful when you want to export grid data without including the header values in the exported document. To achieve this, you can utilize the [excelHeaderQueryCellInfo](#) and [created](#) event.

The following example demonstrates how to perform an export without the header by using the `excelHeaderQueryCellInfo` event to clear cell content in the header row and the [created](#) event to remove the header row from the Grid:

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, ExcelExport,
Inject, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  const toolbar = ['ExcelExport'];
  const toolbarClick = (args) => {
    if (grid && args.item.id === 'Grid_excelexport') {
      grid.excelExport();
    }
  }
  const excelHeaderQueryCellInfo = (args) => {
    args.gridCell.value = '';
  }
  const created = () => {
    var processGridExportObject = grid
    .excelExportModule.__proto__.processGridExport;
    grid.excelExportModule.__proto__.processGridExport = function (gobj,
props, r) {
      var rows = processGridExportObject.call(this, gobj, props, r);
      rows.shift();
      rows.forEach((item, index) => {
        item.index = index + 1;
      });
      return rows;
    };
  };
  return (
    <div>
      <GridComponent id='Grid' dataSource={data} height={270}
toolbar={toolbar} allowExcelExport={true} toolbarClick={toolbarClick} ref={g
=> grid = g} created={created}
excelHeaderQueryCellInfo={excelHeaderQueryCellInfo}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign='Right' />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
          <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
          <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' />
        </ColumnsDirective>
        <Inject services={[Toolbar, ExcelExport]} />
      </GridComponent>
    </div>
  );
}
export default App;
```

APP.TSX

```

import { ClickEventArgs } from '@syncfusion/ej2-navigations';
import { ColumnDirective, ColumnsDirective, GridComponent, ToolbarItems,
ExcelHeaderQueryCellInfoEventArgs, ExcelExport, ExcelCell } from
 '@syncfusion/ej2-react-grids';
import { Inject, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  let grid: GridComponent | null;
  const toolbar: ToolbarItems[] = ['ExcelExport'];
  const toolbarClick = (args: ClickEventArgs) => {
    if (grid && args.item.id === 'Grid_excelexport') {
      grid.excelExport();
    }
  }
  const excelHeaderQueryCellInfo = (args: ExcelHeaderQueryCellInfoEventArgs)
=> {
    (args.gridCell as ExcelCell).value = '';
  }
  const created = () => {
    var processGridExportObject = (grid as
GridComponent).excelExportModule.__proto__.processGridExport;
    (grid as GridComponent).excelExportModule.__proto__.processGridExport =
function (gobj: object, props: ExcelExport, r: boolean) {
      var rows = processGridExportObject.call(this, gobj, props, r);
      rows.shift();
      rows.forEach((item: any, index: number) => {
        item.index = index + 1;
      });
      return rows;
    };
  }
  return (
    <div>
      <GridComponent id='Grid' dataSource={data} height={270}
toolbar={toolbar} allowExcelExport={true} toolbarClick={toolbarClick} ref={g
=> grid = g} created={created}
excelHeaderQueryCellInfo={excelHeaderQueryCellInfo}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign='Right' />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
          <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
          <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' />
        </ColumnsDirective>
        <Inject services={[Toolbar, ExcelExport]} />
      </GridComponent>
    </div>
  );
}
export default App;

```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
```

```

        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',

```

```

        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]
  ];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },

```



```

    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
  ],
  {

```

```

    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

How to add formula for the cell while exporting

The Grid component provides a convenient way to add formulas to cells during the export process. This feature allows you to perform calculations and apply formulas to specific cells in the exported Excel document. This can be particularly useful when you need to include calculated values or perform complex calculations.

To add formulas to cells during the export process, you can utilize the [valueAccessor](#) method along with the [excelQueryCellInfo](#) event.

In the following example, the [toolbarClick](#) function handles a toolbar button click event. When the Excel Export button is clicked, it triggers the Excel export process. Inside this function, an [excelExportProperties](#) object is defined, specifying that hidden columns should be included in the export. Inside the [excelQueryCellInfo](#) event, the [valueAccessor](#) method generates formulas for the desired cells and assigns these formulas to the cell's formula property, ensuring that the calculated values are exported to the Excel document:

APP.JSX

```

import { ClickEventArgs } from '@syncfusion/ej2-navigations';
import { ColumnDirective, ColumnsDirective, GridComponent, ToolbarItems,
ExcelExport, ExcelQueryCellInfoEventArgs, ExcelExportProperties, Inject,
Toolbar, Page } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { inventoryData } from './datasource';
function App() {
  let grid;
  const toolbar = ['ExcelExport'];
  const toolbarClick = (args) => {
    if (grid && args.item.id === 'Grid_excelexport') {
      const excelExportProperties = {
        includeHiddenColumn: true,

```

```

    };
    grid.excelExport(excelExportProperties);
  }
}
const excelQueryCellInfo = (args) => {
  if (args.column.field === 'TotalPatents') {
    args.value = valueAccess(args.column.field, (args.data));
    args.cell.formula = args.value;
  }
}
const valueAccess = (field, data) => {
  const cell = (inventoryData).indexOf(data) + 2;
  return 'E' + cell + '+' + 'B' + cell;
}
return (
  <div>
    <GridComponent id='Grid' dataSource={inventoryData} height={270}
allowPaging={true} toolbar={toolbar} allowExcelExport={true}
toolbarClick={toolbarClick} ref={g => grid = g}
excelQueryCellInfo={excelQueryCellInfo}>
      <ColumnsDirective>
        <ColumnDirective field='Inventor' headerText='Inventor Name'
width='120' textAlign='Right' />
        <ColumnDirective field='NumberofPatentFamilies' headerText='Number
of Patent Families' width='150' />
        <ColumnDirective field='Country' headerText='Country' width='150'
/>
        <ColumnDirective field='Mainfieldsofinvention' headerText='Main
fields of invention' width='150' />
        <ColumnDirective field='Number of INPADOC patents'
headerText='Number of INPADOC patents' width='150' />
        <ColumnDirective field='TotalPatents' headerText='TotalPatents'
valueAccessor={valueAccess} width='150' visible={false} />
      </ColumnsDirective>
      <Inject services={[Toolbar, ExcelExport, Page]} />
    </GridComponent>
  </div>
);
}
export default App;

```

APP.TSX

```

import { ClickEventArgs } from '@syncfusion/ej2-navigations';
import { ColumnDirective, ColumnsDirective, GridComponent, ToolbarItems,
ExcelExport, ExcelQueryCellInfoEventArgs, ExcelExportProperties, Inject,
Toolbar, Page } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { inventoryData } from '../datasource';
interface CustomExcelCell {
  formula: string;
}
function App() {
  let grid: GridComponent | null;
  const toolbar: ToolbarItems[] = ['ExcelExport'];
  const toolbarClick = (args: ClickEventArgs) => {

```

```

    if (grid && args.item.id === 'Grid_excelexport') {
      const excelExportProperties: ExcelExportProperties = {
        includeHiddenColumn: true,
      };
      grid.excelExport(excelExportProperties);
    }
  }
  const excelQueryCellInfo = (args: ExcelQueryCellInfoEventArgs) => {
    if (args.column.field === 'TotalPatents') {
      args.value = valueAccess(args.column.field, (args.data as Object[]));
      (args.cell as CustomExcelCell).formula = args.value;
    }
  }
  const valueAccess = (field: string, data: Object[]) => {
    const cell = (inventoryData as Object[]).indexOf(data) + 2;
    return 'E' + cell + '+' + 'B' + cell;
  }
  return (
    <div>
      <GridComponent id='Grid' dataSource={inventoryData} height={270}
        allowPaging={true} toolbar={toolbar} allowExcelExport={true}
        toolbarClick={toolbarClick} ref={g => grid = g}
        excelQueryCellInfo={excelQueryCellInfo}>
        <ColumnsDirective>
          <ColumnDirective field='Inventor' headerText='Inventor Name'
            width='120' textAlign='Right' />
          <ColumnDirective field='NumberofPatentFamilies' headerText='Number
            of Patent Families' width='150' />
          <ColumnDirective field='Country' headerText='Country' width='150'
            />
          <ColumnDirective field='Mainfieldsofinvention' headerText='Main
            fields of invention' width='150' />
          <ColumnDirective field='Number of INPADOC patents'
            headerText='Number of INPADOC patents' width='150' />
          <ColumnDirective field='TotalPatents' headerText='TotalPatents'
            valueAccessor={valueAccess} width='150' visible={false} />
        </ColumnsDirective>
        <Inject services={[Toolbar, ExcelExport, Page]} />
      </GridComponent>
    </div>
  );
}
export default App;

```

DATASOURCE.JSX

```

export var inventoryData = [
  {
    Inventor: 'Kia Silverbrook',
    NumberofPatentFamilies: 4737,
    Country: 'Australia',
    'Number of INPADOC patents': 9839,
    Active: '1994-2016',
    Mainfieldsofinvention:
      'Printing, Digital paper, Internet, Electronics, Lab-on-a-chip, MEMS,
      Mechanical, VLSI',
  }
]

```

```

    },
    {
      Inventor: 'Shunpei Yamazaki',
      NumberofPatentFamilies: 4677,
      Country: 'Japan',
      'Number of INPADOC patents': 10000,
      Active: '1976-2016',
      Mainfieldsofinvention:
        'Thin film transistors, Liquid crystal displays, Solar cells, Flash
memory, OLED',
    },
    {
      Inventor: 'Lowell L. Wood, Jr.',
      NumberofPatentFamilies: 1419,
      Country: 'USA',
      'Number of INPADOC patents': 1332,
      Active: '1977-2016',
      Mainfieldsofinvention: 'Mosquito laser, Nuclear weapons',
    },
    {
      Inventor: 'Paul Lapstun',
      NumberofPatentFamilies: 1281,
      Country: 'Australia',
      'Number of INPADOC patents': 3099,
      Active: '2000-2016',
      Mainfieldsofinvention:
        'Printing, Digital paper, Internet, Electronics, CGI, VLSI',
    },
    {
      Inventor: 'Gurtej Sandhu',
      NumberofPatentFamilies: 1255,
      Country: 'India',
      'Number of INPADOC patents': 2038,
      Active: '1991-2016',
      Mainfieldsofinvention:
        'Thin film processes and materials, VLSI, Semiconductor device
fabrication',
    },
    {
      Inventor: 'Jun Koyama',
      NumberofPatentFamilies: 1240,
      Country: 'Japan',
      'Number of INPADOC patents': 4126,
      Active: '1991-2016',
      Mainfieldsofinvention:
        'Thin film transistors, Liquid crystal displays, OLED',
    },
    {
      Inventor: 'Roderick A. Hyde',
      NumberofPatentFamilies: 1240,
      Country: 'USA',
      'Number of INPADOC patents': 3360,
      Active: '2001-2016',
      Mainfieldsofinvention: 'Various',
    },
    {
      Inventor: 'Leonard Forbes',

```

```

        NumberofPatentFamilies: 1093,
        Country: 'Canada',
        'Number of INPADOC patents': 1398,
        Active: '1991-2016',
        Mainfieldsofinvention:
            'Semiconductor Memories, CCDs, Thin film processes and materials,
VLSI',
    },
    {
        Inventor: 'Thomas Edison',
        NumberofPatentFamilies: 1084,
        Country: 'USA',
        'Number of INPADOC patents': 2332,
        Active: '1847(b)-1931(d)',
        Mainfieldsofinvention:
            'Electric power, Lighting, Batteries, Phonograph, Cement, Telegraphy,
Mining',
    },
    {
        Inventor: 'Donald E. Weder',
        NumberofPatentFamilies: 999,
        Country: 'USA',
        'Number of INPADOC patents': 1993,
        Active: '1976-2015',
        Mainfieldsofinvention: 'Florist supplies',
    },
    {
        Inventor: 'George Albert Lyon',
        NumberofPatentFamilies: 993,
        Country: 'Canada',
        'Number of INPADOC patents': 0,
        Active: '1882(b)-1961(d)',
        Mainfieldsofinvention: 'Automotive, Stainless steel products',
    },
    {
        Inventor: "John F. O'Connor",
        NumberofPatentFamilies: 949,
        Country: 'USA',
        'Number of INPADOC patents': 0,
        Active: '1864(b)-1938(d)',
        Mainfieldsofinvention: 'Railway draft gearing',
    },
    {
        Inventor: 'Melvin De Groote',
        NumberofPatentFamilies: 925,
        Country: 'USA',
        'Number of INPADOC patents': 0,
        Active: '1895(b)-1963(d)',
        Mainfieldsofinvention: 'Chemical de-emulsifiers',
    },
    {
        Inventor: 'Jay S. Walker',
        NumberofPatentFamilies: 918,
        Country: 'USA',
        'Number of INPADOC patents': 2206,
        Active: '1998-2016',
        Mainfieldsofinvention: 'Gaming machines',
    },

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    {
      Inventor: 'Edward K. Y. Jung',
      NumberofPatentFamilies: 911,
      Country: 'USA',
      'Number of INPADOC patents': 2254,
      Active: '1996-2016',
      Mainfieldsofinvention: 'Various',
    },
    {
      Inventor: 'Francis H. Richards',
      NumberofPatentFamilies: 894,
      Country: 'USA',
      'Number of INPADOC patents': 12,
      Active: '1850(b)-19??(d)',
      Mainfieldsofinvention: 'Mechanical, automation',
    },
    {
      Inventor: 'Kangguo Cheng',
      NumberofPatentFamilies: 884,
      Country: 'USA',
      'Number of INPADOC patents': 1314,
      Active: '2004-2016',
      Mainfieldsofinvention:
        'Semiconductor device fabrication, Semiconductor memory,
        Semiconductor device',
    },
    {
      Inventor: 'Clarence T. Tegreene',
      NumberofPatentFamilies: 872,
      Country: 'USA',
      'Number of INPADOC patents': 2255,
      Active: '2000-2016',
      Mainfieldsofinvention: 'Various',
    },
    {
      Inventor: 'Ahmadreza Rofougaran',
      NumberofPatentFamilies: 808,
      Country: 'USA',
      'Number of INPADOC patents': 1396,
      Active: '2002-2016',
      Mainfieldsofinvention: 'Radio Frequency Integrated Circuits',
    },
    {
      Inventor: 'Shou-Shan Fan',
      NumberofPatentFamilies: 805,
      Country: 'China',
      'Number of INPADOC patents': 2120,
      Active: '2006-2016',
      Mainfieldsofinvention:
        'Carbon nanotubes and applications of carbon nanotubes',
    },
    {
      Inventor: 'Michael J. Sullivan',
      NumberofPatentFamilies: 788,
      Country: 'USA',
      'Number of INPADOC patents': 1560,
    }
  ]

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    Active: '1977-2016',
    Mainfieldsofinvention: 'Golf balls',
  },
  {
    Inventor: 'Rick Allen Hamilton II',
    NumberofPatentFamilies: 773,
    Country: 'USA',
    'Number of INPADOC patents': 1064,
    Active: '1999-2016',
    Mainfieldsofinvention: 'Various',
  },
  {
    Inventor: 'Warren Farnworth',
    NumberofPatentFamilies: 770,
    Country: 'USA',
    'Number of INPADOC patents': 931,
    Active: '1990-2016',
    Mainfieldsofinvention: 'Semiconductor packaging',
  },
  {
    Inventor: 'Carleton Ellis',
    NumberofPatentFamilies: 753,
    Country: 'USA',
    'Number of INPADOC patents': 21,
    Active: '1876(b)-1941(d)',
    Mainfieldsofinvention:
      'Margarine, Polyester, Anti-knock gasoline, Paint stripper',
  },
  {
    Inventor: 'William H. Eby',
    NumberofPatentFamilies: 733,
    Country: 'USA',
    'Number of INPADOC patents': 758,
    Active: '1994-2016',
    Mainfieldsofinvention: 'Transgenic soybeans',
  },
  {
    Inventor: 'Hideo Ando',
    NumberofPatentFamilies: 728,
    Country: 'Japan',
    'Number of INPADOC patents': 2588,
    Active: '1983-2016',
    Mainfieldsofinvention: 'Optical recording',
  },
  {
    Inventor: 'Salman Akram',
    NumberofPatentFamilies: 728,
    Country: 'USA',
    'Number of INPADOC patents': 915,
    Active: '1995-2016',
    Mainfieldsofinvention: 'Semiconductor packaging',
  },
  {
    Inventor: 'George Spector',
    NumberofPatentFamilies: 722,
    Country: 'USA',
    'Number of INPADOC patents': 747,
  }

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    Active: '1976-1998',
    Mainfieldsofinvention: 'Gadgets, Toys',
  },
  {
    Inventor: 'Jeyhan Karaoguz',
    NumberofPatentFamilies: 721,
    Country: 'USA',
    'Number of INPADOC patents': 1530,
    Active: '1996-2016',
    Mainfieldsofinvention: 'Wireless communications, Computer networks',
  },
  {
    Inventor: 'Elihu Thomson',
    NumberofPatentFamilies: 696,
    Country: 'UK',
    'Number of INPADOC patents': 50,
    Active: '1853(b)-1937(d)',
    Mainfieldsofinvention:
      'Electric power, Arc lamp, Electric motors, Lightning arrester, Arc
welder',
  },
  {
    Inventor: 'Austin L. Gurney',
    NumberofPatentFamilies: 695,
    Country: 'USA',
    'Number of INPADOC patents': 3909,
    Active: '1999-2016',
    Mainfieldsofinvention: 'Proteins, Antibodies',
  },
  {
    Inventor: 'Tetsujiro Kondo',
    NumberofPatentFamilies: 684,
    Country: 'Japan',
    'Number of INPADOC patents': 4158,
    Active: '1987-2015',
    Mainfieldsofinvention: 'Signal processing, Image processing',
  },
  {
    Inventor: 'Nathan Myhrvold',
    NumberofPatentFamilies: 661,
    Country: 'USA',
    'Number of INPADOC patents': 1690,
    Active: '1994-2016',
    Mainfieldsofinvention: 'Various',
  },
  {
    Inventor: 'William I. Wood',
    NumberofPatentFamilies: 653,
    Country: 'USA',
    'Number of INPADOC patents': 3560,
    Active: '1981-2016',
    Mainfieldsofinvention: 'Proteins, Antibodies',
  },
  {
    Inventor: 'Simon R. Walmsley',
    NumberofPatentFamilies: 651,
    Country: 'Australia',

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    'Number of INPADOC patents': 1249,
    Active: '1995-2015',
    Mainfieldsofinvention: 'Printing, Electronics, VLSI, Cryptography',
  },
  {
    Inventor: 'Mark Malamud',
    NumberofPatentFamilies: 632,
    Country: 'USA',
    'Number of INPADOC patents': 1759,
    Active: '1997-2016',
    Mainfieldsofinvention: 'Various',
  },
  {
    Inventor: 'Royce A. Levien',
    NumberofPatentFamilies: 630,
    Country: 'USA',
    'Number of INPADOC patents': 1799,
    Active: '1997-2016',
    Mainfieldsofinvention: 'Various',
  },
  {
    Inventor: 'Audrey D. Goddard',
    NumberofPatentFamilies: 622,
    Country: 'USA',
    'Number of INPADOC patents': 3416,
    Active: '1997-2014',
    Mainfieldsofinvention: 'Proteins, Antibodies',
  },
  {
    Inventor: 'Muriel Y. Ishikawa',
    NumberofPatentFamilies: 619,
    Country: 'USA',
    'Number of INPADOC patents': 1660,
    Active: '2002-2016',
    Mainfieldsofinvention: 'Various',
  },
  {
    Inventor: 'Robert W. Lord',
    NumberofPatentFamilies: 618,
    Country: 'USA',
    'Number of INPADOC patents': 1708,
    Active: '2003-2016',
    Mainfieldsofinvention: 'Various',
  },
  {
    Inventor: 'Jerome Lemelson',
    NumberofPatentFamilies: 606,
    Country: 'USA',
    'Number of INPADOC patents': 60,
    Active: '1923(b)-1997(d)',
    Mainfieldsofinvention:
      'Toys, Industrial robots, Cordless telephones, Fax machines,
Videocassette recorders',
  },
  {
    Inventor: 'Béla Barényi',
    NumberofPatentFamilies: 595,

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Country: 'Austria',
'Number of INPADOC patents': 1244,
Active: '1907(b)-1997(d)',
Mainfieldsofinvention: 'Passive safety in automobiles',
},
{
  Inventor: 'Kie Y Ahn',
  NumberofPatentFamilies: 593,
  Country: 'USA',
  'Number of INPADOC patents': 709,
  Active: '1976-2016',
  Mainfieldsofinvention:
    'Thin film processes and materials, VLSI, Semiconductor device
fabrication',
},
{
  Inventor: 'Tadahiro Ohmi',
  NumberofPatentFamilies: 592,
  Country: 'Japan',
  'Number of INPADOC patents': 2691,
  Active: '1981-2016',
  Mainfieldsofinvention:
    'Thin film processes and materials, Semiconductor device
fabrication',
},
{
  Inventor: 'Jordin T. Kare',
  NumberofPatentFamilies: 585,
  Country: 'USA',
  'Number of INPADOC patents': 1559,
  Active: '1992-2016',
  Mainfieldsofinvention: 'Various',
},
{
  Inventor: 'Paul J. Godowski',
  NumberofPatentFamilies: 579,
  Country: 'USA',
  'Number of INPADOC patents': 2605,
  Active: '1994-2014',
  Mainfieldsofinvention: 'Proteins, Antibodies',
},
{
  Inventor: 'Artur Fischer',
  NumberofPatentFamilies: 570,
  Country: 'Germany',
  'Number of INPADOC patents': 3097,
  Active: '1976-2002',
  Mainfieldsofinvention: 'Fasteners, Construction toys',
},
{
  Inventor: 'Edward J. Nowak',
  NumberofPatentFamilies: 564,
  Country: 'USA',
  'Number of INPADOC patents': 1145,
  Active: '1979-2016',
  Mainfieldsofinvention:

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    'Semiconductor device fabrication, Semiconductor memory,
Semiconductor device',
  },
  {
    Inventor: 'Louis L. Hsu',
    NumberofPatentFamilies: 551,
    Country: 'USA',
    'Number of INPADOC patents': 914,
    Active: '1988-2016',
    Mainfieldsofinvention: 'Various',
  },
  {
    Inventor: 'Edwin H. Land',
    NumberofPatentFamilies: 535,
    Country: 'USA',
    'Number of INPADOC patents': 1236,
    Active: '1909(b)-1991(d)',
    Mainfieldsofinvention: 'Instant photography, Polarizing film',
  },
  {
    Inventor: 'Henri Dreyfus',
    NumberofPatentFamilies: 524,
    Country: 'Switzerland',
    'Number of INPADOC patents': 2117,
    Active: '1882(b)-1944(d)',
    Mainfieldsofinvention: 'Polymers, Synthetic fibers, Dyes',
  },
  {
    Inventor: 'Bruce B. Doris',
    NumberofPatentFamilies: 522,
    Country: 'USA',
    'Number of INPADOC patents': 867,
    Active: '1995-2016',
    Mainfieldsofinvention:
      'Integrated Circuits, CMOS, DRAM, Semiconductor device fabrication',
  },
  {
    Inventor: 'Clyde C. Farmer',
    NumberofPatentFamilies: 513,
    Country: 'USA',
    'Number of INPADOC patents': 830,
    Active: '18??(b)-19??(d)',
    Mainfieldsofinvention: 'Railway air brakes',
  },
  {
    Inventor: 'Heinz Focke',
    NumberofPatentFamilies: 512,
    Country: 'Germany',
    'Number of INPADOC patents': 2896,
    Active: '1976-2013',
    Mainfieldsofinvention: 'Cigarette packaging',
  },
  {
    Inventor: 'Mark I. Gardner',
    NumberofPatentFamilies: 511,
    Country: 'USA',
    'Number of INPADOC patents': 587,

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Active: '1994-2010',
Mainfieldsofinvention:
  'Consumer electronics, Energy, Computers, Semiconductors, Physics',
},
{
  Inventor: 'Ravi K. Arimilli',
  NumberofPatentFamilies: 506,
  Country: 'India',
  'Number of INPADOC patents': 767,
  Active: '1992-2016',
  Mainfieldsofinvention:
    'Computer architecture, Semiconductor memory, Cache coherence,
Symmetric multiprocessing',
},
{
  Inventor: 'Louis H. Morin',
  NumberofPatentFamilies: 503,
  Country: 'USA',
  'Number of INPADOC patents': 720,
  Active: '18??(b)-19??(d)',
  Mainfieldsofinvention: 'Fasteners, Locks, Bobbins',
},
{
  Inventor: 'Tobin A. King',
  NumberofPatentFamilies: 497,
  Country: 'Australia',
  'Number of INPADOC patents': 1218,
  Active: '2000-2015',
  Mainfieldsofinvention: 'Printing, Digital paper, Mechanical',
},
{
  Inventor: 'Eric C. Leuthardt',
  NumberofPatentFamilies: 495,
  Country: 'USA',
  'Number of INPADOC patents': 1274,
  Active: '2006-2016',
  Mainfieldsofinvention: 'Medical devices',
},
{
  Inventor: 'Ali Khakifirooz',
  NumberofPatentFamilies: 489,
  Country: 'USA',
  'Number of INPADOC patents': 737,
  Active: '2011-2016',
  Mainfieldsofinvention:
    'Integrated Circuits, CMOS, Semiconductor device fabrication',
},
{
  Inventor: 'Jack A. Mandelman',
  NumberofPatentFamilies: 481,
  Country: 'USA',
  'Number of INPADOC patents': 889,
  Active: '1987-2014',
  Mainfieldsofinvention: 'Various',
},
{
  Inventor: 'Jeffrey P. Gambino',

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    NumberofPatentFamilies: 479,
    Country: 'USA',
    'Number of INPADOC patents': 798,
    Active: '1992-2016',
    Mainfieldsofinvention:
      'MEMS, CMOS, BiCMOS, DRAM, Image Sensors, RF, Biosensors, 3D
Integrated Circuits',
  },
  {
    Inventor: 'John M. Santosuosso',
    NumberofPatentFamilies: 473,
    Country: 'USA',
    'Number of INPADOC patents': 683,
    Active: '2001-2016',
    Mainfieldsofinvention: 'Various',
  },
  {
    Inventor: 'James M. Hart',
    NumberofPatentFamilies: 464,
    Country: 'USA',
    'Number of INPADOC patents': 1145,
    Active: '1988-2016',
    Mainfieldsofinvention: 'Motor vehicle transmission',
  },
  {
    Inventor: 'Eberhard Ammermann',
    NumberofPatentFamilies: 451,
    Country: 'Germany',
    'Number of INPADOC patents': 5178,
    Active: '1979-2015',
    Mainfieldsofinvention: 'Fungicides',
  },
  {
    Inventor: 'Thomas E. Murray',
    NumberofPatentFamilies: 449,
    Country: 'USA',
    'Number of INPADOC patents': 462,
    Active: '1860 (b) -1929 (d)',
    Mainfieldsofinvention:
      'Electrical, HVAC, Wheels, Metal working, Light dimmer',
  },
  {
    Inventor: 'Akira Nakazawa',
    NumberofPatentFamilies: 445,
    Country: 'Australia',
    'Number of INPADOC patents': 1340,
    Active: '1980-2016',
    Mainfieldsofinvention: 'Printing, Mechanical',
  },
  {
    Inventor: 'Hongyong Zhang',
    NumberofPatentFamilies: 440,
    Country: 'Japan',
    'Number of INPADOC patents': 858,
    Active: '1993-2016',
    Mainfieldsofinvention: 'Thin film transistors, Liquid crystal
displays',
  },

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    },
    {
      Inventor: 'Ronald S. Cok',
      NumberofPatentFamilies: 436,
      Country: 'USA',
      'Number of INPADOC patents': 747,
      Active: '1986-2016',
      Mainfieldsofinvention: 'OLED displays; image processing',
    },
    {
      Inventor: 'fe',
      NumberofPatentFamilies: 430,
      Country: 'USA',
      'Number of INPADOC patents': 1759,
      Active: '1983-2016',
      Mainfieldsofinvention: 'Biotechnology, Drug delivery, Tissue
engineering',
    },
    {
      Inventor: 'Scott H. Wittkopp',
      NumberofPatentFamilies: 429,
      Country: 'USA',
      'Number of INPADOC patents': 1010,
      Active: '2001-2016',
      Mainfieldsofinvention: 'Motor vehicle transmission',
    },
    {
      Inventor: 'John Hays Hammond, Jr.',
      NumberofPatentFamilies: 417,
      Country: 'USA',
      'Number of INPADOC patents': 460,
      Active: '1888(b)-1965(d)',
      Mainfieldsofinvention: 'Radio control, Radio communications,
Torpedoes',
    },
    {
      Inventor: 'Wilhelm Brandes',
      NumberofPatentFamilies: 411,
      Country: 'Germany',
      'Number of INPADOC patents': 2923,
      Active: '1976-2010',
      Mainfieldsofinvention: 'Fungicides',
    },
    {
      Inventor: 'Anthony K. Stamper',
      NumberofPatentFamilies: 411,
      Country: 'USA',
      'Number of INPADOC patents': 726,
      Active: '1998-2016',
      Mainfieldsofinvention: 'MEMS, CMOS, BiCMOS, Silicon-germanium',
    },
    {
      Inventor: 'Hossein Eslambolchi',
      NumberofPatentFamilies: 410,
      Country: 'USA',
      'Number of INPADOC patents': 631,
      Active: '1993-2016',
    }
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    Mainfieldsofinvention:
      'Telecommunications, Network intelligence, information Technology,
communications technology',
    },
    {
      Inventor: 'Stanford R. Ovshinsky',
      NumberofPatentFamilies: 400,
      Country: 'USA',
      'Number of INPADOC patents': 1649,
      Active: '1922(b)-2012(d)',
      Mainfieldsofinvention:
        'Batteries, Solar cells, Liquid crystal displays, Hydrogen fuel
cells, Computer data storage',
    },
    {
      Inventor: 'Victoria Y. H. Wood',
      NumberofPatentFamilies: 400,
      Country: 'USA',
      'Number of INPADOC patents': 1045,
      Active: '2009-2016',
      Mainfieldsofinvention: 'Various',
    },
    {
      Inventor: 'Josef Theurer',
      NumberofPatentFamilies: 388,
      Country: 'Austria',
      'Number of INPADOC patents': 5085,
      Active: '1976-2016',
      Mainfieldsofinvention: 'Railroad maintenance machines',
    },
    {
      Inventor: 'Cary L. Bates',
      NumberofPatentFamilies: 384,
      Country: 'USA',
      'Number of INPADOC patents': 570,
      Active: '1994-2016',
      Mainfieldsofinvention: 'Programming tools, DBX, Memory debuggers',
    },
    {
      Inventor: 'David V. Horak',
      NumberofPatentFamilies: 380,
      Country: 'USA',
      'Number of INPADOC patents': 616,
      Active: '1992-2016',
      Mainfieldsofinvention: 'Various',
    },
    {
      Inventor: 'Kai-Li Jiang',
      NumberofPatentFamilies: 379,
      Country: 'China',
      'Number of INPADOC patents': 829,
      Active: '2006-2016',
      Mainfieldsofinvention:
        'Carbon nanotubes and applications of carbon nanotubes',
    },
    {
      Inventor: 'Hans-Joachim Santel',

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    NumberofPatentFamilies: 377,
    Country: 'Germany',
    'Number of INPADOC patents': 2623,
    Active: '1986-2013',
    Mainfieldsofinvention: 'Herbicides, Pesticides, Organic chemistry',
  },
  {
    Inventor: 'Xuemin (Sherman) Chen',
    NumberofPatentFamilies: 377,
    Country: 'USA',
    'Number of INPADOC patents': 1151,
    Active: '1997-2017',
    Mainfieldsofinvention:
      'Computer networks, Integrated Circuits, Signal Processing',
  },
  {
    Inventor: 'George P. Liang',
    NumberofPatentFamilies: 375,
    Country: 'China',
    'Number of INPADOC patents': 508,
    Active: '1983-2016',
    Mainfieldsofinvention: 'Gas turbine cooling',
  },
  {
    Inventor: 'Gisela Lorenz',
    NumberofPatentFamilies: 374,
    Country: 'Germany',
    'Number of INPADOC patents': 4155,
    Active: '1990-2015',
    Mainfieldsofinvention: 'Fungicides, Organic chemistry',
  },
  {
    Inventor: 'Garry R. Jackson',
    NumberofPatentFamilies: 367,
    Country: 'Australia',
    'Number of INPADOC patents': 656,
    Active: '2001-2016',
    Mainfieldsofinvention: 'Printing, Mechanical',
  },
  {
    Inventor: 'Paul W. Dent',
    NumberofPatentFamilies: 362,
    Country: 'USA',
    'Number of INPADOC patents': 2252,
    Active: '1984-2015',
    Mainfieldsofinvention: 'Wireless communications',
  },
  {
    Inventor: 'George Westinghouse',
    NumberofPatentFamilies: 361,
    Country: 'USA',
    'Number of INPADOC patents': 0,
    Active: '1846(b)-1914(d)',
    Mainfieldsofinvention:
      'Electric power, Electricity meter, Railway air brake, Steam
engines',
  },

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{
  Inventor: 'Wael W. Diab',
  NumberofPatentFamilies: 358,
  Country: 'USA',
  'Number of INPADOC patents': 774,
  Active: '2003-2016',
  Mainfieldsofinvention: 'Computer networks',
},
{
  Inventor: 'Devendra K. Sadana',
  NumberofPatentFamilies: 356,
  Country: 'India',
  'Number of INPADOC patents': 794,
  Active: '1983-2016',
  Mainfieldsofinvention:
    'Solar cells, OLED, Integrated Circuits, CMOS, DRAM, LEDs',
},
{
  Inventor: 'Vincent J. Zimmer',
  NumberofPatentFamilies: 354,
  Country: 'USA',
  'Number of INPADOC patents': 972,
  Active: '1999-2016',
  Mainfieldsofinvention: 'Computer software and firmware',
},
{
  Inventor: 'Robert R. Schmidt',
  NumberofPatentFamilies: 350,
  Country: 'Germany',
  'Number of INPADOC patents': 2467,
  Active: '1971-2005',
  Mainfieldsofinvention: 'Herbicides, Fungicides, Organic chemistry',
},
{
  Inventor: 'Norman M. Berry',
  NumberofPatentFamilies: 347,
  Country: 'Australia',
  'Number of INPADOC patents': 516,
  Active: '2006-2016',
  Mainfieldsofinvention: 'Printing, Mechanical',
},
{
  Inventor: 'Chih-Chao Yang',
  NumberofPatentFamilies: 345,
  Country: 'USA',
  'Number of INPADOC patents': 690,
  Active: '2003-2016',
  Mainfieldsofinvention: 'Integrated Circuits',
},
{
  Inventor: 'Gregory J. Boss',
  NumberofPatentFamilies: 345,
  Country: 'USA',
  'Number of INPADOC patents': 588,
  Active: '2008-2016',
  Mainfieldsofinvention: 'Various',
},

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{
  Inventor: 'Mark W. Kroll',
  NumberofPatentFamilies: 343,
  Country: 'USA',
  'Number of INPADOC patents': 460,
  Active: '1987-2016',
  Mainfieldsofinvention: 'Implantable medical devices',
},
{
  Inventor: "Brian M. O'Connell",
  NumberofPatentFamilies: 331,
  Country: 'USA',
  'Number of INPADOC patents': 592,
  Active: '2009-2016',
  Mainfieldsofinvention: 'Various',
},
{
  Inventor: 'William Daniel Hillis',
  NumberofPatentFamilies: 328,
  Country: 'USA',
  'Number of INPADOC patents': 229,
  Active: '1986-2016',
  Mainfieldsofinvention: 'Various',
},
{
  Inventor: 'Brent A. Anderson',
  NumberofPatentFamilies: 323,
  Country: 'USA',
  'Number of INPADOC patents': 454,
  Active: '2001-2016',
  Mainfieldsofinvention:
    'Semiconductor device fabrication, Semiconductor memory,
Semiconductor device',
},
{
  Inventor: 'Jeffrey E. Stahmann',
  NumberofPatentFamilies: 321,
  Country: 'USA',
  'Number of INPADOC patents': 640,
  Active: '1994-2016',
  Mainfieldsofinvention: 'Medical devices',
},
{
  Inventor: 'Carl J. Radens',
  NumberofPatentFamilies: 317,
  Country: 'USA',
  'Number of INPADOC patents': 636,
  Active: '1994-2016',
  Mainfieldsofinvention:
    'Integrated Circuits, CMOS, DRAM, Semiconductor device fabrication',
},
{
  Inventor: 'Clifford A. Pickover',
  NumberofPatentFamilies: 317,
  Country: 'USA',
  'Number of INPADOC patents': 653,
  Active: '1992-2016',

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    Mainfieldsofinvention: 'Various',
  },
  {
    Inventor: 'Liang Liu',
    NumberofPatentFamilies: 310,
    Country: 'China',
    'Number of INPADOC patents': 777,
    Active: '2005-2016',
    Mainfieldsofinvention:
      'Carbon nanotubes and applications of carbon nanotubes',
  },
  {
    Inventor: 'Steven L. Teig',
    NumberofPatentFamilies: 307,
    Country: 'USA',
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    Inventor: 'Victoria Smith',
    NumberofPatentFamilies: 305,
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    'Number of INPADOC patents': 2040,
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    NumberofPatentFamilies: 299,
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    'Number of INPADOC patents': 67,
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      'Earthworks (engineering), Heavy Equipment, Industrial Machinery',
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    Inventor: 'William R. Tonti',
    NumberofPatentFamilies: 291,
    Country: 'USA',
    'Number of INPADOC patents': 441,
    Active: '1994-2016',
    Mainfieldsofinvention:
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  {
    Inventor: 'Keith R. Walker',
    NumberofPatentFamilies: 282,
    Country: 'Saudi Arabia',
    'Number of INPADOC patents': 318,
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    Mainfieldsofinvention: 'Various',
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    Inventor: 'Victor S. Moore',
    NumberofPatentFamilies: 280,
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    'Number of INPADOC patents': 428,
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    Inventor: 'Hanson S. Gifford III',
    NumberofPatentFamilies: 276,
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    'Number of INPADOC patents': 795,
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    Mainfieldsofinvention: 'Medical Devices',
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  {
    Inventor: 'Daniel J. Winarski',
    NumberofPatentFamilies: 275,
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    'Number of INPADOC patents': 506,
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    Mainfieldsofinvention: 'Various',
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  {
    Inventor: 'Adam Heller',
    NumberofPatentFamilies: 272,
    Country: 'Romania',
    'Number of INPADOC patents': 711,
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    Mainfieldsofinvention: 'Solar cells, Glucose meters, Lasers',
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  {
    Inventor: 'Lisa Seacat DeLuca',
    NumberofPatentFamilies: 271,
    Country: 'USA',
    'Number of INPADOC patents': 385,
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    Mainfieldsofinvention: 'Various',
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    Inventor: 'Brent Keeth',
    NumberofPatentFamilies: 270,
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    'Number of INPADOC patents': 470,
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    Active: '2001-2017',
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    'Number of INPADOC patents': 486,
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    Mainfieldsofinvention: 'Various',
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    NumberofPatentFamilies: 248,
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    'Number of INPADOC patents': 1658,
    Active: '2000-2017',
    Mainfieldsofinvention: 'Wireless communications',
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  {
    Inventor: 'Nobuyuki Taniguchi',
    NumberofPatentFamilies: 245,
    Country: 'Japan',
    'Number of INPADOC patents': 967,
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    Mainfieldsofinvention: 'Cameras',
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  {
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    NumberofPatentFamilies: 243,
    Country: 'USA',
    'Number of INPADOC patents': 1186,
    Active: '1979-2016',
    Mainfieldsofinvention:
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    NumberofPatentFamilies: 236,
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    'Number of INPADOC patents': 158,
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    Mainfieldsofinvention: 'Various',
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  {
    Inventor: 'Rajiv V. Joshi',
    NumberofPatentFamilies: 235,
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    'Number of INPADOC patents': 354,
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    NumberofPatentFamilies: 235,
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    'Number of INPADOC patents': 526,
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    NumberofPatentFamilies: 231,
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    'Number of INPADOC patents': 444,
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    Mainfieldsofinvention: 'Various',
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    Inventor: 'Takeshi Chujoh',
    NumberofPatentFamilies: 229,
    Country: 'Japan',
    'Number of INPADOC patents': 1065,
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    Mainfieldsofinvention: 'Video processing',
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    NumberofPatentFamilies: 225,
    Country: 'USA',
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    Mainfieldsofinvention:
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Interfaces, Automotive',
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    NumberofPatentFamilies: 220,
    Country: 'Australia',
    'Number of INPADOC patents': 246,
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    Mainfieldsofinvention: 'Printing, Mechanical',
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  {
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    NumberofPatentFamilies: 218,
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  {
    Inventor: 'Thomas J. Kennedy III',

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    NumberofPatentFamilies: 218,
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    NumberofPatentFamilies: 213,
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    'Number of INPADOC patents': 387,
    Active: '1997-2016',
    Mainfieldsofinvention: 'Various',
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    Inventor: 'Esmael H. Dinan',
    NumberofPatentFamilies: 208,
    Country: 'USA',
    'Number of INPADOC patents': 344,
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    Mainfieldsofinvention: 'Communication Networks',
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  {
    Inventor: 'Imad Libbus',
    NumberofPatentFamilies: 207,
    Country: 'USA',
    'Number of INPADOC patents': 472,
    Active: '2007-2017',
    Mainfieldsofinvention: 'Medical devices',
  },
  {
    Inventor: 'Hiroshi (You) Yoshioka',
    NumberofPatentFamilies: 205,
    Country: 'Japan',
    'Number of INPADOC patents': 181,
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    Mainfieldsofinvention: 'Cameras',
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  {
    Inventor: 'Patrick B. Usoro',
    NumberofPatentFamilies: 205,
    Country: 'USA',
    'Number of INPADOC patents': 343,
    Active: '1999-2016',
    Mainfieldsofinvention:
      'Transmissions, Hybrid Powertrains, Vehicle Thermal Management',
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  {
    Inventor: 'Gregory McAvoy',
    NumberofPatentFamilies: 205,
    Country: 'Australia',
    'Number of INPADOC patents': 433,
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    Mainfieldsofinvention: 'Printing, MEMS',
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    Inventor: 'Sebastian T Ventrone',

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  {
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    NumberofPatentFamilies: 200,
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    'Number of INPADOC patents': 452,
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Computer Vision',
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Mechanical, VLSI',
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  {
    Inventor: 'Shunpei Yamazaki',
    NumberofPatentFamilies: 4677,
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memory, OLED',
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  {
    Inventor: 'Lowell L. Wood, Jr.',
    NumberofPatentFamilies: 1419,
    Country: 'USA',
    'Number of INPADOC patents': 1332,
    Active: '1977-2016',
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  {
    Inventor: 'Paul Lapstun',
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Mainfieldsofinvention:
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fabrication',
},
{
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  NumberofPatentFamilies: 1240,
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  'Number of INPADOC patents': 4126,
  Active: '1991-2016',
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{
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  NumberofPatentFamilies: 1240,
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  NumberofPatentFamilies: 1093,
  Country: 'Canada',
  'Number of INPADOC patents': 1398,
  Active: '1991-2016',
  Mainfieldsofinvention:
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VLSI',
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{
  Inventor: 'Thomas Edison',
  NumberofPatentFamilies: 1084,
  Country: 'USA',
  'Number of INPADOC patents': 2332,
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  Mainfieldsofinvention:
    'Electric power, Lighting, Batteries, Phonograph, Cement, Telegraphy,
Mining',
},
{
  Inventor: 'Donald E. Weder',
  NumberofPatentFamilies: 999,
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  'Number of INPADOC patents': 1993,
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  Mainfieldsofinvention: 'Florist supplies',

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{
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  NumberofPatentFamilies: 949,
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  'Number of INPADOC patents': 0,
  Active: '1864(b)-1938(d)',
  Mainfieldsofinvention: 'Railway draft gearing',
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{
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  NumberofPatentFamilies: 925,
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  'Number of INPADOC patents': 0,
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  Mainfieldsofinvention: 'Chemical de-emulsifiers',
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  Inventor: 'Jay S. Walker',
  NumberofPatentFamilies: 918,
  Country: 'USA',
  'Number of INPADOC patents': 2206,
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  Inventor: 'Edward K. Y. Jung',
  NumberofPatentFamilies: 911,
  Country: 'USA',
  'Number of INPADOC patents': 2254,
  Active: '1996-2016',
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  NumberofPatentFamilies: 894,
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  'Number of INPADOC patents': 12,
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  'Number of INPADOC patents': 1314,
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    NumberofPatentFamilies: 805,
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    'Number of INPADOC patents': 2120,
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    NumberofPatentFamilies: 788,
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    'Number of INPADOC patents': 1560,
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    Mainfieldsofinvention: 'Golf balls',
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Active: '1876(b)-1941(d)',
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  Mainfieldsofinvention: 'Semiconductor packaging',
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{
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  'Number of INPADOC patents': 747,
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  NumberofPatentFamilies: 721,
  Country: 'USA',
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  Mainfieldsofinvention: 'Wireless communications, Computer networks',
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  Mainfieldsofinvention:
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welder',
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{
  Inventor: 'Austin L. Gurney',
  NumberofPatentFamilies: 695,

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Country: 'USA',
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{
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  NumberofPatentFamilies: 684,
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  'Number of INPADOC patents': 4158,
  Active: '1987-2015',
  Mainfieldsofinvention: 'Signal processing, Image processing',
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{
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  NumberofPatentFamilies: 661,
  Country: 'USA',
  'Number of INPADOC patents': 1690,
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  Mainfieldsofinvention: 'Various',
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{
  Inventor: 'Simon R. Walmsley',
  NumberofPatentFamilies: 651,
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  'Number of INPADOC patents': 1249,
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  Mainfieldsofinvention: 'Printing, Electronics, VLSI, Cryptography',
},
{
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  NumberofPatentFamilies: 632,
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  'Number of INPADOC patents': 1759,
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  NumberofPatentFamilies: 630,
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  NumberofPatentFamilies: 622,
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    'Number of INPADOC patents': 3416,
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    NumberofPatentFamilies: 618,
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    Mainfieldsofinvention: 'Various',
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  {
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    NumberofPatentFamilies: 606,
    Country: 'USA',
    'Number of INPADOC patents': 60,
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    Mainfieldsofinvention:
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Videocassette recorders',
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    Inventor: 'Béla Barényi',
    NumberofPatentFamilies: 595,
    Country: 'Austria',
    'Number of INPADOC patents': 1244,
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fabrication',
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    'Number of INPADOC patents': 2691,
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fabrication',

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      NumberofPatentFamilies: 570,
      Country: 'Germany',
      'Number of INPADOC patents': 3097,
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      Mainfieldsofinvention: 'Fasteners, Construction toys',
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    {
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      NumberofPatentFamilies: 564,
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      'Number of INPADOC patents': 1145,
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      Mainfieldsofinvention:
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Semiconductor device',
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      NumberofPatentFamilies: 551,
      Country: 'USA',
      'Number of INPADOC patents': 914,
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      Mainfieldsofinvention: 'Various',
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      NumberofPatentFamilies: 535,
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      'Number of INPADOC patents': 1236,
      Active: '1909(b)-1991(d)',
      Mainfieldsofinvention: 'Instant photography, Polarizing film',
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    {
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      NumberofPatentFamilies: 524,
      Country: 'Switzerland',
      'Number of INPADOC patents': 2117,
      Active: '1882(b)-1944(d)',
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    Mainfieldsofinvention: 'Polymers, Synthetic fibers, Dyes',
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    'Number of INPADOC patents': 867,
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    Mainfieldsofinvention:
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  },
  {
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    NumberofPatentFamilies: 513,
    Country: 'USA',
    'Number of INPADOC patents': 830,
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    Mainfieldsofinvention: 'Railway air brakes',
  },
  {
    Inventor: 'Heinz Focke',
    NumberofPatentFamilies: 512,
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    'Number of INPADOC patents': 2896,
    Active: '1976-2013',
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  {
    Inventor: 'Mark I. Gardner',
    NumberofPatentFamilies: 511,
    Country: 'USA',
    'Number of INPADOC patents': 587,
    Active: '1994-2010',
    Mainfieldsofinvention:
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  {
    Inventor: 'Ravi K. Arimilli',
    NumberofPatentFamilies: 506,
    Country: 'India',
    'Number of INPADOC patents': 767,
    Active: '1992-2016',
    Mainfieldsofinvention:
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Symmetric multiprocessing',
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    NumberofPatentFamilies: 503,
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    'Number of INPADOC patents': 720,
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  {
    Inventor: 'Tobin A. King',
    NumberofPatentFamilies: 497,

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Country: 'Australia',
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Mainfieldsofinvention: 'Printing, Digital paper, Mechanical',
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  NumberofPatentFamilies: 495,
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  'Number of INPADOC patents': 1274,
  Active: '2006-2016',
  Mainfieldsofinvention: 'Medical devices',
},
{
  Inventor: 'Ali Khakifirooz',
  NumberofPatentFamilies: 489,
  Country: 'USA',
  'Number of INPADOC patents': 737,
  Active: '2011-2016',
  Mainfieldsofinvention:
    'Integrated Circuits, CMOS, Semiconductor device fabrication',
},
{
  Inventor: 'Jack A. Mandelman',
  NumberofPatentFamilies: 481,
  Country: 'USA',
  'Number of INPADOC patents': 889,
  Active: '1987-2014',
  Mainfieldsofinvention: 'Various',
},
{
  Inventor: 'Jeffrey P. Gambino',
  NumberofPatentFamilies: 479,
  Country: 'USA',
  'Number of INPADOC patents': 798,
  Active: '1992-2016',
  Mainfieldsofinvention:
    'MEMS, CMOS, BiCMOS, DRAM, Image Sensors, RF, Biosensors, 3D
Integrated Circuits',
},
{
  Inventor: 'John M. Santosuosso',
  NumberofPatentFamilies: 473,
  Country: 'USA',
  'Number of INPADOC patents': 683,
  Active: '2001-2016',
  Mainfieldsofinvention: 'Various',
},
{
  Inventor: 'James M. Hart',
  NumberofPatentFamilies: 464,
  Country: 'USA',
  'Number of INPADOC patents': 1145,
  Active: '1988-2016',
  Mainfieldsofinvention: 'Motor vehicle transmission',
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    Inventor: 'Eberhard Ammermann',
    NumberofPatentFamilies: 451,
    Country: 'Germany',
    'Number of INPADOC patents': 5178,
    Active: '1979-2015',
    Mainfieldsofinvention: 'Fungicides',
  },
  {
    Inventor: 'Thomas E. Murray',
    NumberofPatentFamilies: 449,
    Country: 'USA',
    'Number of INPADOC patents': 462,
    Active: '1860(b)-1929(d)',
    Mainfieldsofinvention:
      'Electrical, HVAC, Wheels, Metal working, Light dimmer',
  },
  {
    Inventor: 'Akira Nakazawa',
    NumberofPatentFamilies: 445,
    Country: 'Australia',
    'Number of INPADOC patents': 1340,
    Active: '1980-2016',
    Mainfieldsofinvention: 'Printing, Mechanical',
  },
  {
    Inventor: 'Hongyong Zhang',
    NumberofPatentFamilies: 440,
    Country: 'Japan',
    'Number of INPADOC patents': 858,
    Active: '1993-2016',
    Mainfieldsofinvention: 'Thin film transistors, Liquid crystal
displays',
  },
  {
    Inventor: 'Ronald S. Cok',
    NumberofPatentFamilies: 436,
    Country: 'USA',
    'Number of INPADOC patents': 747,
    Active: '1986-2016',
    Mainfieldsofinvention: 'OLED displays; image processing',
  },
  {
    Inventor: 'fe',
    NumberofPatentFamilies: 430,
    Country: 'USA',
    'Number of INPADOC patents': 1759,
    Active: '1983-2016',
    Mainfieldsofinvention: 'Biotechnology, Drug delivery, Tissue
engineering',
  },
  {
    Inventor: 'Scott H. Wittkopp',
    NumberofPatentFamilies: 429,
    Country: 'USA',
    'Number of INPADOC patents': 1010,
    Active: '2001-2016',
    Mainfieldsofinvention: 'Motor vehicle transmission',
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    },
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      Inventor: 'John Hays Hammond, Jr.',
      NumberofPatentFamilies: 417,
      Country: 'USA',
      'Number of INPADOC patents': 460,
      Active: '1888(b)-1965(d)',
      Mainfieldsofinvention: 'Radio control, Radio communications,
Torpedoes',
    },
    {
      Inventor: 'Wilhelm Brandes',
      NumberofPatentFamilies: 411,
      Country: 'Germany',
      'Number of INPADOC patents': 2923,
      Active: '1976-2010',
      Mainfieldsofinvention: 'Fungicides',
    },
    {
      Inventor: 'Anthony K. Stamper',
      NumberofPatentFamilies: 411,
      Country: 'USA',
      'Number of INPADOC patents': 726,
      Active: '1998-2016',
      Mainfieldsofinvention: 'MEMS, CMOS, BiCMOS, Silicon-germanium',
    },
    {
      Inventor: 'Hossein Eslambolchi',
      NumberofPatentFamilies: 410,
      Country: 'USA',
      'Number of INPADOC patents': 631,
      Active: '1993-2016',
      Mainfieldsofinvention:
        'Telecommunications, Network intelligence, information Technology,
communications technology',
    },
    {
      Inventor: 'Stanford R. Ovshinsky',
      NumberofPatentFamilies: 400,
      Country: 'USA',
      'Number of INPADOC patents': 1649,
      Active: '1922(b)-2012(d)',
      Mainfieldsofinvention:
        'Batteries, Solar cells, Liquid crystal displays, Hydrogen fuel
cells, Computer data storage',
    },
    {
      Inventor: 'Victoria Y. H. Wood',
      NumberofPatentFamilies: 400,
      Country: 'USA',
      'Number of INPADOC patents': 1045,
      Active: '2009-2016',
      Mainfieldsofinvention: 'Various',
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    {
      Inventor: 'Josef Theurer',
      NumberofPatentFamilies: 388,

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Country: 'Austria',
'Number of INPADOC patents': 5085,
Active: '1976-2016',
Mainfieldsofinvention: 'Railroad maintenance machines',
},
{
  Inventor: 'Cary L. Bates',
  NumberofPatentFamilies: 384,
  Country: 'USA',
  'Number of INPADOC patents': 570,
  Active: '1994-2016',
  Mainfieldsofinvention: 'Programming tools, DBX, Memory debuggers',
},
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  Inventor: 'David V. Horak',
  NumberofPatentFamilies: 380,
  Country: 'USA',
  'Number of INPADOC patents': 616,
  Active: '1992-2016',
  Mainfieldsofinvention: 'Various',
},
{
  Inventor: 'Kai-Li Jiang',
  NumberofPatentFamilies: 379,
  Country: 'China',
  'Number of INPADOC patents': 829,
  Active: '2006-2016',
  Mainfieldsofinvention:
    'Carbon nanotubes and applications of carbon nanotubes',
},
{
  Inventor: 'Hans-Joachim Santel',
  NumberofPatentFamilies: 377,
  Country: 'Germany',
  'Number of INPADOC patents': 2623,
  Active: '1986-2013',
  Mainfieldsofinvention: 'Herbicides, Pesticides, Organic chemistry',
},
{
  Inventor: 'Xuemin (Sherman) Chen',
  NumberofPatentFamilies: 377,
  Country: 'USA',
  'Number of INPADOC patents': 1151,
  Active: '1997-2017',
  Mainfieldsofinvention:
    'Computer networks, Integrated Circuits, Signal Processing',
},
{
  Inventor: 'George P. Liang',
  NumberofPatentFamilies: 375,
  Country: 'China',
  'Number of INPADOC patents': 508,
  Active: '1983-2016',
  Mainfieldsofinvention: 'Gas turbine cooling',
},
{
  Inventor: 'Gisela Lorenz',

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    NumberofPatentFamilies: 374,
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    'Number of INPADOC patents': 4155,
    Active: '1990-2015',
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  {
    Inventor: 'Garry R. Jackson',
    NumberofPatentFamilies: 367,
    Country: 'Australia',
    'Number of INPADOC patents': 656,
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    Mainfieldsofinvention: 'Printing, Mechanical',
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  {
    Inventor: 'Paul W. Dent',
    NumberofPatentFamilies: 362,
    Country: 'USA',
    'Number of INPADOC patents': 2252,
    Active: '1984-2015',
    Mainfieldsofinvention: 'Wireless communications',
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  {
    Inventor: 'George Westinghouse',
    NumberofPatentFamilies: 361,
    Country: 'USA',
    'Number of INPADOC patents': 0,
    Active: '1846(b)-1914(d)',
    Mainfieldsofinvention:
      'Electric power, Electricity meter, Railway air brake, Steam
engines',
  },
  {
    Inventor: 'Wael W. Diab',
    NumberofPatentFamilies: 358,
    Country: 'USA',
    'Number of INPADOC patents': 774,
    Active: '2003-2016',
    Mainfieldsofinvention: 'Computer networks',
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  {
    Inventor: 'Devendra K. Sadana',
    NumberofPatentFamilies: 356,
    Country: 'India',
    'Number of INPADOC patents': 794,
    Active: '1983-2016',
    Mainfieldsofinvention:
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  {
    Inventor: 'Vincent J. Zimmer',
    NumberofPatentFamilies: 354,
    Country: 'USA',
    'Number of INPADOC patents': 972,
    Active: '1999-2016',
    Mainfieldsofinvention: 'Computer software and firmware',
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{
  Inventor: 'Robert R. Schmidt',
  NumberofPatentFamilies: 350,
  Country: 'Germany',
  'Number of INPADOC patents': 2467,
  Active: '1971-2005',
  Mainfieldsofinvention: 'Herbicides, Fungicides, Organic chemistry',
},
{
  Inventor: 'Norman M. Berry',
  NumberofPatentFamilies: 347,
  Country: 'Australia',
  'Number of INPADOC patents': 516,
  Active: '2006-2016',
  Mainfieldsofinvention: 'Printing, Mechanical',
},
{
  Inventor: 'Chih-Chao Yang',
  NumberofPatentFamilies: 345,
  Country: 'USA',
  'Number of INPADOC patents': 690,
  Active: '2003-2016',
  Mainfieldsofinvention: 'Integrated Circuits',
},
{
  Inventor: 'Gregory J. Boss',
  NumberofPatentFamilies: 345,
  Country: 'USA',
  'Number of INPADOC patents': 588,
  Active: '2008-2016',
  Mainfieldsofinvention: 'Various',
},
{
  Inventor: 'Mark W. Kroll',
  NumberofPatentFamilies: 343,
  Country: 'USA',
  'Number of INPADOC patents': 460,
  Active: '1987-2016',
  Mainfieldsofinvention: 'Implantable medical devices',
},
{
  Inventor: "Brian M. O'Connell",
  NumberofPatentFamilies: 331,
  Country: 'USA',
  'Number of INPADOC patents': 592,
  Active: '2009-2016',
  Mainfieldsofinvention: 'Various',
},
{
  Inventor: 'William Daniel Hillis',
  NumberofPatentFamilies: 328,
  Country: 'USA',
  'Number of INPADOC patents': 229,
  Active: '1986-2016',
  Mainfieldsofinvention: 'Various',
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Inventor: 'Brent A. Anderson',
NumberofPatentFamilies: 323,
Country: 'USA',
'Number of INPADOC patents': 454,
Active: '2001-2016',
Mainfieldsofinvention:
  'Semiconductor device fabrication, Semiconductor memory,
Semiconductor device',
},
{
  Inventor: 'Jeffrey E. Stahmann',
  NumberofPatentFamilies: 321,
  Country: 'USA',
  'Number of INPADOC patents': 640,
  Active: '1994-2016',
  Mainfieldsofinvention: 'Medical devices',
},
{
  Inventor: 'Carl J. Radens',
  NumberofPatentFamilies: 317,
  Country: 'USA',
  'Number of INPADOC patents': 636,
  Active: '1994-2016',
  Mainfieldsofinvention:
    'Integrated Circuits, CMOS, DRAM, Semiconductor device fabrication',
},
{
  Inventor: 'Clifford A. Pickover',
  NumberofPatentFamilies: 317,
  Country: 'USA',
  'Number of INPADOC patents': 653,
  Active: '1992-2016',
  Mainfieldsofinvention: 'Various',
},
{
  Inventor: 'Liang Liu',
  NumberofPatentFamilies: 310,
  Country: 'China',
  'Number of INPADOC patents': 777,
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  Mainfieldsofinvention:
    'Carbon nanotubes and applications of carbon nanotubes',
},
{
  Inventor: 'Steven L. Teig',
  NumberofPatentFamilies: 307,
  Country: 'USA',
  'Number of INPADOC patents': 366,
  Active: '1995-2016',
  Mainfieldsofinvention: 'Integrated Circuits',
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{
  Inventor: 'Victoria Smith',
  NumberofPatentFamilies: 305,
  Country: 'USA',
  'Number of INPADOC patents': 2040,
  Active: '2006-2016',
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    Mainfieldsofinvention: 'Proteins, Antibodies',
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    NumberofPatentFamilies: 299,
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    'Number of INPADOC patents': 67,
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    Mainfieldsofinvention:
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  {
    Inventor: 'William R. Tonti',
    NumberofPatentFamilies: 291,
    Country: 'USA',
    'Number of INPADOC patents': 441,
    Active: '1994-2016',
    Mainfieldsofinvention:
      'Integrated Circuits, CMOS, DRAM, Semiconductor device fabrication',
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  {
    Inventor: 'Keith R. Walker',
    NumberofPatentFamilies: 282,
    Country: 'Saudi Arabia',
    'Number of INPADOC patents': 318,
    Active: '2003-2016',
    Mainfieldsofinvention: 'Various',
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  {
    Inventor: 'Victor S. Moore',
    NumberofPatentFamilies: 280,
    Country: 'USA',
    'Number of INPADOC patents': 428,
    Active: '1982-2016',
    Mainfieldsofinvention: 'Various',
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  {
    Inventor: 'Hanson S. Gifford III',
    NumberofPatentFamilies: 276,
    Country: 'USA',
    'Number of INPADOC patents': 795,
    Active: '1987-2016',
    Mainfieldsofinvention: 'Medical Devices',
  },
  {
    Inventor: 'Daniel J. Winarski',
    NumberofPatentFamilies: 275,
    Country: 'USA',
    'Number of INPADOC patents': 506,
    Active: '1982-2016',
    Mainfieldsofinvention: 'Various',
  },
  {
    Inventor: 'Adam Heller',
    NumberofPatentFamilies: 272,
    Country: 'Romania',
    'Number of INPADOC patents': 711,
  }

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    Active: '1968-2016',
    Mainfieldsofinvention: 'Solar cells, Glucose meters, Lasers',
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  {
    Inventor: 'Lisa Seacat DeLuca',
    NumberofPatentFamilies: 271,
    Country: 'USA',
    'Number of INPADOC patents': 385,
    Active: '2009-2016',
    Mainfieldsofinvention: 'Various',
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  {
    Inventor: 'Brent Keeth',
    NumberofPatentFamilies: 270,
    Country: 'USA',
    'Number of INPADOC patents': 470,
    Active: '1994-2016',
    Mainfieldsofinvention: 'Integrated Circuits, CMOS, DRAM',
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  {
    Inventor: 'Hartley Owen',
    NumberofPatentFamilies: 267,
    Country: 'USA',
    'Number of INPADOC patents': 751,
    Active: '1976-2010',
    Mainfieldsofinvention: 'Fluid catalytic cracking',
  },
  {
    Inventor: 'Michael A. Rothman',
    NumberofPatentFamilies: 256,
    Country: 'USA',
    'Number of INPADOC patents': 687,
    Active: '2001-2017',
    Mainfieldsofinvention: 'Computer software and firmware',
  },
  {
    Inventor: 'Yoshihiro Kikuchi',
    NumberofPatentFamilies: 255,
    Country: 'Japan',
    'Number of INPADOC patents': 1120,
    Active: '1994-2015',
    Mainfieldsofinvention: 'Video processing',
  },
  {
    Inventor: 'Kulvir S. Bhogal',
    NumberofPatentFamilies: 252,
    Country: 'USA',
    'Number of INPADOC patents': 486,
    Active: '2003-2016',
    Mainfieldsofinvention: 'Various',
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  {
    Inventor: 'Bengt Lindoff',
    NumberofPatentFamilies: 248,
    Country: 'Sweden',
    'Number of INPADOC patents': 1658,
    Active: '2000-2017',
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    Mainfieldsofinvention: 'Wireless communications',
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  {
    Inventor: 'Nobuyuki Taniguchi',
    NumberofPatentFamilies: 245,
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    'Number of INPADOC patents': 967,
    Active: '1979-2015',
    Mainfieldsofinvention: 'Cameras',
  },
  {
    Inventor: 'Dean L. Kamen',
    NumberofPatentFamilies: 243,
    Country: 'USA',
    'Number of INPADOC patents': 1186,
    Active: '1979-2016',
    Mainfieldsofinvention:
      'Battery-powered electric vehicles, Medical devices, Stirling
      engines, Water purification, Wheelchairs',
  },
  {
    Inventor: 'Philip S. Yu',
    NumberofPatentFamilies: 236,
    Country: 'USA',
    'Number of INPADOC patents': 158,
    Active: '1982-2016',
    Mainfieldsofinvention: 'Various',
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  {
    Inventor: 'Rajiv V. Joshi',
    NumberofPatentFamilies: 235,
    Country: 'USA',
    'Number of INPADOC patents': 354,
    Active: '1986-2016',
    Mainfieldsofinvention: 'Electronics, analytics',
  },
  {
    Inventor: 'Lawrence A. Clevenger',
    NumberofPatentFamilies: 235,
    Country: 'USA',
    'Number of INPADOC patents': 526,
    Active: '1996-2017',
    Mainfieldsofinvention:
      'Semiconductor, Cognitive, Memory, Security, Analytics',
  },
  {
    Inventor: 'Johnny M. Shieh',
    NumberofPatentFamilies: 231,
    Country: 'USA',
    'Number of INPADOC patents': 444,
    Active: '1996-2016',
    Mainfieldsofinvention: 'Various',
  },
  {
    Inventor: 'Takeshi Chujoh',
    NumberofPatentFamilies: 229,
    Country: 'Japan',

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    'Number of INPADOC patents': 1065,
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    Mainfieldsofinvention: 'Video processing',
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    Inventor: 'Bran Ferren',
    NumberofPatentFamilies: 225,
    Country: 'USA',
    'Number of INPADOC patents': 589,
    Active: '1986-2017',
    Mainfieldsofinvention:
      'Computers, Consumer Electronics, Optical Systems, Medical, User
      Interfaces, Automotive',
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  {
    Inventor: 'Paul Ian Mackey',
    NumberofPatentFamilies: 220,
    Country: 'Australia',
    'Number of INPADOC patents': 246,
    Active: '2008-2016',
    Mainfieldsofinvention: 'Printing, Mechanical',
  },
  {
    Inventor: 'Louis Rosenberg',
    NumberofPatentFamilies: 218,
    Country: 'USA',
    'Number of INPADOC patents': 444,
    Active: '1995-2016',
    Mainfieldsofinvention: 'Augmented Reality, Virtual Reality, A.I., HCI',
  },
  {
    Inventor: 'Thomas J. Kennedy III',
    NumberofPatentFamilies: 218,
    Country: 'USA',
    'Number of INPADOC patents': 513,
    Active: '1992-2016',
    Mainfieldsofinvention: 'Sporting Goods, Wind Turbines',
  },
  {
    Inventor: 'Gerald F. McBrearty',
    NumberofPatentFamilies: 213,
    Country: 'USA',
    'Number of INPADOC patents': 387,
    Active: '1997-2016',
    Mainfieldsofinvention: 'Various',
  },
  {
    Inventor: 'Esmael H. Dinan',
    NumberofPatentFamilies: 208,
    Country: 'USA',
    'Number of INPADOC patents': 344,
    Active: '2000-2017',
    Mainfieldsofinvention: 'Communication Networks',
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  {
    Inventor: 'Imad Libbus',
    NumberofPatentFamilies: 207,

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Country: 'USA',
'Number of INPADOC patents': 472,
Active: '2007-2017',
Mainfieldsofinvention: 'Medical devices',
},
{
  Inventor: 'Hiroshi (You) Yoshioka',
  NumberofPatentFamilies: 205,
  Country: 'Japan',
  'Number of INPADOC patents': 181,
  Active: '1997-2015',
  Mainfieldsofinvention: 'Cameras',
},
{
  Inventor: 'Patrick B. Usoro',
  NumberofPatentFamilies: 205,
  Country: 'USA',
  'Number of INPADOC patents': 343,
  Active: '1999-2016',
  Mainfieldsofinvention:
    'Transmissions, Hybrid Powertrains, Vehicle Thermal Management',
},
{
  Inventor: 'Gregory McAvoy',
  NumberofPatentFamilies: 205,
  Country: 'Australia',
  'Number of INPADOC patents': 433,
  Active: '2003-2014',
  Mainfieldsofinvention: 'Printing, MEMS',
},
{
  Inventor: 'Sebastian T Ventrone',
  NumberofPatentFamilies: 204,
  Country: 'USA',
  'Number of INPADOC patents': 283,
  Active: '1989-2017',
  Mainfieldsofinvention: 'Semiconductor, Logic, Architecture',
},
{
  Inventor: 'Dorin Comaniciu',
  NumberofPatentFamilies: 200,
  Country: 'USA',
  'Number of INPADOC patents': 452,
  Active: '2003-2017',
  Mainfieldsofinvention:
    'Machine Intelligence, Medical Imaging, Image-Guided Surgery,
Computer Vision',
},
];

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Limitations

- A CSV is a plain text format that does not support features such as cell rotation, font and color customization, column and row spanning, or adding formulas. CSV files store raw data without any formatting or styling.

See Also

- [Exporting Grid in Cordova application](#)

Global local in React Grid component

The Syncfusion React Grid component provides a feature known as Globalization (global and local), which makes the application more accessible and useful for individuals from different regions and language backgrounds. You have the ability to view data in your preferred language and format, resulting in an enhanced overall experience.

Localization

The Syncfusion React Grid provides a built-in [Localization](#) library, enabling you to customize the text used in the grid to suit different languages or cultural preferences. With this library, you can change static text on various elements, such as **group drop area text** and **pager information text**, to different cultures, such as **Arabic**, **Deutsch**, **French**, and more.

This can be achieved by defining the [locale](#) property and translation object.

The following list of properties and its values are used in the grid.

Data Rendering

Locale key words | Text | Example

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10249	true
10250	true

True | true |

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10249	false
10250	false

False | false |


Order ID	Customer Name
10248	VINET

Elements Console Sources Network Performance

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TemplateCell | is template cell |

Employee Image	Employee ID
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Elements Console Sources Network Performance M

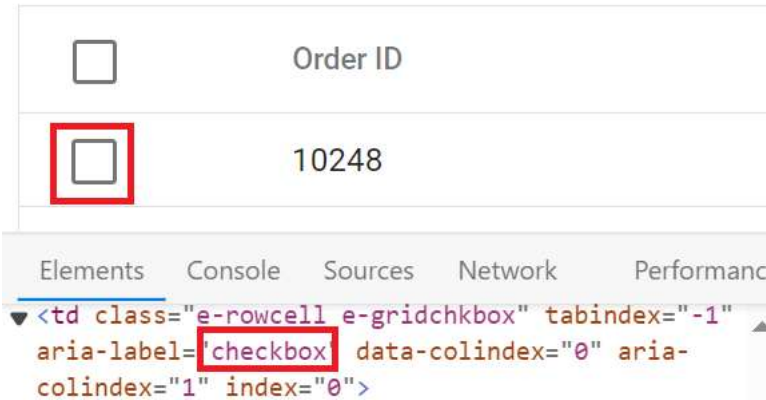
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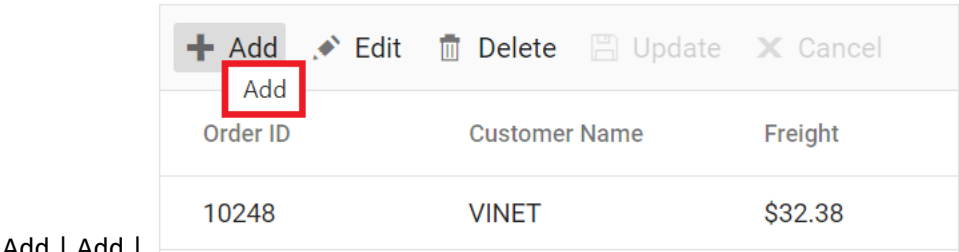
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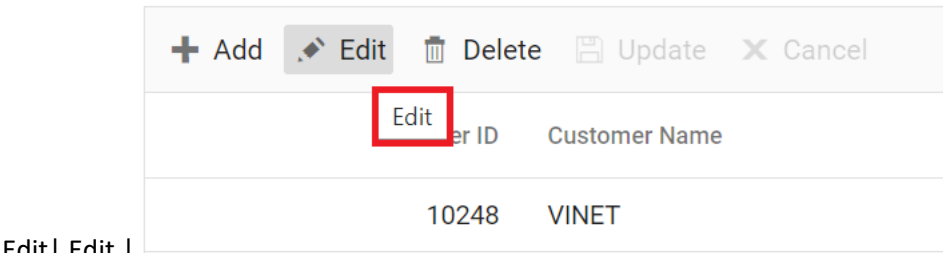
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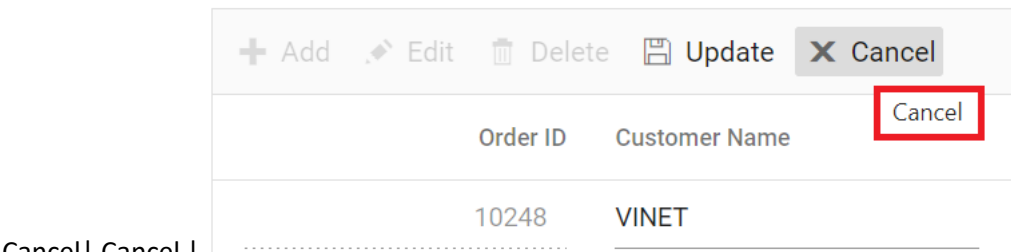
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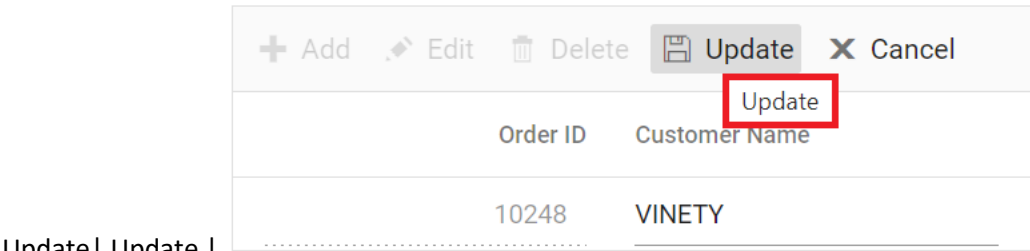
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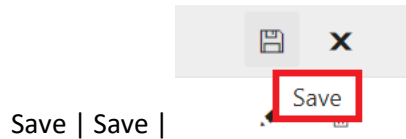
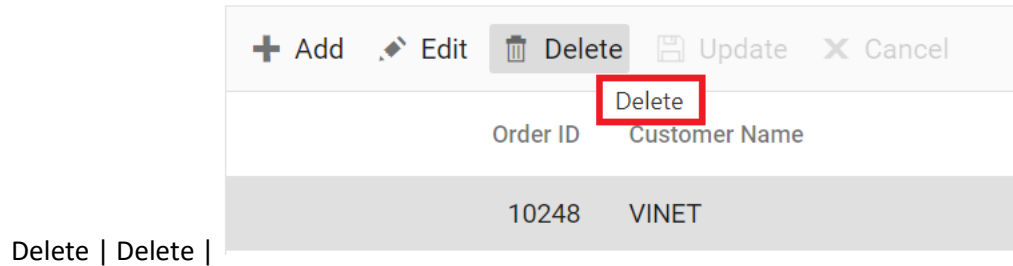
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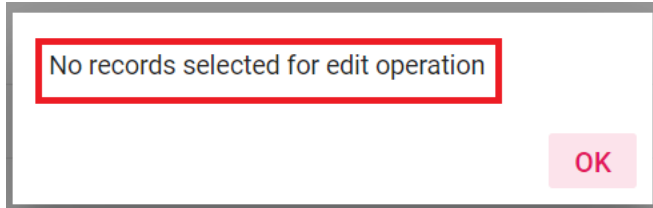
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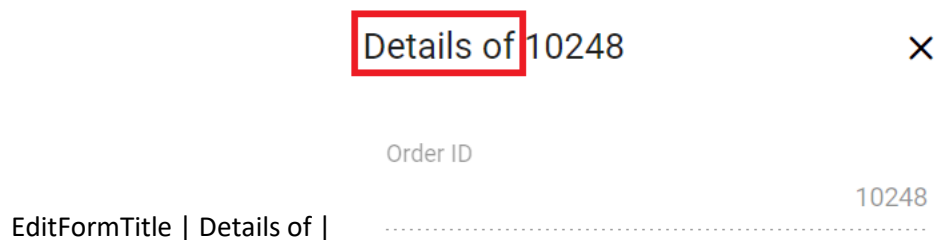
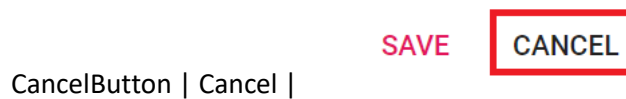
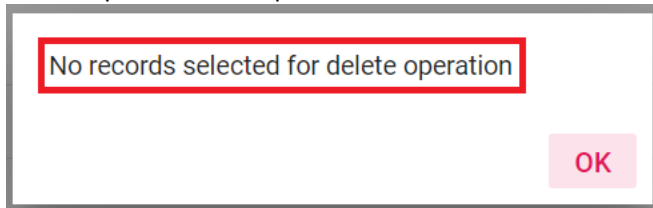
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OK CANCEL

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Unsaved changes will be lost. Are you sure you want to continue?

OK CANCEL

ConfirmDelete | Are you sure you want to Delete Record? |

Are you sure you want to Delete Record?

OK CANCEL

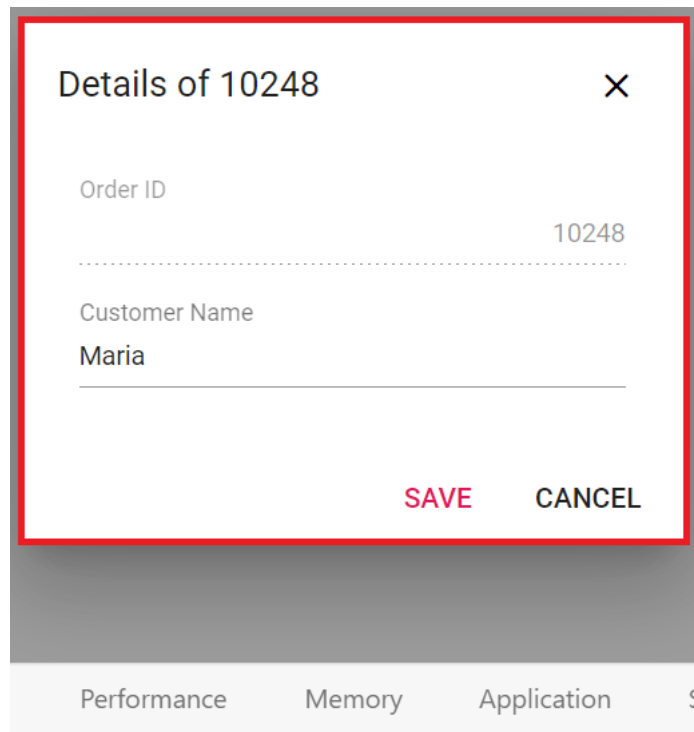
CancelEdit | Are you sure you want to Cancel the changes? |

Are you sure you want to Cancel the changes?

OK CANCEL

DialogEditARIA | Edit dialog |

CommandColumnAria | is Command column column header |



```
width: 330px; max-height: 405px; z-index: 100000;
;-c3990564242 aria-label="Dialog edit" class="e-
```

DialogEdit | Dialog edit |

Grouping

Locale key words | Text | Example

InvalidFilterMessage | Invalid Filter Data

FilterbarTitle | Filter bar cell |

Order ID	Customer Name
Order ID's filter bar cell	

▼ Clear Filter

Number Filters >

103 ×

Matches | No Matches Found |

No Matches Found

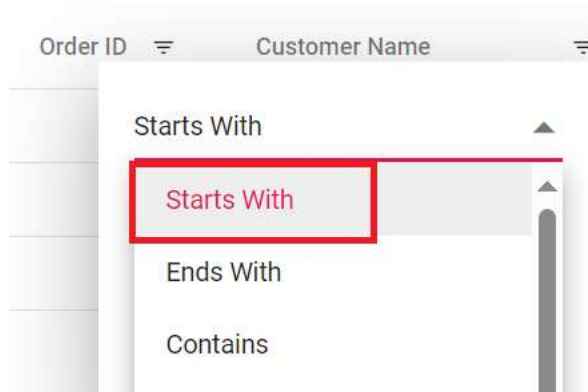
FilterButton | Filter |

Order ID	Customer Name
Starts With ▼	
VINET	
FILTER CLEAR	

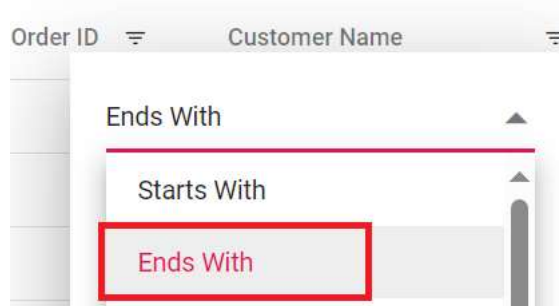
ClearButton | Clear |

Order ID	Customer Name
Starts With ▼	
VINET	
FILTER CLEAR	

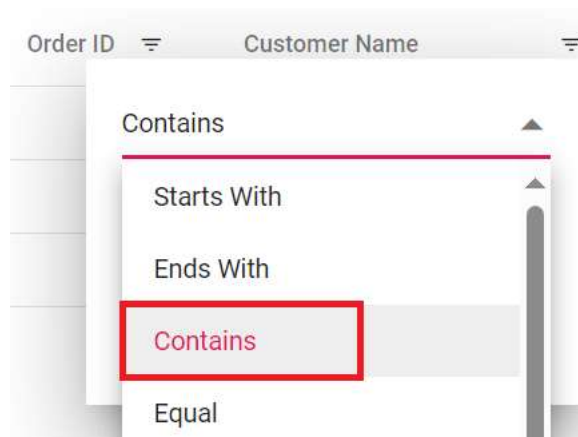
StartsWith | Starts With |



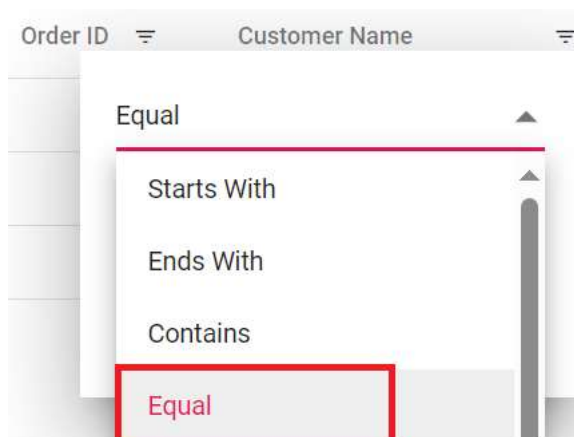
EndsWith | Ends With |

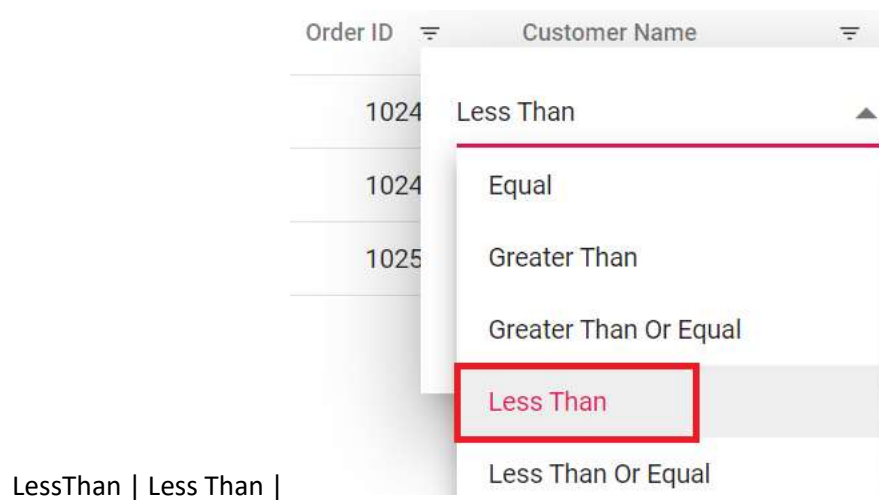
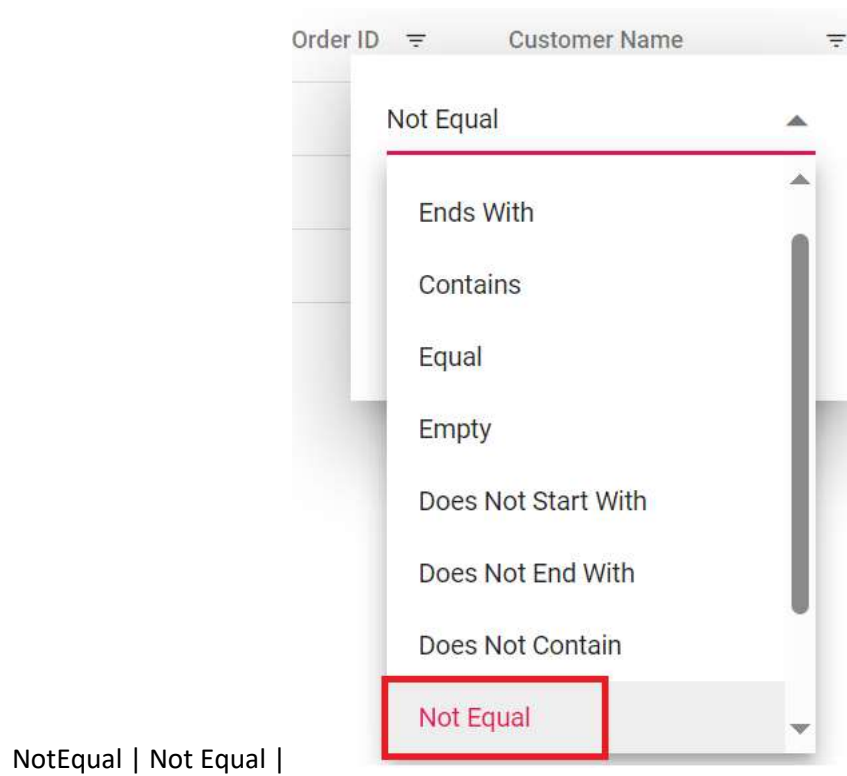


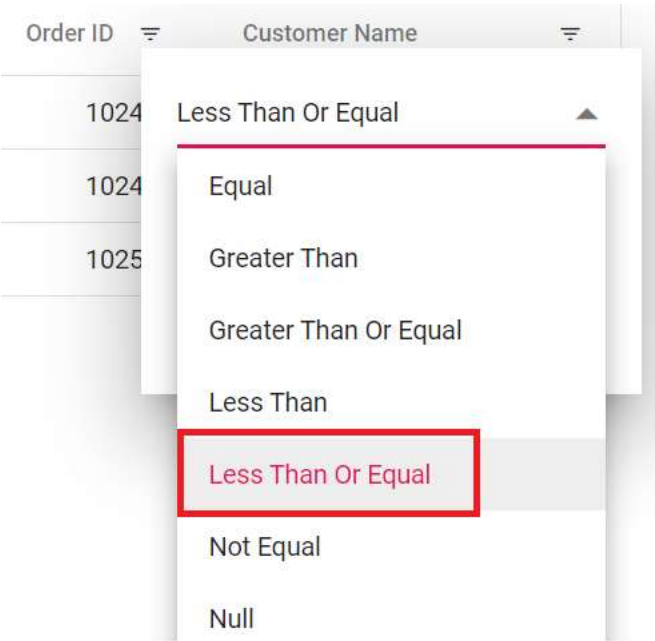
Contains | Contains |



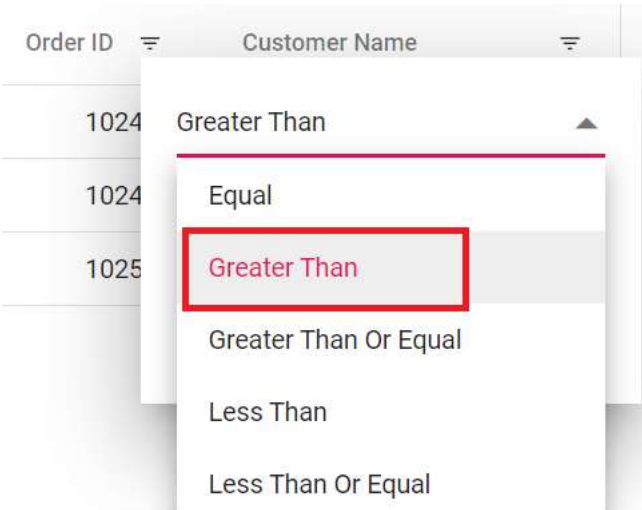
Equal | Equal |



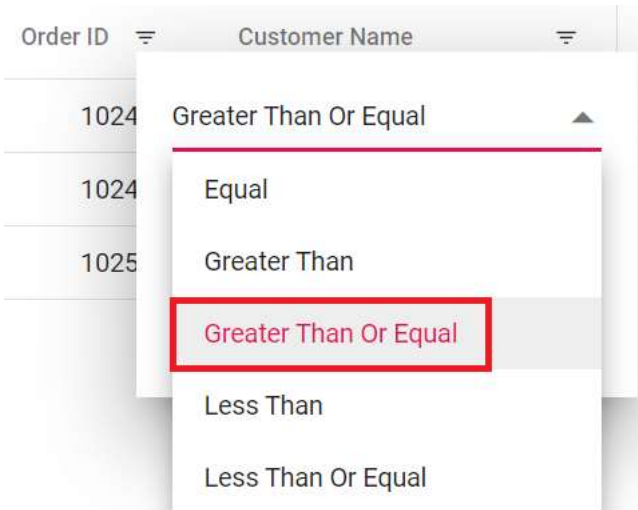




LessThanOrEqual | Less Than Or Equal |

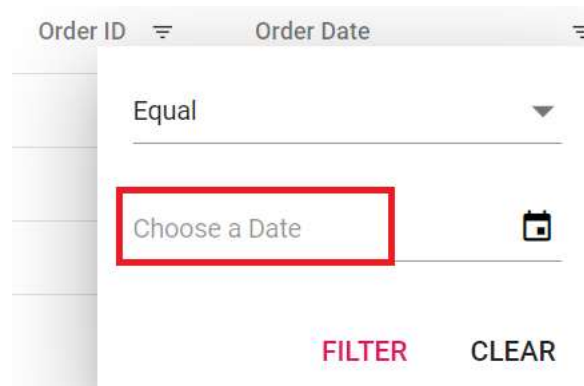


GreaterThan | Greater Than |

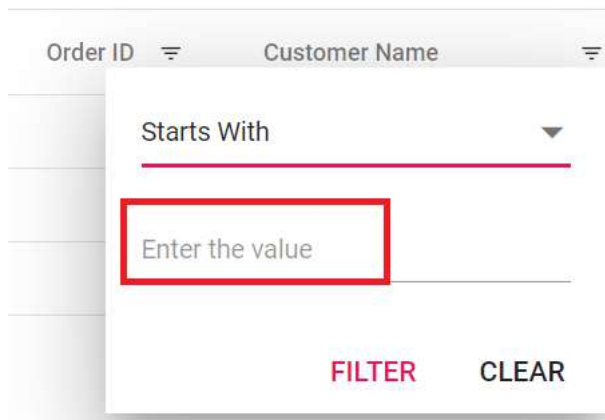


GreaterThanOrEqual | Greater Than Or Equal |

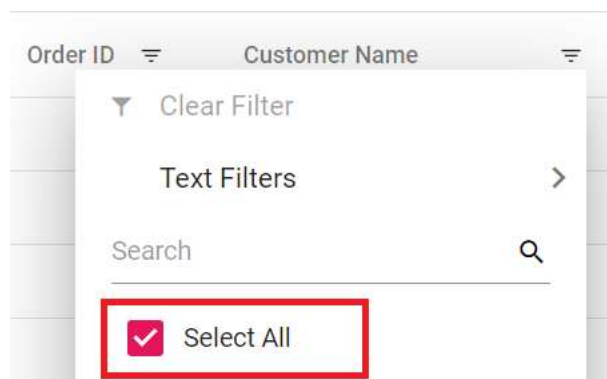
ChooseDate | Choose a Date |

A screenshot of a date filter dropdown menu. The menu is open, showing a dropdown list with 'Equal' selected. Below the dropdown is a text input field containing 'Choose a Date' and a calendar icon. At the bottom of the menu are two buttons: 'FILTER' and 'CLEAR'. The text input field is highlighted with a red rectangle.

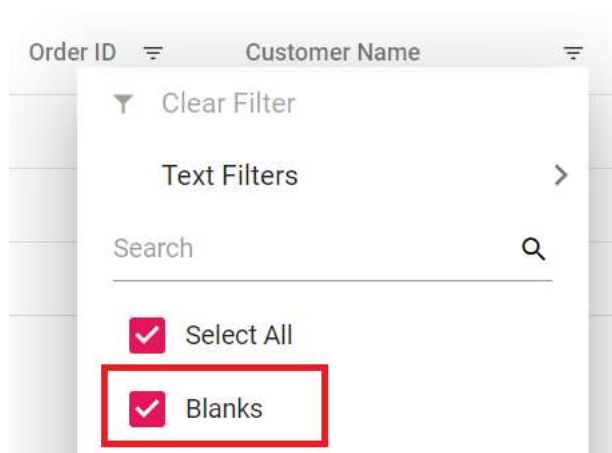
EnterValue | Enter the value |

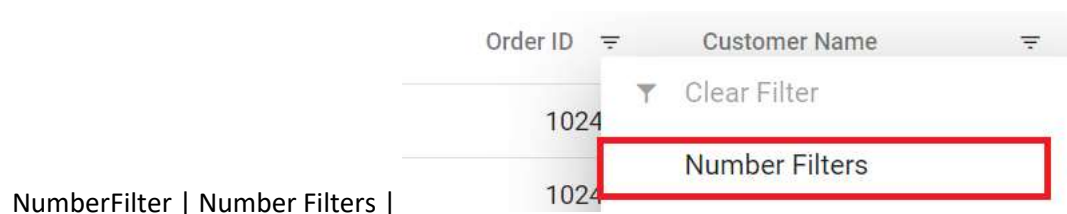
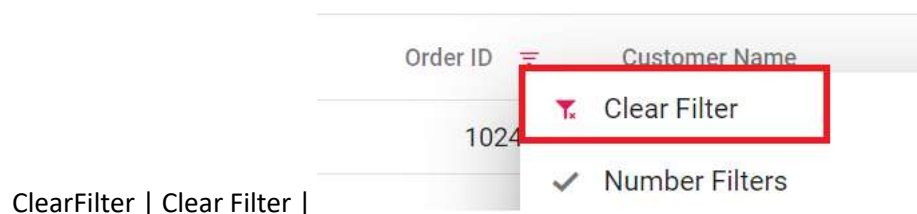
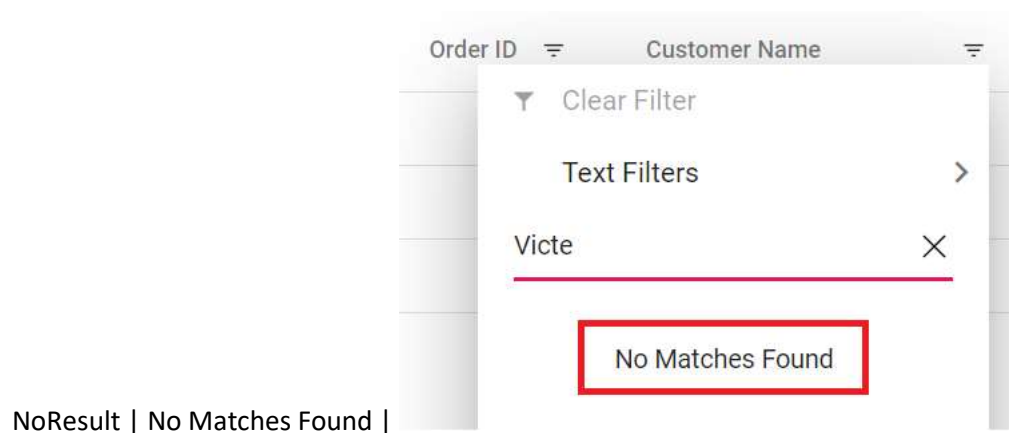
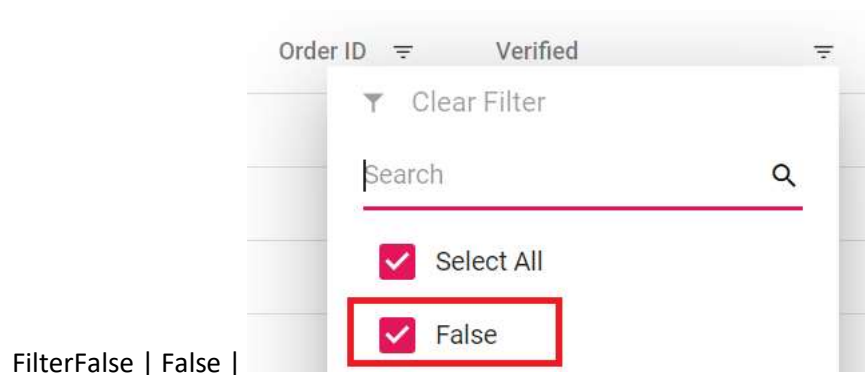
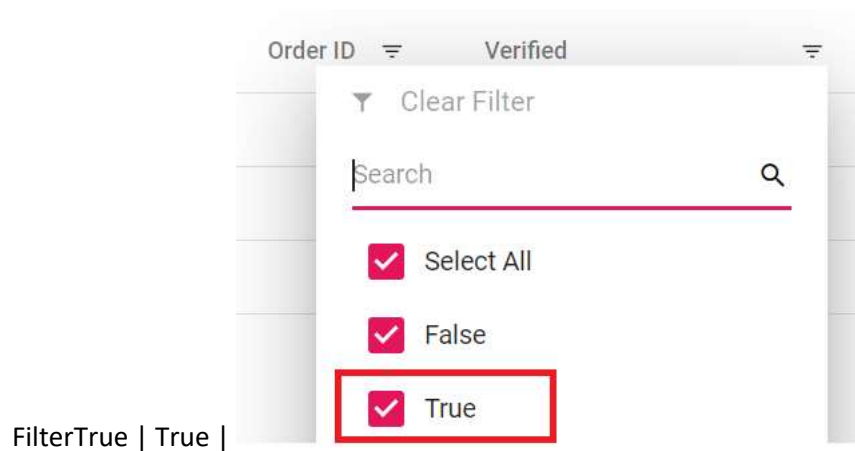
A screenshot of a text filter dropdown menu. The menu is open, showing a dropdown list with 'Starts With' selected. Below the dropdown is a text input field containing 'Enter the value'. At the bottom of the menu are two buttons: 'FILTER' and 'CLEAR'. The text input field is highlighted with a red rectangle.

SelectAll | Select All |

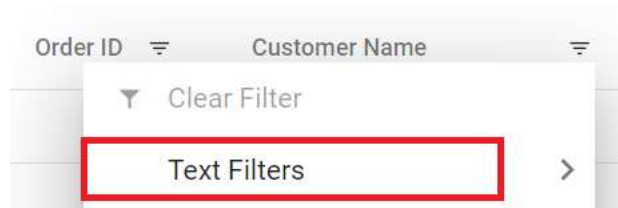
A screenshot of a filter menu. The menu is open, showing a dropdown list with 'Clear Filter' selected. Below the dropdown is a section titled 'Text Filters' with a search input field. At the bottom of the menu is a checkbox labeled 'Select All' which is checked. The checkbox is highlighted with a red rectangle.

Blanks | Blanks |

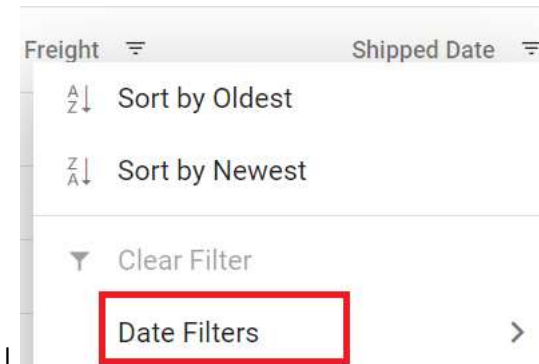
A screenshot of a filter menu. The menu is open, showing a dropdown list with 'Clear Filter' selected. Below the dropdown is a section titled 'Text Filters' with a search input field. At the bottom of the menu are two checkboxes: 'Select All' and 'Blanks'. Both are checked. The 'Blanks' checkbox is highlighted with a red rectangle.



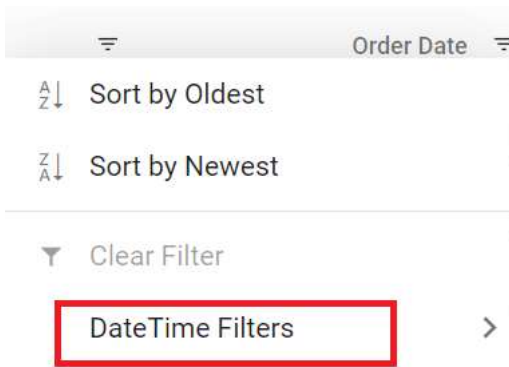
TextFilter | Text Filters |



DateFilter | Date Filters |



DateTimeFilter | DateTime Filters |



Custom Filter



Show rows where:

Customer Name

Starts With ▼ Enter the value

☒ AND ☐ OR ☒ Match Case

MatchCase | Match Case |

Order ID 1024 Customer Name

Clear Filter

Number Filters

Equal...

Not Equal...

Less Than...

Less Than Or Equal...

Greater Than...

Greater Than Or Equal...

Between...

Between | Between |

Custom Filter

Show rows where:

Customer Name

Starts With Enter the value

☒ AND ☐ OR ☐ Match Case

Enter the value

CustomFilter | Custom Filter | OK CANCEL

CustomFilterPlaceholder | Enter the value |

Custom Filter

Show rows where:

Customer Name

Starts With Enter the value

CustomFilterDatePlaceholder | Choose a date |

Custom Filter



Show rows where:

Order Date

Equal



Choose a date



Custom Filter



Show rows where:

Customer Name

Starts With



Enter the value



AND



OR



Match Case

AND | AND |

Custom Filter



Show rows where:

Customer Name

Starts With



Enter the value



AND



OR



Match Case

OR | OR |

ShowRowsWhere | Show rows where: |

Custom Filter



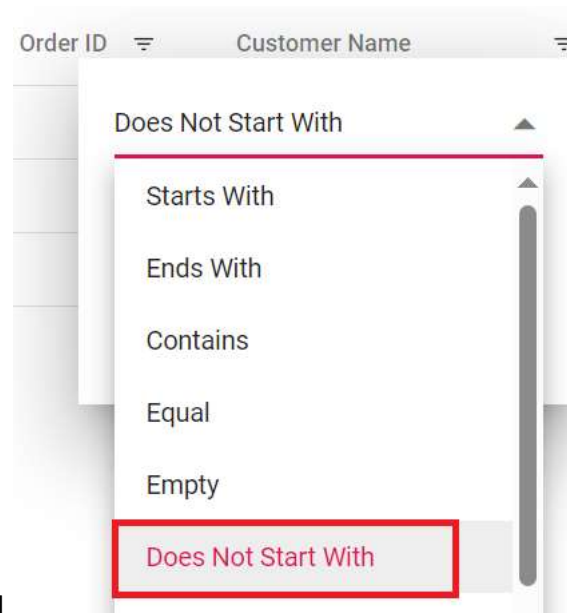
Show rows where:

Customer Name

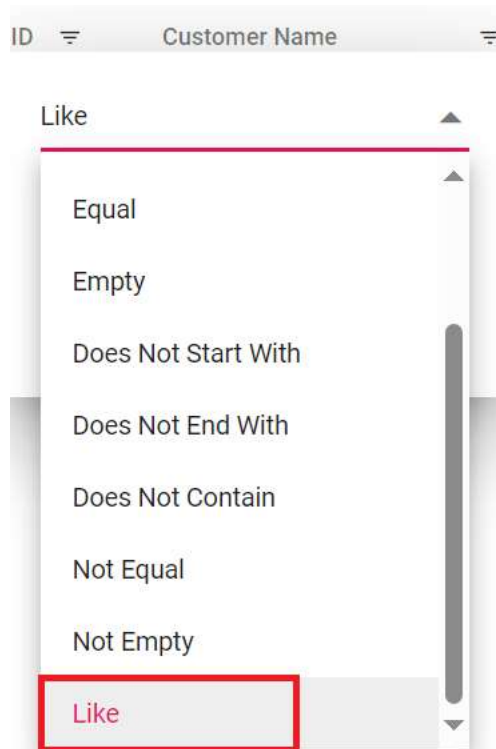
Starts With



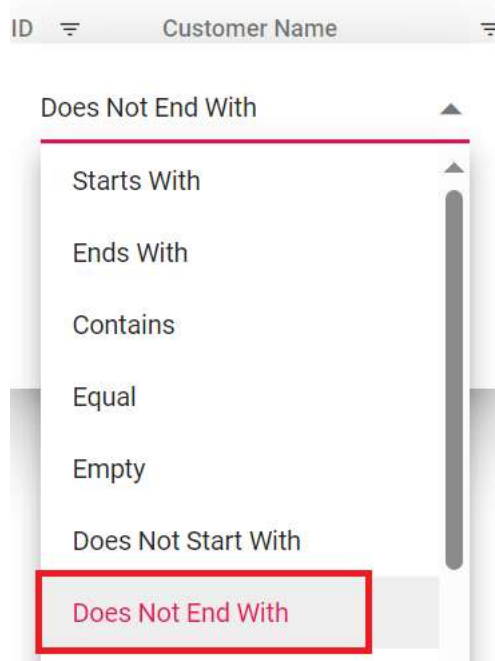
Enter the value



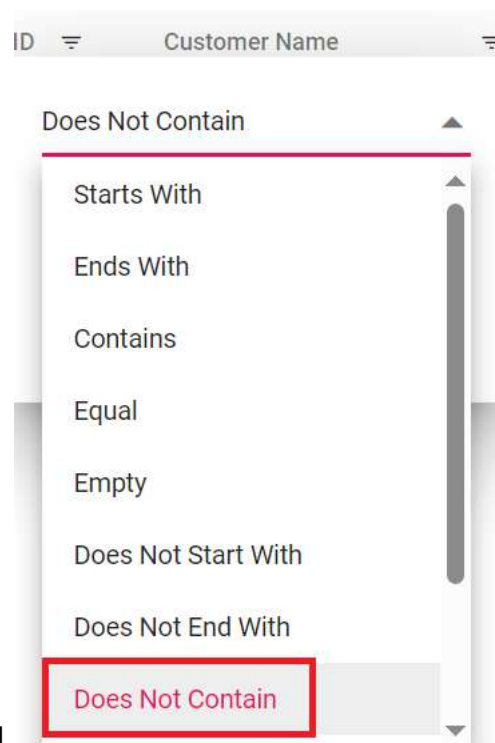
NotStartsWith | Does Not Start With |



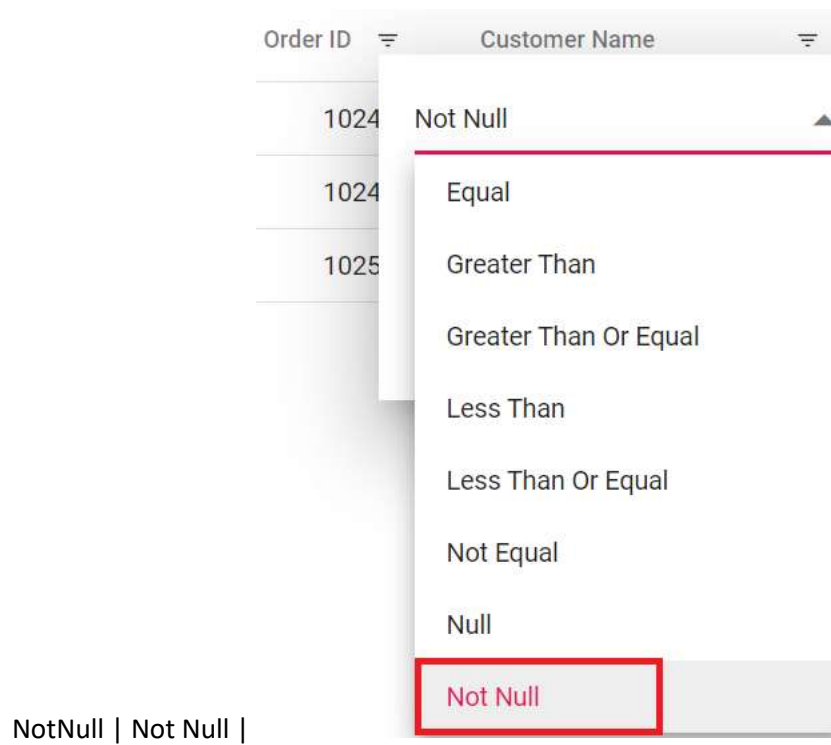
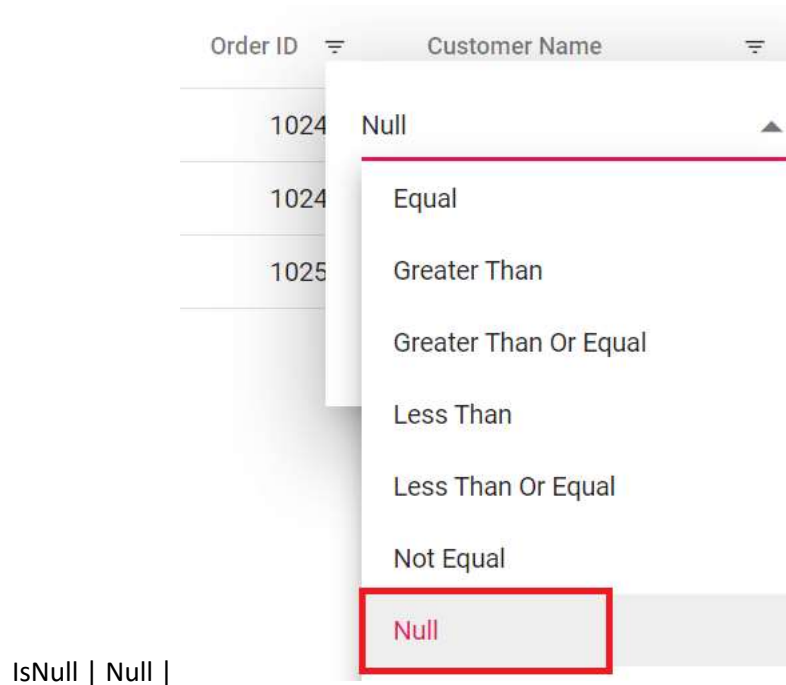
Like | Like |

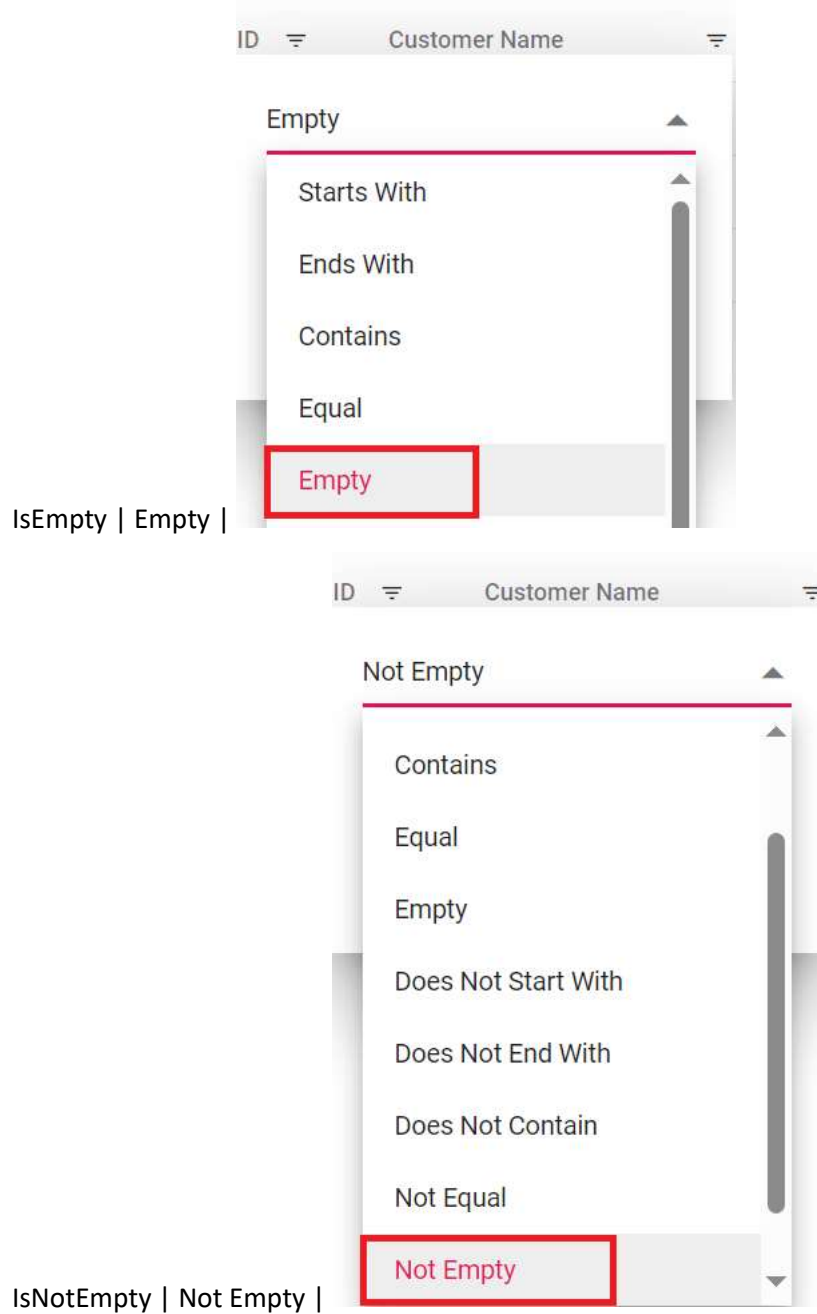


NotEndsWith | Does Not End With |



NotContains | Does Not Contain |





Order ID Customer Na...

Clear Filter

Text Filters >

vin

☒ Select All

☐ Add current selection to filter

☒ VINET

AddCurrentSelection | Add current selection to filter |

FilterMenuDialogARIA | Filter menu dialog |

Order ID	Customer Name
10248	
10249	
10250	
10251	

Equal

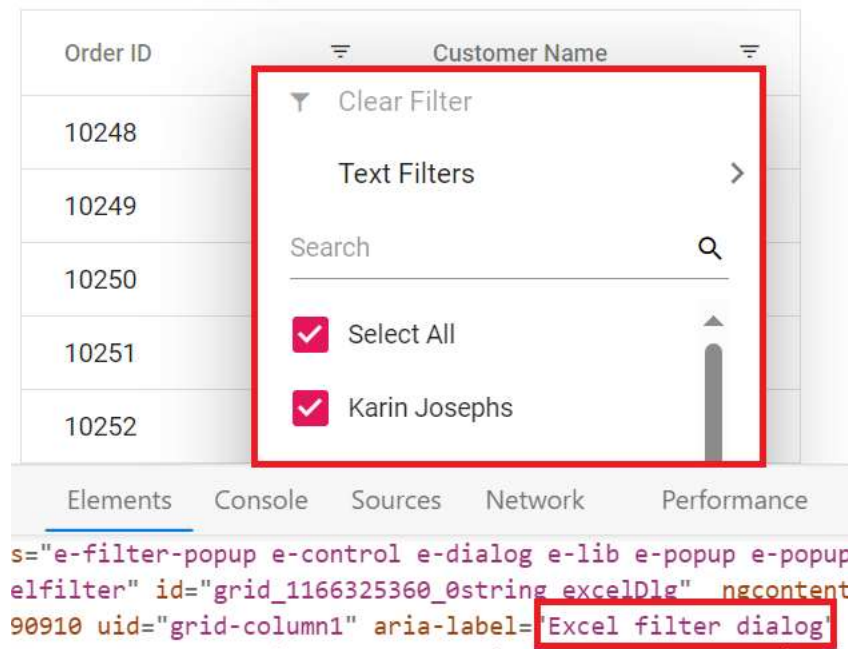
Enter the value

FILTER **CLEAR**

Elements Console Sources Network Performance

s="e-flmenu e-control e-dialog e-lib e-filter-popup e-po
p-open" id="grid-column1709-flmdl" _ngcontent-ng-
l0 aria-label="Filter menu dialog" role="dialog" style=

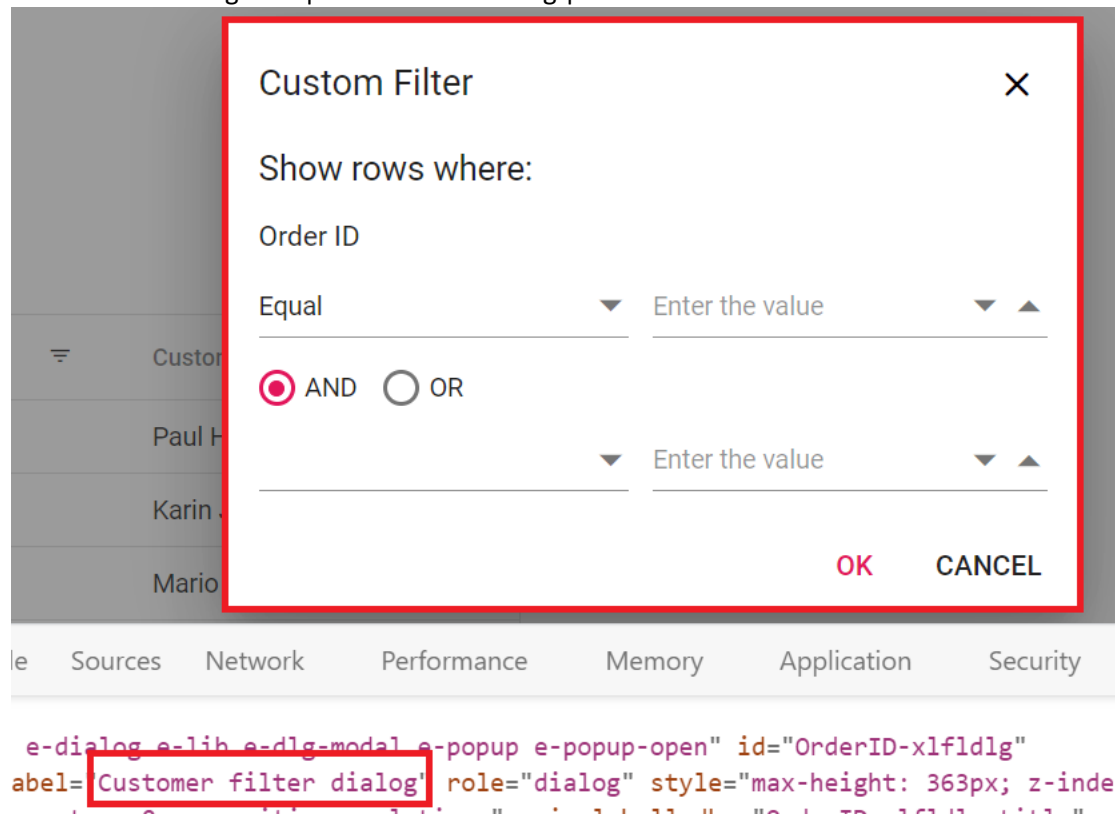
ExcelFilterDialogARIA | Excel filter dialog |



The screenshot shows a data grid with columns 'Order ID' and 'Customer Name'. A dialog box titled 'Excel filter dialog' is open, allowing users to filter the grid. The dialog includes a 'Clear Filter' button, a 'Text Filters' section with a search input, and a list of selected filters: 'Select All' and 'Karin Josephs'. The dialog is highlighted with a red border.

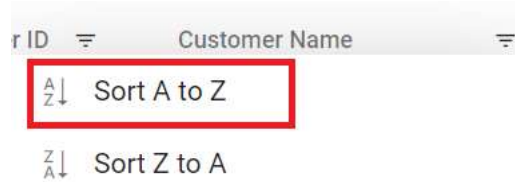
```
s="e-filter-popup e-control e-dialog e-lib e-popup e-popup  
elfilter" id="grid_1166325360_0string_excelDlg" ngcontent  
90910 uid="grid-column1" aria-label="Excel filter dialog"
```

CustomFilterDialogARIA | Custom filter dialog |

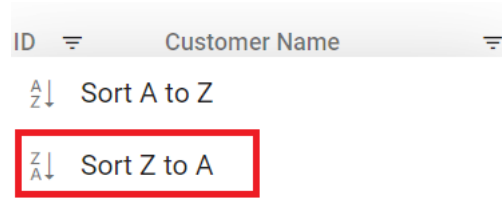


The screenshot shows a 'Custom Filter' dialog box. It has a title bar with a close button (X). The main content area is titled 'Show rows where:' and contains two filter rules for 'Order ID'. The first rule is 'Equal' with a dropdown menu and an input field 'Enter the value'. The second rule is 'AND' with a dropdown menu and an input field 'Enter the value'. The dialog also has 'OK' and 'CANCEL' buttons at the bottom right. The dialog is highlighted with a red border.

```
e-dialog e-lib e-dlg-modal e-popup e-popup-open" id="OrderID-xlfldlg"  
abel="Customer filter dialog" role="dialog" style="max-height: 363px; z-inde
```



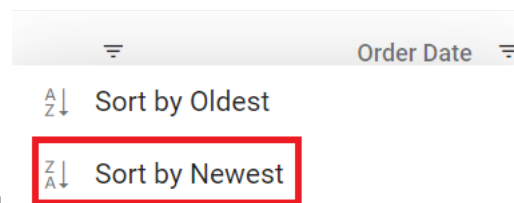
SortAtoZ | Sort A to Z |



SortZtoA | Sort Z to A |



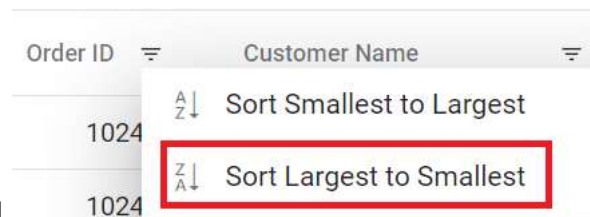
SortByOldest | Sort by Oldest |



SortByNewest | Sort by Newest |



SortSmallestToLargest | Sort Smallest to Largest |



SortLargestToSmallest | Sort Largest to Smallest |

FilterDescription | Press Alt Down to open filter Menu |

Order ID	Customer Name
10248	Paul Henriot
10249	Karin Josephs
10250	Mario Pontes

Elements Console Sources Network Performance

`<th class="e-headercell e-filter-icon _ngcontent-ng-c4169890910 tabindex="0" data-colindex="0" aria-colindex="1" aria-description="Press Alt Down to open filter Menu"`

Searching

Locale key words | Text | Example

Sort | Sort | Sort

Order ID	Customer Name
10248	Paul Henriot
10249	Karin Josephs

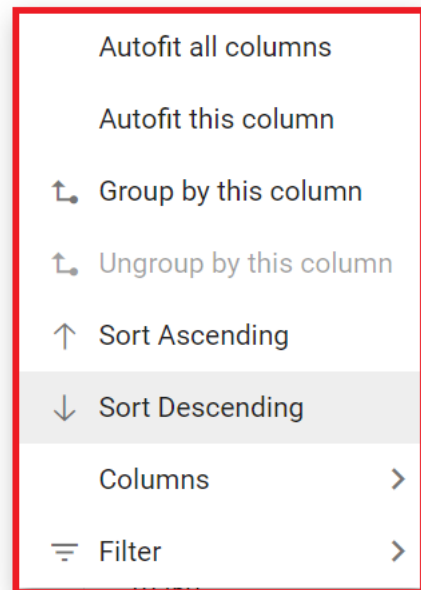
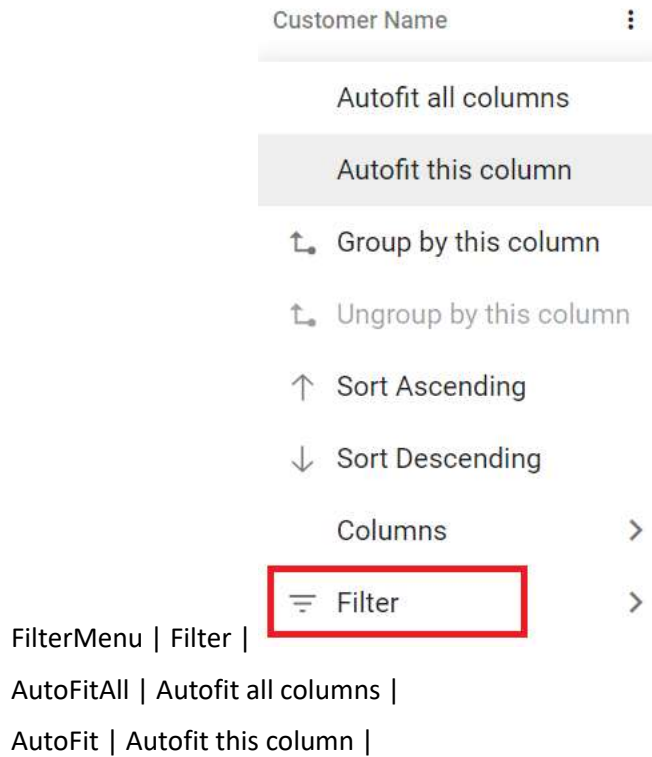
Elements Console Sources Network Performance

`<th class="e-headercell e-mousepointer e-focus" _ngcontent-ng-c3207075763 tabindex="0" data-colindex="0" aria-colindex="1" aria-sort="ascending" aria-description="Press Enter to sort" aria-rowspan="1" aria-colspan="1">...</th> == $0`

SortDescription | Press Enter to sort |

Toolbar

Locale key words | Text | Example



ColumnMenuDialogARIA | Column menu dialog |

ColumnMenuDescription | Press Alt Down to open Column Menu |

Drag a column header here to group its column

Order ID		Customer Name	
10248		Maria	
10249		Ana Trujillo	
10250		Antonio Moreno	

Elements

Console

Sources

Network

Perf

sort="none" aria-grabbed="false" aria-

description="Press Enter to sort. Press Ctrl spa

e to group. Press Alt Down to open Column Menu

aria-reverse="1" aria-selected="1"

ContextMenu

Locale key words | Text | Example

currentPageInfo | {0} of {1} pages | 1 of 1 pages (3 items)

totalItemsInfo | ({0} items) | 1 of 1 pages (3 items)

firstPageTooltip | Go to first page |

I<

<

...

6

7

8

Go to first page

lastPageTooltip | Go to last page |

8

9

10

...

>

>I

Go to last page

nextPageTooltip | Go to next page |

8

9

10

...

>

>I

Go to next page

previousPageTooltip | Go to previous page |

I<

<

...

6

7

8

Go to previous page

nextPagerTooltip | Go to next pager items |

8

9

10

...

>

>I

Go to next pager items

previousPagerTooltip | Go to previous pager items |

1< < ... 6 7 8 9 10

Go to previous pager items

12 Items per page

All Items

All | All | All Items

1 of 1 pages (1 item)

Container | Pager Container |

1< < ... 6 7 8 9 10 ... > >1 8 of 166 pages (830 items)

Elements Console Sources Network Performance Memory Application S

ss="e-gridpager e-control e-pager e-lib" _ngcontent-ng-c1913795131 data-role="pager"
="-1" aria-label="Pager Container" >...</div> == \$0

Information | Pager Information |

Order ID	Customer Na...
10248	
10248	Paul Henriot
1< < 1 > >1	
Order ID: 10248	

Welcome Elements Console Sources Ne

```
<div class="e-pagerexternalmsg" aria-label="Pager external message" style>
Order ID: 10248</div> == $0
```

ExternalMsg | Pager external message |

Page | Page |

Of | of | 1 of 1 pages (5 items)

Pages | Pages |

Loading translations for de culture

The Syncfusion React Grid component provides a built-in Localization library that allows you to load translation objects for different cultures. By using the **load** function of the **L10n** class, you can customize the text content of the Grid to be displayed in different languages.

This feature allows you to specify translation objects for specific cultures, such as **Deutsch** (German), and display the Grid's content in the desired language.

To work with **JSON** files in your application, you can enable JSON module resolution in TypeScript by adding the **resolveJsonModule** to true to your tsconfig.json file. Additionally, you can enhance module interoperation by setting **esModuleInterop** to true as shown below:

```
`ts
{
  compilerOptions: {
    resolveJsonModule: true,
    esModuleInterop: true,
  }
}
```

The following example demonstrates how to load a translation object for **Deutsch (de)** culture, by using the **load** function of **L10n** class from the **ej2-base** module and by defining the [locale](#) to **de-DE**.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Group,
Page } from '@syncfusion/ej2-react-grids';
import { L10n, } from '@syncfusion/ej2-base';
import * as React from 'react';
import deDELocalization from './locale.json'
import { data } from './datasource';
L10n.load(deDELocalization);
function App() {
  const pageOptions = { pageSize: 6 };
  return <GridComponent dataSource={data} locale='de-DE' allowPaging={true}
    pageSettings={pageOptions} allowGrouping={true}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
      <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
      <ColumnDirective field='ShipName' headerText='Ship Name'
width='150' />
    </ColumnsDirective>
    <Inject services={[Page, Group]} />
  </GridComponent>
};
```



```
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Group,
Page, PageSettingsModel } from '@syncfusion/ej2-react-grids';
import { L10n, } from '@syncfusion/ej2-base';
import * as React from 'react';
import deDELocalization from './locale.json'
import { data } from './datasource';
L10n.load(deDELocalization);
function App() {
  const pageOptions: PageSettingsModel = { pageSize: 6 };
  return <GridComponent dataSource={data} locale='de-DE' allowPaging={true}
    pageSettings={pageOptions} allowGrouping={true}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
      <ColumnDirective field='ShipCity' headerText='Ship City' width='150' />
      <ColumnDirective field='ShipName' headerText='Ship Name' width='150' />
    </ColumnsDirective>
    <Inject services={[Page, Group]} />
  </GridComponent>
</>
};
export default App;
```

LOCALE.JSON

```
{
  "de-DE": {
    "grid": {
      "EmptyRecord": "Keine Datensätze zum Anzeigen",
      "True": "wahr",
      "False": "falsch",
      "InvalidFilterMessage": "Ungültige Filterdaten",
      "GroupDropArea": "Ziehen Sie eine Spaltenüberschrift hierher, um die
Spalte zu gruppieren",
      "UnGroup": "Klicken Sie hier, um die Gruppierung aufzuheben",
      "GroupDisable": "Die Gruppierung ist für diese Spalte deaktiviert",
      "FilterbarTitle": "\"s Filterbalkenzelle",
      "EmptyDataSourceError": "Datenquelle darf beim ersten Laden nicht leer
sein, da Spalten aus der Datenquelle automatisch generiert werden",
      "Add": "Hinzufügen",
      "Edit": "Bearbeiten",
      "Cancel": "Abbrechen",
      "Update": "Aktualisieren",
      "Delete": "Löschen",
      "Print": "Drucken",
      "Pdfexport": "PDF-Export",
      "Excelexport": "Excel-Export",
      "Wordexport": "Word-Export",
      "Csvexport": "CSV-Export",
      "Search": "Suchen",
      "Columnchooser": "Spalten",
    }
  }
}
```

```

"Save": "Speichern",
"Item": "Datensatz",
"Items": "Datensätze",
"EditOperationAlert": "Keine Datensätze zum Bearbeiten ausgewählt",
"DeleteOperationAlert": "Keine Datensätze zum Löschen ausgewählt",
"SaveButton": "Speichern",
"OKButton": "in Ordnung",
"CancelButton": "Abbrechen",
"EditFormTitle": "Details von",
"AddFormTitle": "Neuen Datensatz hinzufügen",
"BatchSaveConfirm": "Möchten Sie die Änderungen wirklich speichern?",
"BatchSaveLostChanges": "Nicht gespeicherte Änderungen gehen verloren.
Sind Sie sicher, dass Sie fortfahren wollen?",
"ConfirmDelete": "Möchten Sie den Datensatz wirklich löschen?",
"CancelEdit": "Möchten Sie die Änderungen wirklich abbrechen?",
"ChooseColumns": "Wählen Sie Spalten",
"SearchColumns": "Spalten durchsuchen",
"Matches": "Keine Treffer gefunden",
"FilterButton": "Filter",
"ClearButton": "Löschen",
"StartsWith": "Beginnt mit",
"EndsWith": "Endet mit",
"Contains": "Enthält",
"Equal": "Gleich",
"NotEqual": "Nicht gleich",
"LessThan": "Weniger als",
"LessThanOrEqual": "Weniger als oder gleich",
"GreaterThan": "Grösser als",
"GreaterThanOrEqual": "Grösser als oder gleich",
"ChooseDate": "Wählen Sie ein Datum",
"EnterValue": "Geben Sie den Wert ein",
"Copy": "Kopieren",
"Group": "Nach dieser Spalte gruppieren",
"Ungroup": "Gruppierung nach dieser Spalte aufheben",
"autoFitAll": "Automatisch alle Spalten anpassen",
"autoFit": "Diese Spalte automatisch anpassen",
"Export": "Export",
"FirstPage": "Erste Seite",
"LastPage": "Letzte Seite",
"PreviousPage": "Vorherige Seite",
"NextPage": "Nächste Seite",
"SortAscending": "Aufsteigend sortieren",
"SortDescending": "Absteigend sortieren",
"EditRecord": "Datensatz bearbeiten",
"DeleteRecord": "Datensatz löschen",
"FilterMenu": "Filter",
"SelectAll": "Wählen Sie Alle",
"Blanks": "Leerzeichen",
"FilterTrue": "Wahr",
"FilterFalse": "Falsch",
"NoResult": "Keine Treffer gefunden",
"ClearFilter": "Filter löschen",
"NumberFilter": "Anzahl Filter",
"TextFilter": "Textfilter",
"DateFilter": "Datumsfilter",
"DateTimeFilter": "DatumsZeit-Filter",
"MatchCase": "Gross- / Kleinschreibung",

```

```

    "Between": "Zwischen",
    "CustomFilter": "Benutzerdefinierte Filter",
    "CustomFilterPlaceholder": "Geben Sie einen Wert ein",
    "CustomFilterDatePlaceholder": "Wählen Sie ein Datum",
    "AND": "UND",
    "OR": "ODER",
    "ShowRowsWhere": "Zeilen anzeigen, in denen:",
    "NotStartsWith": "beginnt nicht mit",
    "Like": "Wie",
    "NotEndsWith": "endet nicht mit",
    "NotContains": "enthält nicht",
    "IsNull": "Null",
    "NotNull": "nicht null",
    "IsEmpty": "leer",
    "IsNotEmpty": "nicht leer",
    "AddCurrentSelection": "Aktuelle Auswahl zum Filter hinzufügen",
    "UnGroupButton": "Klicken Sie hier, um die Gruppierung aufzuheben",
    "AutoFitAll": "Automatisch alle Spalten anpassen",
    "AutoFit": "Diese Spalte automatisch anpassen",
    "Clear": "Klar",
    "FilterMenuDialogARIA": "Menüdialog filtern",
    "ExcelFilterDialogARIA": "Excel-Filterdialog",
    "DialogEditARIA": "Dialog bearbeiten",
    "ColumnChooserDialogARIA": "Spaltenauswahl",
    "ColumnMenuDialogARIA": "Spaltenmenüdialog",
    "CustomFilterDialogARIA": "Benutzerdefinierter Filterdialog",
    "SortAtoZ": "Sortiere von A bis Z",
    "SortZtoA": "Z bis A sortieren",
    "SortByOldest": "Nach Ältesten sortieren",
    "SortByNewest": "Nach Neuesten sortieren",
    "SortSmallestToLargest": "Vom Kleinsten zum Größten sortieren",
    "SortLargestToSmallest": "Vom Größten zum Kleinsten sortieren",
    "Sort": "Sortieren",
    "FilterDescription": "Drücken Sie die Alt-Nach-unten-Taste, um das Filtermenü zu öffnen",
    "SortDescription": "Drücken Sie zum Sortieren die Eingabetaste",
    "ColumnMenuDescription": "Drücken Sie die Alt-Nach-unten-Taste, um das Spaltenmenü zu öffnen",
    "GroupDescription": "Drücken Sie zum Gruppieren die Strg-Leertaste",
    "ColumnHeader": " Spaltenüberschrift ",
    "TemplateCell": " ist eine Vorlagenzelle",
    "CommandColumnAria": "ist die Spaltenüberschrift der Befehlsspalte ",
    "DialogEdit": "Dialog bearbeiten",
    "Clipboard": "Zwischenablage",
    "GroupButton": "Gruppenschaltfläche",
    "UnGroupAria": "Schaltfläche zum Aufheben der Gruppierung",
    "GroupSeperator": "Trennzeichen für die gruppierten Spalten",
    "UnGroupIcon": "heben Sie die Gruppierung der gruppierten Spalte auf ",
    "GroupedSortIcon": "sortieren Sie die gruppierte Spalte ",
    "GroupedDrag": "Ziehen Sie die gruppierte Spalte",
    "GroupCaption": " ist eine Gruppenunterschriftszelle",
    "CheckBoxLabel": "Kontrollkästchen",
    "Expanded": "Erweitert",
    "Collapsed": "Zusammengebrochen"
  },
  "pager": {
    "currentPageInfo": "{0} von {1} Seiten",

```

```

    "totalItemsInfo": "({0} Datensätze)",
    "firstPageTooltip": "Gehe zur ersten Seite",
    "lastPageTooltip": "Gehe zur letzten Seite",
    "nextPageTooltip": "Gehe zur nächsten Seite",
    "previousPageTooltip": "Zurück zur letzten Seite",
    "nextPagerTooltip": "Gehe zu den nächsten Pager-Elementen",
    "previousPagerTooltip": "Gehen Sie zu den vorherigen Pager-Elementen",
    "pagerDropDown": "Datensätze pro Seite",
    "pagerAllDropDown": "Datensätze",
    "All": "Alle",
    "totalItemInfo": "({0} Datensatz)",
    "Container": "Pager-Container",
    "Information": "Pager-Informationen",
    "ExternalMsg": "Pager-externe Nachricht",
    "Page": "Buchseite ",
    "Of": " von ",
    "Pages": " Seiten"
  }
}
}

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },

```

```

{
  OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
  ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
  ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
},
{
  OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
  ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
  ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
},
{
  OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
  ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
  ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
},
{
  OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
  ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
  ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
},
{
  OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
  ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
  ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
},
{
  OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
  ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
  ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
},
{
  OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
  ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
  ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
},
{

```

```

    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),

```

```

        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),

```

```

      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
      'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
      'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
      Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
      Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
      'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
      Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }
  ]];

```

Loading translations for fr culture

The Loading translations feature allows you to specify translation objects for different cultures, such as **Deutsch**, **Arabic**, **French** and display the Grid's content in the desired language.

To work with **JSON** files in your application, you can enable JSON module resolution in TypeScript by adding the **resolveJsonModule** to true to your tsconfig.json file. Additionally, you can enhance module interoperation by setting **esModuleInterop** to true as shown below:

```
`ts
```



```
{
  compilerOptions: {
    resolveJsonModule: true,
    esModuleInterop: true,
  }
}
```

The following example demonstrates how to load a translation object for **French (fr)** culture, by defining the [locale](#) to **fr-FR** and by using the **load** function of **L10n** class from the **ej2-base** module.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Group,
Page, Edit, Toolbar } from '@syncfusion/ej2-react-grids';
import { L10n, } from '@syncfusion/ej2-base';
import * as React from 'react';
import frFRLocalization from './locale.json'
import { data } from './datasource';
L10n.load(frFRLocalization);
function App() {
  const pageOptions = { pageSize: 6 };
  const editSettings = { allowAdding: true, allowDeleting: true,
allowEditing: true };
  const toolbar = ['Add', 'Edit', 'Delete', 'Update', 'Cancel', 'Search'];
  return <GridComponent dataSource={data} locale='fr-FR' allowPaging={true}
    pageSettings={pageOptions} allowGrouping={true}
    editSettings={editSettings} toolbar={toolbar}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
      <ColumnDirective field='ShipCity' headerText='Ship City' width='150' />
      <ColumnDirective field='ShipName' headerText='Ship Name' width='150' />
    </ColumnsDirective>
    <Inject services={[Page, Group, Edit, Toolbar]} />
  </GridComponent>
};
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Group,
Page, PageSettingsModel, EditSettingsModel, ToolbarItems, Edit, Toolbar }
from '@syncfusion/ej2-react-grids';
import { L10n, } from '@syncfusion/ej2-base';
import * as React from 'react';
import frFRLocalization from './locale.json'
import { data } from './datasource';
L10n.load(frFRLocalization);
function App() {
```

```

const pageOptions: PageSettingsModel = { pageSize: 6 };
const editSettings: EditSettingsModel = { allowAdding: true, allowDeleting:
true, allowEditing: true };
const toolbar: ToolbarItems[] = ['Add', 'Edit', 'Delete', 'Update',
'Cancel', 'Search'];
return <GridComponent dataSource={data} locale='fr-FR' allowPaging={true}
pageSettings={pageOptions} allowGrouping={true}
editSettings={editSettings} toolbar={toolbar}>
  <ColumnsDirective>
    <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
    <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
    <ColumnDirective field='ShipCity' headerText='Ship City' width='150' />
    <ColumnDirective field='ShipName' headerText='Ship Name' width='150' />
  </ColumnsDirective>
  <Inject services={[Page, Group, Edit, Toolbar]} />
</GridComponent>
};
export default App;

```

LOCALE.JSON

```

{
  "fr-FR": {
    "grid": {
      "EmptyRecord": "Aucun enregistrement à afficher",
      "True": "vrai",
      "False": "faux",
      "InvalidFilterMessage": "Données de filtre non valides",
      "GroupDropArea": "Faites glisser un en-tête de colonne ici pour
regrouper sa colonne",
      "UnGroup": "Cliquez ici pour dissocier",
      "GroupDisable": "Le regroupement est désactivé pour cette colonne",
      "FilterbarTitle": "Cellule de barre de filtre \"s\",
      "EmptyDataSourceError": "DataSource ne doit pas être vide lors du
chargement initial car les colonnes sont générées à partir de dataSource dans
AutoGenerate Column Grid",
      "Add": "Ajouter",
      "Edit": "Éditer",
      "Cancel": "Annuler",
      "Update": "Mise à jour",
      "Delete": "Supprimer",
      "Print": "Impression",
      "Pdfexport": "Exportation PDF",
      "Excelexport": "Exportation Excel",
      "Wordexport": "Exportation de mots",
      "Csvexport": "Exportation CSV",
      "Search": "Chercher",
      "Columnchooser": "Colonnes",
      "Save": "sauvegarder",
      "Item": "article",
      "Items": "articles",
      "EditOperationAlert": "Aucun enregistrement sélectionné pour
l'opération d'édition",

```

```

    "DeleteOperationAlert": "Aucun enregistrement sélectionné pour
l'opération de suppression",
    "SaveButton": "Sauvegarder",
    "OKButton": "Ok",
    "CancelButton": "Annuler",
    "EditFormTitle": "Les détails de",
    "AddFormTitle": "Ajouter un nouvel enregistrement",
    "BatchSaveConfirm": "Voulez-vous vraiment enregistrer les modifications
?",
    "BatchSaveLostChanges": "Les modifications non enregistrées seront
perdues. Es-tu sur de vouloir continuer ?",
    "ConfirmDelete": "Voulez-vous vraiment supprimer l'enregistrement ?",
    "CancelEdit": "Voulez-vous vraiment annuler les modifications ?",
    "ChooseColumns": "Choisissez la colonne",
    "SearchColumns": "colonnes de recherche",
    "Matches": "Aucun résultat",
    "FilterButton": "Filtrer",
    "ClearButton": "Effacer",
    "StartsWith": "Commence par",
    "EndsWith": "Se termine par",
    "Contains": "Contient",
    "Equal": "Égal",
    "NotEqual": "Différent",
    "LessThan": "Inférieur",
    "LessThanOrEqual": "Inférieur ou égal",
    "GreaterThan": "Supérieur",
    "GreaterThanOrEqual": "Supérieur ou égal",
    "ChooseDate": "Choisissez une date",
    "EnterValue": "Entrez la valeur",
    "Copy": "Copie",
    "Group": "Regrouper par cette colonne",
    "Ungroup": "Dissocier par cette colonne",
    "autoFitAll": "Ajuster automatiquement toutes les colonnes",
    "autoFit": "Ajuster automatiquement cette colonne",
    "Export": "Exportation",
    "FirstPage": "Première page",
    "LastPage": "Dernière page",
    "PreviousPage": "Page précédente",
    "NextPage": "Page suivante",
    "SortAscending": "Trier par ordre croissant",
    "SortDescending": "Trier par ordre décroissant",
    "EditRecord": "Modifier l'enregistrement",
    "DeleteRecord": "Supprimer l'enregistrement",
    "FilterMenu": "Filtre",
    "SelectAll": "Tout sélectionner",
    "Blanks": "Blancs",
    "FilterTrue": "Vrai",
    "FilterFalse": "Faux",
    "NoResult": "Aucun résultat",
    "ClearFilter": "Effacer le filtre",
    "NumberFilter": "Filtres numériques",
    "TextFilter": "Filtres de texte",
    "DateFilter": "Filtres de date",
    "DateTimeFilter": "Filtres DateTime",
    "MatchCase": "Cas de correspondance",
    "Between": "Entre",
    "CustomFilter": "Filtre personnalisé",

```

```

"CustomFilterPlaceholder": "Entrez la valeur",
"CustomFilterDatePlaceholder": "Choisissez une date",
"AND": "ET",
"OR": "OU",
"ShowRowsWhere": "Afficher les lignes où:",
"NotStartsWith": "Ne commence pas par",
"Like": "Comme",
"NotEndsWith": "Ne se termine pas par",
"NotContains": "Ne contient pas",
"IsNull": "Nul",
"NotNull": "Non nul",
"IsEmpty": "Vide",
"IsNotEmpty": "Pas vide",
"AddCurrentSelection": "Ajouter la sélection actuelle au filtre",
"UnGroupButton": "Cliquez ici pour dissocier",
"AutoFitAll": "Ajuster automatiquement toutes les colonnes",
"AutoFit": "Ajuster automatiquement cette colonne",
"Clear": "Dégager",
"FilterMenuDialogARIA": "Boîte de dialogue du menu Filtre",
"ExcelFilterDialogARIA": "Boîte de dialogue de filtre Excel",
"DialogEditARIA": "Boîte de dialogue Modifier",
"ColumnChooserDialogARIA": "Sélecteur de colonne",
"ColumnMenuDialogARIA": "Boîte de dialogue du menu des colonnes",
"CustomFilterDialogARIA": "Boîte de dialogue Filtre personnalisé",
"SortAtoZ": "Trier de A à Z",
"SortZtoA": "Trier de Z à A",
"SortByOldest": "Trier par le plus ancien",
"SortByNewest": "Trier par Plus récent",
"SortSmallestToLargest": "Trier du plus petit au plus grand",
"SortLargestToSmallest": "Trier du plus grand au plus petit",
"Sort": "Sorte",
"FilterDescription": "Appuyez sur Alt Bas pour ouvrir le menu du
filtre",
"SortDescription": "Appuyez sur Entrée pour trier",
"ColumnMenuDescription": "Appuyez sur Alt Bas pour ouvrir le menu des
colonnes",
"GroupDescription": "Appuyez sur Ctrl espace pour grouper",
"ColumnHeader": " en-tête de colonne ",
"TemplateCell": " est une cellule modèle",
"CommandColumnAria": "est l'en-tête de colonne de la colonne de
commande ",
"DialogEdit": "Modifier la boîte de dialogue",
"Clipboard": "presse-papiers",
"GroupButton": "Bouton de groupe",
"UnGroupAria": "bouton dissocier",
"GroupSeperator": "Séparateur pour les colonnes groupées",
"UnGroupIcon": "dissocier la colonne groupée ",
"GroupedSortIcon": "trier la colonne groupée ",
"GroupedDrag": "Faites glisser la colonne groupée",
"GroupCaption": " est une cellule de légende de groupe",
"CheckBoxLabel": "case à cocher",
"Expanded": "Étendue",
"Collapsed": "S'est effondré"
},
"pager": {
  "currentPageInfo": "{0} de {1} pages",
  "totalItemsInfo": "({0} éléments)",

```

```

    "firstPageTooltip": "Aller à la première page",
    "lastPageTooltip": "Aller à la dernière page",
    "nextPageTooltip": "Aller à la page suivante",
    "previousPageTooltip": "Aller à la page précédente",
    "nextPagerTooltip": "Aller aux éléments suivants du téléavertisseur",
    "previousPagerTooltip": "Accéder aux éléments de téléavertisseur
précédents",
    "pagerDropDown": "objets par page",
    "pagerAllDropDown": "Articles",
    "All": "Tout",
    "totalItemInfo": "({0} élément)",
    "Container": "Conteneur de téléavertisseur",
    "Information": "Informations sur le téléavertisseur",
    "ExternalMsg": "Message externe du téléavertisseur",
    "Page": "Page",
    "Of": " de ",
    "Pages": " pages"
  }
}
}

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },

```

```

{
  OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
  ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
  ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
},
{
  OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
  ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
  ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
},
{
  OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
  ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
  ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
},
{
  OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
  ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
  ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
},
{
  OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
  ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
  ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
},
{
  OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
  ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
  ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
},
{
  OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
  ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
  ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
},
{

```

```

    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),

```

```

    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
  {
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
    Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
    'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
    Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
    Date(8374554e5),

```



```

      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
      'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
      'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
      Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
      Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
      'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
      Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }
  ]];

```

Switch the different localization

The Syncfusion React Grid allows you to switch the localization from one culture to another culture. This will be useful when you want to change the localization based on your requirements.

To switch to a different localization, follow these steps:

Step 1: Import and load the required CLDR (Common Locale Data Repository) data for the desired culture using the loadCldr function.

`ts

```
loadCldr(  
  cagregorian,  
  currencies,  
  numbers,  
  timeZoneNames,  
  numberingSystems  
);  
`
```

Step 2: To import **json** files in your application, you can enable JSON module resolution in TypeScript by adding the **resolveJsonModule** to true to your tsconfig.json file. Additionally, you can enhance module interoperation by setting **esModuleInterop** to true as shown below:

```
`ts  
{  
  compilerOptions: {  
    resolveJsonModule: true,  
    esModuleInterop: true,  
  }  
}
```

Step 3: To change the default culture and the currency code, you can use the methods **setCulture** for setting the locale and **setCurrencyCode** for setting the currency code.

To switch to the **French** culture and set the currency code as **EUR**, you can use the **setCulture** method and the **setCurrencyCode** method of the Grid on external button click. This is demonstrated below:

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Page }  
  from '@syncfusion/ej2-react-grids';  
import { L10n, loadCldr, setCulture, setCurrencyCode } from '@syncfusion/ej2-  
  base';  
import * as React from 'react';  
import frFRLocalization from './locale.json';  
import cagregorian from './ca-gregorian.json';  
import currencies from './currencies.json';  
import numbers from './numbers.json';  
import timeZoneNames from './timeZoneNames.json';  
import numberingSystems from './numberingSystems.json';  
import { data } from './datasource';  
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';  
L10n.load(frFRLocalization);  
function App() {  
  setCulture('fr-FR'); // Change the Grid culture  
  setCurrencyCode('EUR');
```

```

loadCldr(
  cagregorian,
  currencies,
  numbers,
  timeZoneNames,
  numberingSystems
);
const pageOptions = { pageSize: 6 };
const changeFrLocale = () => {
  setCulture('fr-FR'); // Change the Grid culture to French locale
  setCurrencyCode('EUR'); // Change the currency code based on French
  culture
}
const changeEnLocale = () => {
  setCulture('en-US'); // Change the Grid culture to English locale
  setCurrencyCode('USD'); // Change the currency code based on Americal
  English culture
}
return (<div>
  <ButtonComponent cssClass='e-outline' id='frButton'
onClick={changeFrLocale}>Change FR Locale</ButtonComponent>
  <ButtonComponent cssClass='e-outline' id='enButton' style={{ marginLeft:
"10px" }} onClick={changeEnLocale}>Change EN Locale</ButtonComponent>
  <GridComponent dataSource={data} allowPaging={true}
pageSettings={pageOptions} >
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
      <ColumnDirective field='Freight' headerText='Freight' width='150'
format='C2' />
      <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' />
    </ColumnsDirective>
    <Inject services={[Page]} />
  </GridComponent></div>
);
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Page,
PageSettingsModel } from '@syncfusion/ej2-react-grids';
import { L10n, loadCldr, setCulture, setCurrencyCode } from '@syncfusion/ej2-
base';
import * as React from 'react';
import frFRLocalization from './locale.json';
import cagregorian from './ca-gregorian.json';
import currencies from './currencies.json';
import numbers from './numbers.json';
import timeZoneNames from './timeZoneNames.json';
import numberingSystems from './numberingSystems.json';
import { data } from './datasource';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
L10n.load(frFRLocalization);

```

```

function App() {
  setCulture('fr-FR'); // Change the Grid culture
  setCurrencyCode('EUR');
  loadCldr(
    cagregorian,
    currencies,
    numbers,
    timeZoneNames,
    numberingSystems
  );
  const pageOptions: PageSettingsModel = { pageSize: 6 };
  const changeFrLocale = () => {
    setCulture('fr-FR'); // Change the Grid culture to French locale
    setCurrencyCode('EUR'); // Change the currency code based on French
    culture
  }
  const changeEnLocale = () => {
    setCulture('en-US'); // Change the Grid culture to English locale
    setCurrencyCode('USD'); // Change the currency code based on Americal
    English culture
  }
  return (<div>
    <ButtonComponent cssClass='e-outline' id='frButton'
    onClick={changeFrLocale}>Change FR Locale</ButtonComponent>
    <ButtonComponent cssClass='e-outline' id='enButton' style={{ marginLeft:
    "10px" }} onClick={changeEnLocale}>Change EN Locale</ButtonComponent>
    <GridComponent dataSource={data} allowPaging={true}
    pageSettings={pageOptions} >
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='120'
        textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
        width='150' />
        <ColumnDirective field='Freight' headerText='Freight' width='150'
        format='C2' />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
        width='150' />
      </ColumnsDirective>
      <Inject services={[Page]} />
    </GridComponent></div>)
  };
  export default App;

```

LOCALE.JSON

```

{
  "fr-FR": {
    "grid": {
      "EmptyRecord": "Aucun enregistrement à afficher",
      "True": "vrai",
      "False": "faux",
      "InvalidFilterMessage": "Données de filtre non valides",
      "GroupDropArea": "Faites glisser un en-tête de colonne ici pour
      regrouper sa colonne",
      "UnGroup": "Cliquez ici pour dissocier",
      "GroupDisable": "Le regroupement est désactivé pour cette colonne",

```

```

    "FilterbarTitle": "Cellule de barre de filtre \"s\",
    "EmptyDataSourceError": "DataSource ne doit pas être vide lors du
chargement initial car les colonnes sont générées à partir de dataSource dans
AutoGenerate Column Grid",
    "Add": "Ajouter",
    "Edit": "Éditer",
    "Cancel": "Annuler",
    "Update": "Mise à jour",
    "Delete": "Supprimer",
    "Print": "Impression",
    "Pdfexport": "Exportation PDF",
    "Excelexport": "Exportation Excel",
    "Wordexport": "Exportation de mots",
    "Csvexport": "Exportation CSV",
    "Search": "Chercher",
    "Columnchooser": "Colonnes",
    "Save": "sauvegarder",
    "Item": "article",
    "Items": "articles",
    "EditOperationAlert": "Aucun enregistrement sélectionné pour
l'opération d'édition",
    "DeleteOperationAlert": "Aucun enregistrement sélectionné pour
l'opération de suppression",
    "SaveButton": "Sauvegarder",
    "OKButton": "Ok",
    "CancelButton": "Annuler",
    "EditFormTitle": "Les détails de",
    "AddFormTitle": "Ajouter un nouvel enregistrement",
    "BatchSaveConfirm": "Voulez-vous vraiment enregistrer les modifications
?",
    "BatchSaveLostChanges": "Les modifications non enregistrées seront
perdues. Es-tu sur de vouloir continuer ?",
    "ConfirmDelete": "Voulez-vous vraiment supprimer l'enregistrement ?",
    "CancelEdit": "Voulez-vous vraiment annuler les modifications ?",
    "ChooseColumns": "Choisissez la colonne",
    "SearchColumns": "colonnes de recherche",
    "Matches": "Aucun résultat",
    "FilterButton": "Filtrer",
    "ClearButton": "Effacer",
    "StartsWith": "Commence par",
    "EndsWith": "Se termine par",
    "Contains": "Contient",
    "Equal": "Égal",
    "NotEqual": "Différent",
    "LessThan": "Inférieur",
    "LessThanOrEqual": "Inférieur ou égal",
    "GreaterThan": "Supérieur",
    "GreaterThanOrEqual": "Supérieur ou égal",
    "ChooseDate": "Choisissez une date",
    "EnterValue": "Entrez la valeur",
    "Copy": "Copie",
    "Group": "Regrouper par cette colonne",
    "Ungroup": "Dissocier par cette colonne",
    "autoFitAll": "Ajuster automatiquement toutes les colonnes",
    "autoFit": "Ajuster automatiquement cette colonne",
    "Export": "Exportation",
    "FirstPage": "Première page",

```

```

    "LastPage": "Dernière page",
    "PreviousPage": "Page précédente",
    "NextPage": "Page suivante",
    "SortAscending": "Trier par ordre croissant",
    "SortDescending": "Trier par ordre décroissant",
    "EditRecord": "Modifier l'enregistrement",
    "DeleteRecord": "Supprimer l'enregistrement",
    "FilterMenu": "Filtre",
    "SelectAll": "Tout sélectionner",
    "Blanks": "Blancs",
    "FilterTrue": "Vrai",
    "FilterFalse": "Faux",
    "NoResult": "Aucun résultat",
    "ClearFilter": "Effacer le filtre",
    "NumberFilter": "Filtres numériques",
    "TextFilter": "Filtres de texte",
    "DateFilter": "Filtres de date",
    "DateTimeFilter": "Filtres DateTime",
    "MatchCase": "Cas de correspondance",
    "Between": "Entre",
    "CustomFilter": "Filtre personnalisé",
    "CustomFilterPlaceholder": "Entrez la valeur",
    "CustomFilterDatePlaceholder": "Choisissez une date",
    "AND": "ET",
    "OR": "OU",
    "ShowRowsWhere": "Afficher les lignes où:",
    "NotStartsWith": "Ne commence pas par",
    "Like": "Comme",
    "NotEndsWith": "Ne se termine pas par",
    "NotContains": "Ne contient pas",
    "IsNull": "Nul",
    "NotNull": "Non nul",
    "IsEmpty": "Vide",
    "IsNotEmpty": "Pas vide",
    "AddCurrentSelection": "Ajouter la sélection actuelle au filtre",
    "UnGroupButton": "Cliquez ici pour dissocier",
    "AutoFitAll": "Ajuster automatiquement toutes les colonnes",
    "AutoFit": "Ajuster automatiquement cette colonne",
    "Clear": "Dégager",
    "FilterMenuDialogARIA": "Boîte de dialogue du menu Filtre",
    "ExcelFilterDialogARIA": "Boîte de dialogue de filtre Excel",
    "DialogEditARIA": "Boîte de dialogue Modifier",
    "ColumnChooserDialogARIA": "Sélecteur de colonne",
    "ColumnMenuDialogARIA": "Boîte de dialogue du menu des colonnes",
    "CustomFilterDialogARIA": "Boîte de dialogue Filtre personnalisé",
    "SortAtoZ": "Trier de A à Z",
    "SortZtoA": "Trier de Z à A",
    "SortByOldest": "Trier par le plus ancien",
    "SortByNewest": "Trier par Plus récent",
    "SortSmallestToLargest": "Trier du plus petit au plus grand",
    "SortLargestToSmallest": "Trier du plus grand au plus petit",
    "Sort": "Sorte",
    "FilterDescription": "Appuyez sur Alt Bas pour ouvrir le menu du
filtre",
    "SortDescription": "Appuyez sur Entrée pour trier",
    "ColumnMenuDescription": "Appuyez sur Alt Bas pour ouvrir le menu des
colonnes",

```

```

    "GroupDescription": "Appuyez sur Ctrl espace pour grouper",
    "ColumnHeader": " en-tête de colonne ",
    "TemplateCell": " est une cellule modèle",
    "CommandColumnAria": "est l'en-tête de colonne de la colonne de
commande ",
    "DialogEdit": "Modifier la boîte de dialogue",
    "Clipboard": "presse-papiers",
    "GroupButton": "Bouton de groupe",
    "UnGroupAria": "bouton dissocier",
    "GroupSeperator": "Séparateur pour les colonnes groupées",
    "UnGroupIcon": "dissocier la colonne groupée ",
    "GroupedSortIcon": "trier la colonne groupée ",
    "GroupedDrag": "Faites glisser la colonne groupée",
    "GroupCaption": " est une cellule de légende de groupe",
    "CheckBoxLabel": "case à cocher",
    "Expanded": "Étendue",
    "Collapsed": "S'est effondré"
  },
  "pager": {
    "currentPageInfo": "{0} de {1} pages",
    "totalItemsInfo": "({0} éléments)",
    "firstPageTooltip": "Aller à la première page",
    "lastPageTooltip": "Aller à la dernière page",
    "nextPageTooltip": "Aller à la page suivante",
    "previousPageTooltip": "Aller à la page précédente",
    "nextPagerTooltip": "Aller aux éléments suivants du téléavertisseur",
    "previousPagerTooltip": "Accéder aux éléments de téléavertisseur
précédents",
    "pagerDropDown": "objets par page",
    "pagerAllDropDown": "Articles",
    "All": "Tout",
    "totalItemInfo": "({0} élément)",
    "Container": "Conteneur de téléavertisseur",
    "Information": "Informations sur le téléavertisseur",
    "ExternalMsg": "Message externe du téléavertisseur",
    "Page": "Page",
    "Of": " de ",
    "Pages": " pages"
  }
}
}

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),

```

```

        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),

```



```

        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]
};

```

DATASOURCE.TSX

```
export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
    Freight: 22.98, Verified: !1
  },
]
```

```

{
  OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
  ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
  ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
},
{
  OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
  ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
  ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
},
{
  OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
  ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
  ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
},
{
  OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
  ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
  ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
},
{
  OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
  ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
  ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
},
{
  OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
  ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
  ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
},
{
  OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
  ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
  ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
},
{

```

```

    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
    Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
    ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
    Freight: 48.29, Verified: !0
  }];

```

Internationalization

The Internationalization library in the Syncfusion React Grid provides a localized display of number, date, and time values in the Grid component based on the preferred language and region.

[Internationalization](#) library allows you to globalize number, date, and time values using format strings defined in the [format](#) property.

To work with **JSON** files in your application, you can enable JSON module resolution in TypeScript by adding the **resolveJsonModule** to true to your tsconfig.json file. Additionally, you can enhance module interoperation by setting **esModuleInterop** to true as shown below:

```

`ts
{
  compilerOptions: {
    resolveJsonModule: true,
    esModuleInterop: true,
  }
}
`

```

This ensures that the Grid component uses the correct format strings for number, date, and time values based on the selected culture. This can be demonstrated in the below example,

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Group, Inject,
Page } from '@syncfusion/ej2-react-grids';
import { L10n, loadCldr, setCulture, setCurrencyCode } from '@syncfusion/ej2-
base';
import * as React from 'react';
import deDELocalization from './locale.json';
import cagregorian from './ca-gregorian.json';
import currencies from './currencies.json';
import numbers from './numbers.json';
import timeZoneNames from './timeZoneNames.json';
import numberingSystems from './numberingSystems.json';
import { data } from './datasource';
L10n.load(deDELocalization);
function App() {
  setCulture('de-DE');
  setCurrencyCode('EUR');
  loadCldr(
    cagregorian,

```

```

    currencies,
    numbers,
    timeZoneNames,
    numberingSystems
  );
  const formatOptions = { format: 'C2', useGrouping: false,
minimumSignificantDigits: 1, maximumSignificantDigits: 3 }
  return (<div>
    <GridComponent dataSource={data} allowPaging={true} allowGrouping={true}
  >
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
      <ColumnDirective field='Freight' headerText='Freight' width='150'
format={formatOptions} />
      <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' />
    </ColumnsDirective>
    <Inject services={[Page, Group]} />
  </GridComponent></div>)
};
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Group, Inject,
Page } from '@syncfusion/ej2-react-grids';
import { L10n, loadCldr, setCulture, setCurrencyCode } from '@syncfusion/ej2-
base';
import * as React from 'react';
import deDELocalization from './locale.json';
import cagregorian from './ca-gregorian.json';
import currencies from './currencies.json';
import numbers from './numbers.json';
import timeZoneNames from './timeZoneNames.json';
import numberingSystems from './numberingSystems.json';
import { data } from './datasource';
L10n.load(deDELocalization);
function App() {
  setCulture('de-DE');
  setCurrencyCode('EUR');
  loadCldr(
    cagregorian,
    currencies,
    numbers,
    timeZoneNames,
    numberingSystems
  );
  const formatOptions = { format: 'C2', useGrouping: false,
minimumSignificantDigits: 1, maximumSignificantDigits: 3 }
  return (<div>
    <GridComponent dataSource={data} allowPaging={true}
allowGrouping={true}>
      <ColumnsDirective>

```

```

        <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
        <ColumnDirective field='Freight' headerText='Freight'
width='150' format={formatOptions} />
        <ColumnDirective field='ShipCountry' headerText='Ship
Country' width='150' />
    </ColumnsDirective>
    <Inject services={[Page, Group]} />
    </GridComponent></div>
);
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    }
]

```

```

    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
  ],

```

```

    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
  ]
};

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),

```



```

        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),

```

```

        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]];

```

* In the above sample, **Freight** column is formatted using the [NumberFormatOptions](#).

* By default, [locale](#) value is **en-US**. If you wish to change the culture to something other than **en-US**, you can simply set the **locale** property accordingly.

Right to Left - RTL

The Right to Left (RTL) feature in the Syncfusion React Grid allows you to switch the text direction and layout from left-to-right to right-to-left. This feature is especially beneficial for interacting with the grid in languages that are written and read from right to left, such as **Arabic**, **Farsi**, **Urdu**, and others.

Enabling RTL significantly improves the experience and accessibility for such languages.

To enable RTL in the Grid, you need to set the [enableRtl](#) property to **true**. By setting `enableRtl`, the grid component's text direction and layout will be adjusted to support right-to-left languages.

To work with **JSON** files in your application, you can enable JSON module resolution in TypeScript by adding the **resolveJsonModule** to true to your `tsconfig.json` file. Additionally, you can enhance module interoperation by setting **esModuleInterop** to true as shown below:

```
`ts
{
  compilerOptions: {
    resolveJsonModule: true,
    esModuleInterop: true,
  }
}
`
```

In the following example, the [EJ2 Toggle Switch Button](#) component is added to enable or disable the Right to Left (RTL) feature for the **Arabic (ar-AE)** locale. When the switch is toggled, the [change](#) event is triggered and the `enableRtl` property of the grid is updated accordingly.

APP.JSX

```
import { ColumnChooser, ColumnDirective, ColumnMenu, ColumnsDirective, Edit,
GridComponent, Group, Inject, Page, Sort, Toolbar, Filter, Reorder } from
'@syncfusion/ej2-react-grids';
import { L10n } from '@syncfusion/ej2-base';
import * as React from 'react';
import arAELocalization from './locale.json';
import { data } from './datasource';
import { SwitchComponent } from '@syncfusion/ej2-react-buttons';
L10n.load(arAELocalization);
function App() {
  let grid;
  const editSettings = { allowAdding: true, allowDeleting: true,
allowEditing: true, mode: 'Normal' };
  const toolbar = ['Add', 'Edit', 'Delete', 'Update', 'Cancel'];
  const pageOptions = { pageSize: 7 };
  const changeRTL = (args) => {
    grid.enableRtl = !args.checked;
  }
  return (<div>
    <label style={{ padding: "10px 10px" }}>Enable or disable RTL mode</label>
    <SwitchComponent change={changeRTL}></SwitchComponent>
    <GridComponent ref={g => grid = g} dataSource={data} locale='ar-AE'
allowPaging={true} pageSettings={pageOptions} allowGrouping={true}
allowSorting={true} allowReordering={true}
allowFiltering={true} editSettings={editSettings} toolbar={toolbar}
enableRtl={true} showColumnChooser={true} showColumnMenu={true}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
        <ColumnDirective field='ShipCity' headerText='ShipCity' width='150'
/>
        <ColumnDirective field='ShipName' headerText='Ship Name' width='150'
/>
      </ColumnsDirective>
```

```

    <Inject services={[Page, Group, Sort, Toolbar, Filter, Edit,
ColumnChooser, ColumnMenu, Reorder]} />
    </GridComponent></div>)
};
export default App;

```

APP.TSX

```

import { ColumnChooser, ColumnDirective, ColumnMenu, ColumnsDirective, Edit,
EditSettingsModel, GridComponent, Group, Inject, Page, PageSettingsModel,
Sort, ToolbarItems, Toolbar, Filter, Reorder } from '@syncfusion/ej2-react-
grids';
import { L10n } from '@syncfusion/ej2-base';
import * as React from 'react';
import arAELocalization from './locale.json';
import { data } from './datasource';
import { ChangeEventArgs, SwitchComponent } from '@syncfusion/ej2-react-
buttons';
L10n.load(arAELocalization);
function App() {
    let grid: GridComponent | null;
    const editSettings: EditSettingsModel = { allowAdding: true, allowDeleting:
true, allowEditing: true, mode: 'Normal' };
    const toolbar: ToolbarItems[] = ['Add', 'Edit', 'Delete', 'Update',
'Cancel'];
    const pageOptions: PageSettingsModel = { pageSize: 7 };
    const changeRTL = (args: ChangeEventArgs) => {
        (grid as GridComponent).enableRtl = !args.checked;
    }
    return (<div>
        <label style={{ padding: "10px 10px" }}>Enable or diable RTL mode</label>
        <SwitchComponent change={changeRTL}></SwitchComponent>
        <GridComponent ref={g => grid = g} dataSource={data} locale='ar-AE'
allowPaging={true} pageSettings={pageOptions} allowGrouping={true}
allowSorting={true} allowReordering={true}
        allowFiltering={true} editSettings={editSettings} toolbar={toolbar}
enableRtl={true} showColumnChooser={true} showColumnMenu={true}>
            <ColumnsDirective>
                <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
                <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
                <ColumnDirective field='ShipCity' headerText='ShipCity' width='150'
/>
                <ColumnDirective field='ShipName' headerText='Ship Name' width='150'
/>
            </ColumnsDirective>
            <Inject services={[Page, Group, Sort, Toolbar, Filter, Edit,
ColumnChooser, ColumnMenu, Reorder]} />
            </GridComponent></div>)
};
export default App;

```

LOCALE.JSON

```
{
```

```

"ar-AE": {
  "grid": {
    "EmptyRecord": "لا سجلات لعرضها",
    "True": "صحيح",
    "False": "خاطئة",
    "InvalidFilterMessage": "بيانات تصفية غير صالحة",
    "GroupDropArea": "اسحب رأس العمود هنا لتجميع العمود",
    "UnGroup": "انقر هنا لإلغاء التجميع",
    "GroupDisable": "تم تعطيل التجميع لهذا العمود",
    "FilterbarTitle": "خلية شريط مرشح",
    "EmptyDataSourceError": "فارغًا عند التحميل DataSource يجب ألا يكون",
    "Add": "إضافة",
    "Edit": "تعديل",
    "Cancel": "إلغاء",
    "Update": "تحديث",
    "Delete": "حذف",
    "Print": "طباعة",
    "Pdfexport": "تصدير قوات الدفاع الشعبي",
    "Excelexport": "اكسل التصدير",
    "Wordexport": "كلمة تصدير",
    "Csvexport": "تصدير CSV",
    "Search": "بحث",
    "Columnchooser": "أعمدة",
    "Save": "حفظ",
    "Item": "بند",
    "Items": "العناصر",
    "EditOperationAlert": "لم يتم تحديد سجلات لعملية التحرير",
    "DeleteOperationAlert": "لم يتم تحديد سجلات لعملية الحذف",
    "SaveButton": "حفظ",
    "OKButton": "حسنًا",
    "CancelButton": "إلغاء",
    "EditFormTitle": "تفاصيل",
    "AddFormTitle": "إضافة سجل جديد",
    "BatchSaveConfirm": "هل أنت متأكد أنك تريد حفظ التغييرات؟",
    "BatchSaveLostChanges": "سيتم فقد التغييرات غير المحفوظة. هل أنت متأكد؟",
    "ConfirmDelete": "هل أنت متأكد أنك تريد حذف السجل؟",
    "CancelEdit": "هل أنت متأكد من أنك تريد إلغاء التغييرات؟",
    "ChooseColumns": "اختيار العمود",
    "SearchColumns": "أعمدة البحث",
    "Matches": "لم يتم العثور على تطابق",
    "FilterButton": "منقي",
    "ClearButton": "واضح",
    "StartsWith": "ابدا بـ",
    "EndsWith": "ينتهي بـ",
    "Contains": "يحتوي على",
    "Equal": "مساو",
    "NotEqual": "ليس متساوي",
    "LessThan": "أقل من",
    "LessThanOrEqual": "اصغر من أو يساوي",
    "GreaterThan": "أكثر من",
    "GreaterThanOrEqual": "أكبر من أو يساوي",
    "ChooseDate": "اختيار التاريخ",
    "EnterValue": "أدخل القيمة",
    "Copy": "نسخ",
    "Group": "تجميع حسب هذا العمود",
  }
}

```

```

"Ungroup": "فك تجميع بواسطة هذا العمود",
"autoFitAll": "احتواء تلقائي لجميع الأعمدة",
"autoFit": "احتواء تلقائي لهذا العمود",
"Export": "تصدير",
"FirstPage": "الصفحة الأولى",
"LastPage": "آخر صفحة",
"PreviousPage": "الصفحة السابقة",
"NextPage": "الصفحة التالية",
"SortAscending": "فرز تصاعدي",
"SortDescending": "ترتيب تنازلي",
"EditRecord": "تحرير السجل",
"DeleteRecord": "حذف سجل",
"FilterMenu": "منقي",
"SelectAll": "اختر الكل",
"Blanks": "الفراغات",
"FilterTrue": "صحيح",
"FilterFalse": "خاطئة",
"NoResult": "لم يتم العثور على تطابق",
"ClearFilter": "مرشح واضح",
"NumberFilter": "عدد المرشحات",
"TextFilter": "مرشحات النص",
"DateFilter": "مرشحات التاريخ",
"DateTimeFilter": "مرشحات DateTime",
"MatchCase": "حالة مباراة",
"Between": "ما بين",
"CustomFilter": "تصفية مخصص",
"CustomFilterPlaceholder": "أدخل القيمة",
"CustomFilterDatePlaceholder": "اختيار موعد",
"AND": "و",
"OR": "أو",
"ShowRowsWhere": "إظهار الصفوف حيث",
"NotStartsWith": "لا تبدأ بـ",
"Like": "يحب",
"NotEndsWith": "لا تنتهي بـ",
"NotContains": "لا يحتوي",
"IsNull": "باطل",
"NotNull": "غير فارغة",
"IsEmpty": "فارغ",
"IsNotEmpty": "ليس فارغاً",
"AddCurrentSelection": "إضافة التحديد الحالي للتصفية",
"UnGroupButton": "انقر هنا لفك التجميع",
"AutoFitAll": "احتواء تلقائي لجميع الأعمدة",
"AutoFit": "احتواء تلقائي لهذا العمود",
"Clear": "صافي",
"FilterMenuDialogARIA": "مربع حوار قائمة التصفية",
"ExcelFilterDialogARIA": "مربع حوار مرشح Excel",
"DialogEditARIA": "مربع حوار التحرير",
"ColumnChooserDialogARIA": "منتقي الأعمدة",
"ColumnMenuDialogARIA": "مربع حوار قائمة العمود",
"CustomFilterDialogARIA": "مربع حوار عامل التصفية المخصص",
"SortAtoZ": "فرز من الألف إلى الياء",
"SortZtoA": "A إلى Z فرز من",
"SortByOldest": "فرز حسب الأقدم",
"SortByNewest": "فرز حسب الأحدث",
"SortSmallestToLargest": "الفرز من الأصغر إلى الأكبر",
"SortLargestToSmallest": "الفرز من الأكبر إلى الأصغر",
"Sort": "فرز",

```

```

"FilterDescription": "لفتح قائمة التصفية Alt Down اضغط على",
"SortDescription": "للفرز Enter اضغط على",
"ColumnMenuDescription": "لأسفل لفتح قائمة العمود Alt اضغط على",
"GroupDescription": "مسافة للمجموعة Ctrl اضغط على مفتاح",
"ColumnHeader": "رأس العمود",
"TemplateCell": "هي خلية قالب",
"CommandColumnAria": "هو رأس عمود الأمر",
"DialogEdit": "تحرير الحوار",
"Clipboard": "الحافظة",
"GroupButton": "زر المجموعة",
"UnGroupAria": "زر فك التجميع",
"GroupSeperator": "فاصل للأعمدة الممجة",
"UnGroupIcon": "قم بفك تجميع العمود المجمع",
"GroupedSortIcon": "قم بفرز العمود المجمع",
"GroupedDrag": "اسحب العمود المجمع",
"GroupCaption": "هي خلية تسمية توضيحية جماعية",
"CheckBoxLabel": "خانة الاختيار",
"Expanded": "موسع",
"Collapsed": "انهار"
},
"pager": {
  "currentPageInfo": "من {0} 1 صفحة {0}",
  "totalItemsInfo": "(عناصر {0})",
  "firstPageTooltip": "الذهاب إلى الصفحة الأولى",
  "lastPageTooltip": "الذهاب إلى الصفحة الأخيرة",
  "nextPageTooltip": "انتقل إلى الصفحة التالية",
  "previousPageTooltip": "الانتقال إلى الصفحة السابقة",
  "nextPagerTooltip": "انتقل إلى عناصر بيكر التالية",
  "previousPagerTooltip": "انتقل إلى عناصر بيكر السابقة",
  "pagerDropDown": "مواد لكل صفحة",
  "pagerAllDropDown": "العناصر",
  "All": "الكل",
  "totalItemInfo": "(بند {0})",
  "Container": "حاوية بيكر",
  "Information": "معلومات جهاز النداء",
  "ExternalMsg": "رسالة خارجية بيكر",
  "Page": "صفحة",
  "Of": "من",
  "Pages": "الصفحات"
}
}
}

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {

```

```

    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {

```



```

    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```
export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
```

```

      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),

```

```
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
    Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
    Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
    ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
    Freight: 48.29, Verified: !0
  }
];
```

See also

- [Internationalization](#)
- [Localization](#)

Accessibility in React Grid component

The Grid component followed the accessibility guidelines and standards, including [ADA, Section 508](#), [WCAG 2.2](#) standards, and [WCAG roles](#) that are commonly used to evaluate accessibility.


The accessibility compliance for the Grid component is outlined below.


| [Accessibility Criteria](#) | [Compatibility](#) |


| -- | -- |


| [WCAG 2.2 Support](#) |  |
src="https://cdn.syncfusion.com/content/images/documentation/partial.png" alt="Intermediate"> |


| [Section 508 Support](#) |  |
src="https://cdn.syncfusion.com/content/images/documentation/partial.png" alt="Intermediate"> |

| [Screen Reader Support](#) |  |
page/yes.png" alt="Yes"> |

| [Right-To-Left Support](#) |  |
alt="Yes"> |

| [Color Contrast](#) |  |
alt="Yes"> |

| [Mobile Device Support](#) |  |
page/yes.png" alt="Yes"> |

| [Keyboard Navigation Support](#) |  |
src="https://cdn.syncfusion.com/content/images/documentation/partial.png" alt="Intermediate"> |

| [Accessibility Checker Validation](#) |  |
src="https://cdn.syncfusion.com/content/images/documentation/partial.png" alt="Intermediate"> |

| [Axe-core Accessibility Validation](#) |  |
src="https://cdn.syncfusion.com/content/images/documentation/partial.png" alt="Intermediate"> |

```
<style>
.post .post-content img {
display: inline-block;
margin: 0.5em 0;
}
</style>

<div> - All
features of the component meet the requirement.</div>

<div> - Some features of the component do not meet the requirement.</div>

<div> - The component does not meet the requirement.</div>
```

WAI-ARIA attributes

The Grid component followed the [WAI-ARIA](#) patterns to meet the accessibility. The following ARIA attributes are used in the Grid component:

Attributes	Purpose
---	---
<code>role=grid</code>	To represent the element containing the grid component.
<code>role=row</code>	To represent the element containing the cells of the row in the grid.
<code>role=rowgroup</code>	To represent the group of rows in the grid.
<code>role=columnheader</code>	To represent the cell in a row contains header information for a column in the grid.
<code>role=gridcell</code>	To represent a cell in the grid component.
<code>role=button</code>	To represent the element that acts as a button in the grid.
<code>role=search</code>	To represent the element that acts as a search region in the grid.
<code>role=presentation</code>	To represent the element to be not available for accessibility concerns.
<code>role=navigation</code>	To represent the element containing pager elements to navigate from one page to another.
<code>aria-colindex</code>	Defines the column index of the column with respect to the total number of columns within the grid.
<code>aria-rowindex</code>	Defines row index of the row with respect to the total number of rows within the grid.
<code>aria-rowspan</code>	Defines the number of rows spanned by a cell within the grid.
<code>aria-colspan</code>	Defines the number of columns spanned by a cell within the grid.
<code>aria-rowcount</code>	Defines the total number of rows in the grid.

- | `aria-colcount` | Defines the total number of columns in the grid. |
- | `aria-selected` | Indicates the current "selected" state of the rows and cells in the grid. |
- | `aria-expanded` | Indicate if the expand icon in the hierarchy grid or grouped grid or detail grid is expanded or collapsed |
- | `aria-sort` | Indicates whether the data in the grid are sorted in ascending or descending order. |
- | `aria-busy` | Indicates an element is being modified and that assistive technologies may want to wait until the changes are complete before informing the user about the update. |
- | `aria-owns` | Identifies an element in order to define a visual, functional, or contextual relationship between a parent and its child elements. |
- | `aria-hidden` | Hides the element from accessibility concerns. |
- | `aria-labelledby` | Provides an accessible name for the checkbox labels in excel filter, checkbox filter and column chooser dialog. |
- | `aria-describedby` | Provides an description about the features enabled in the header when the grid header cell is focused. |

The Syncfusion Grid component is structured with a two-table architecture for its header and content. To enhance accessibility for screen readers, roles and ARIA attributes are incorporated for both the grid parent and all its child elements. Although this architectural approach may have some limitations with accessibility checker tools. It's important to note that these limitations do not affect the readability of the grid content over screen readers.

The accessibility checker tools highlights the following known issues:

- `aria-required-children`: This warning appears when rendering the grid without any features, as it contains textarea and grid content. Additionally, it appears when enabling features such as the toolbar and grouping.
- `color-contrast`: This warning appears when you are enabling the search item in the grid's toolbar.
- An explicit ARIA 'role' is not valid for element within an ARIA role 'grid' per the ARIA in HTML specification.
- An explicit ARIA 'role' is not valid for element within an ARIA role 'grid' per the ARIA in HTML specification.
- An explicit ARIA 'role' is not valid for element within an ARIA role 'grid' per the ARIA in HTML specification.
- The element with role "button" contains descendants with roles "rowgroup" which are ignored by browsers.
- Content is not within a landmark element.
- Multiple elements with "search" role do not have unique labels.
- Text contrast of 4.10 with its background is less than the WCAG AA minimum requirements for text of size 13px and weight of 400.
- Interactive component with ARIA role 'grid' does not have a programmatically associated name.
- The element with role "rowgroup" is not contained in or owned by an element with one of the following roles: "grid, table, treegrid".

Keyboard interaction

The Grid component followed the [keyboard interaction](#) guideline, making it easy for people who use assistive technologies (AT) and those who completely rely on keyboard navigation. The following keyboard shortcuts are supported by the Grid component.

Pager

Windows | MAC | To do this

Home | Fn + Left Arrow | Moves the focus to the first cell of the focused row.

End | Fn + Right Arrow | Moves the focus to the last cell of the focused row.

Ctrl + Home | Command + Fn + Left Arrow | Moves the focus to the first Cell of the first row in the grid.

Ctrl + End | Command + Fn + Right Arrow | Moves the focus to the last Cell of the last row in the grid.

Up Arrow | Up Arrow | Moves the cell focus upward from the focused cell.

Down Arrow | Down Arrow | Moves the cell focus downward from the focused cell.

Right Arrow | Right Arrow | Moves the cell focus right side from the focused cell.

Left Arrow | Left Arrow | Moves the cell focus left side from the focused cell.

Alt + J | Alt + J | Moves the focus to the entire grid.

Alt + W | Alt + W | Move the focus to the grid content element.

Selection

Windows | MAC | To do this

Ctrl + Up Arrow | Command + Up Arrow | Collapses all the visible groups.

Ctrl + Down Arrow | Command + Down Arrow | Expands all the visible groups.

Ctrl + Space | Ctrl + Space | Performs grouping when focused on a header element.

Enter | Enter | If the current cell is an expand/collapse cell then expands/collapses the current group/detailrow/childgrid.

Print

Windows | MAC | To do this

Ctrl + C | Command + C | Copies selected rows or cells data into the clipboard.

Ctrl + Shift + H | Ctrl + Shift + H | Copies selected rows or cells data with header into clipboard

Editing

Windows | MAC | To do this

Alt + Down arrow | Alt + Down arrow | Opens the filter menu(excel, menu and checkbox filter) when its header element is in focused state.

Column Menu

Windows | MAC | To do this

Ctrl + left arrow or right arrow | Command + left arrow or right arrow | Reorders the focused header column to the left or right side.

Sorting

Windows | MAC | To do this

Enter | Enter | Performs sorting(ascending/descending) on a column when its header element is in focused state.

Ctrl + Enter | Command + Enter | Performs multi-sorting on a column when its header element is in focused state.

Shift + Enter | Shift + Enter | Clears sorting for the focused header column.

*** The Command and Control keys on Mac devices can be interchanged. When this switch occurs, use the Command key in place of the Control key and the Control key in place of the Command key for the above listed key interactions with Mac devices.**

*** For example, after switching the keys to group the columns when the header element is focused use Command + Space and for expanding the visible groups use Ctrl + Down Arrow.**

How to prevent default key action behavior

The Syncfusion React Grid provides flexibility to prevent the default key action behavior based on your requirements. This enables you to intercept and customize the behavior when specific keys are pressed within a web application

To prevent the default key action behavior in the grid, you can utilize the [keyPressed](#) event. This event is triggered for every key press, allowing you to customize the behavior based on the pressed key.

The following example demonstrates how to prevent the default behavior of the “ENTER” key using the `keyPressed` event.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const keyPressed = (args) => {
    if (args.keyCode === 13) {
      args.cancel = true;
    }
  }
  return (<div>
    <GridComponent dataSource={data} keyPressed={keyPressed}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
      </ColumnsDirective>
    </GridComponent>
  </div>);
}
```



```

        <ColumnDirective field='ShipCity' headerText='ShipCity'
width='150' />
        <ColumnDirective field='ShipName' headerText='Ship Name'
width='150' />
    </ColumnsDirective>
</GridComponent></div>
};
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, KeyboardEventArgs }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    const keyPressed = (args: KeyboardEventArgs) => {
        if (args.keyCode === 13) {
            args.cancel = true;
        }
    }
    return (<div>
        <GridComponent dataSource={data} keyPressed={keyPressed}>
            <ColumnsDirective>
                <ColumnDirective field='OrderID' headerText='Order ID'
width='120' textAlign="Right" />
                <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
                <ColumnDirective field='ShipCity' headerText='ShipCity'
width='150' />
                <ColumnDirective field='ShipName' headerText='Ship Name'
width='150' />
            </ColumnsDirective>
        </GridComponent></div>
    );
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5), ShippedDate: new Date(8367642e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6), ShippedDate: new Date(8367642e5),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
]

```

```
{
  OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5), ShippedDate: new Date(8367642e5),
  ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
  ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
},
{
  OrderID: 10251, CustomerID: 'VINET', EmployeeID: 3, OrderDate: new
Date(8367642e5), ShippedDate: new Date(8367642e5),
  ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
  ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
},
{
  OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5), ShippedDate: new Date(8367642e5),
  ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
  ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
},
{
  OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6), ShippedDate: new Date(8367642e5),
  ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
  ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
},
{
  OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5), ShippedDate: new Date(8367642e5),
  ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
  ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
},
{
  OrderID: 10255, CustomerID: 'VINET', EmployeeID: 9, OrderDate: new
Date(8371098e5), ShippedDate: new Date(8367642e5),
  ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
  ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
},
{
  OrderID: 10256, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(837369e6), ShippedDate: new Date(8367642e5),
  ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
  ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
},
}
```

```

    OrderID: 10257, CustomerID: 'VINET', EmployeeID: 4, OrderDate: new
Date(8374554e5), ShippedDate: new Date(8367642e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'VINET', EmployeeID: 1, OrderDate: new
Date(8375418e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8377146e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8377146e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'VINET', EmployeeID: 8, OrderDate: new
Date(8379738e5), ShippedDate: new Date(8367642e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5), ShippedDate: new Date(8367642e5),

```

```

      ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
      ShipAddress: '59 rue de l Abbaye',
      ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
      Freight: 32.38, Verified: !0
    },
    {
      OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
      Date(836505e6), ShippedDate: new Date(8367642e5),
      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
      'Luisenstr. 48',
      ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
      Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
      Date(8367642e5), ShippedDate: new Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VINET', EmployeeID: 3, OrderDate: new
      Date(8367642e5), ShippedDate: new Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5), ShippedDate: new Date(8367642e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6), ShippedDate: new Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5), ShippedDate: new Date(8367642e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'VINET', EmployeeID: 9, OrderDate: new
      Date(8371098e5), ShippedDate: new Date(8367642e5),

```

```

      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(837369e6), ShippedDate: new Date(8367642e5),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'VINET', EmployeeID: 4, OrderDate: new
Date(8374554e5), ShippedDate: new Date(8367642e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'VINET', EmployeeID: 1, OrderDate: new
Date(8375418e5), ShippedDate: new Date(8367642e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5), ShippedDate: new Date(8367642e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8377146e5), ShippedDate: new Date(8367642e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8377146e5), ShippedDate: new Date(8367642e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'VINET', EmployeeID: 8, OrderDate: new
Date(8379738e5), ShippedDate: new Date(8367642e5),

```

```
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',  
        ShipAddress: '2817 Milton Dr.',  
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',  
        Freight: 48.29, Verified: !0  
    }  
];
```

Custom shortcut keys to perform grid actions

The Syncfusion React Grid component enables you to enhance the usability of keyboard shortcuts for various grid actions and navigation. In addition to the built-in keyboard navigation capabilities, you can implement custom keyboard shortcuts to execute specific actions.

To achieve this, you can utilize the [keyPressed](#) event of the grid. This event is triggered for every key press, allowing you to customize the behavior based on the pressed key.

The following example demonstrates how to perform grid actions using shortcut keys through the `keyPressed` event. Within the event, define the following custom shortcuts to perform various grid actions:

- Pressing N adds a new record.
- Pressing Ctrl + S save a record by invoking `endEdit`.
- Pressing Ctrl + D deletes a record.
- Pressing Ctrl + A selects all rows.
- Pressing Ctrl + G groups the grid by a specified column.

And prevented the default actions associated with the following keyboard shortcuts used for default grouping and editing action:

- Ctrl + Space
- Insert
- F2
- Delete
- Enter

You can add more custom shortcuts and actions as needed to enhance the functionality of your Syncfusion React Grid component.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, EditSettingsModel, GridComponent,  
Inject, KeyboardEventArgs, SelectionSettingsModel, Group } from  
    '@syncfusion/ej2-react-grids';  
import { Edit, Toolbar, ToolbarItems } from '@syncfusion/ej2-react-grids';  
import * as React from 'react';  
import { data } from './datasource';  
function App() {  
    let grid;  
    const editOptions = { allowEditing: true, allowAdding: true, allowDeleting:  
true, mode: 'Normal' };  
    const toolbarOptions = ['Add', 'Edit', 'Delete'];  
    const selectionSettings = { type: 'Multiple' };  
    const keyPressed = (e) => {
```

```
const key = e.key.toLowerCase();
switch (key) {
  case 'n':
    e.preventDefault();
    grid.addRecord();
    break;
  case 's':
    if (e.ctrlKey) {
      e.preventDefault();
      grid.endEdit();
    }
    break;
  case 'd':
    if (e.ctrlKey) {
      e.preventDefault();
      grid.deleteRecord();
    }
    break;
  case 'a':
    if (e.ctrlKey) {
      e.preventDefault();
      grid.selectRowsByRange(0);
    }
    break;
  case 'g':
    if (e.ctrlKey) {
      e.preventDefault();
      grid.groupColumn('CustomerID');
    }
    break;
  case 'enter':
    e.preventDefault();
    e.cancel = true;
    grid.refreshColumns();
    break;
  case 'insert':
    e.preventDefault();
    e.cancel = true;
    break;
  case 'delete':
    e.preventDefault();
    e.cancel = true;
    break;
  case 'f2':
    e.preventDefault();
    e.cancel = true;
    break;
  case '" "':
    if (e.ctrlKey) {
      e.preventDefault();
      e.cancel = true;
    }
    break;
  // Add more custom shortcuts as needed
}
```

```

    return <GridComponent ref={g => grid = g} dataSource={data}
    keyPressed={keyPressed} allowGrouping={true}
    editSettings={editOptions} toolbar={toolbarOptions} height={315}
    selectionSettings={selectionSettings}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='100'
        textAlign="Right" isPrimaryKey={true} />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
        width='120' />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
        width='150' />
      </ColumnsDirective>
      <Inject services={[Edit, Toolbar, Group]} />
    </GridComponent>
  };
  export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, EditSettingsModel, GridComponent,
Inject, KeyboardEventArgs, SelectionSettingsModel, Group } from
'@syncfusion/ej2-react-grids';
import { Edit, Toolbar, ToolbarItems } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid: GridComponent | null;
  const editOptions: EditSettingsModel = { allowEditing: true, allowAdding:
true, allowDeleting: true, mode: 'Normal' };
  const toolbarOptions: ToolbarItems[] = ['Add', 'Edit', 'Delete'];
  const selectionSettings: SelectionSettingsModel = { type: 'Multiple' };
  const keyPressed = (e: KeyboardEventArgs): void => {
    const key = e.key.toLowerCase();
    switch (key) {
      case 'n':
        e.preventDefault();
        (grid as GridComponent).addRecord();
        break;
      case 's':
        if (e.ctrlKey) {
          e.preventDefault();
          (grid as GridComponent).endEdit();
        }
        break;
      case 'd':
        if (e.ctrlKey) {
          e.preventDefault();
          (grid as GridComponent).deleteRecord();
        }
        break;
      case 'a':
        if (e.ctrlKey) {
          e.preventDefault();
          (grid as GridComponent).selectRowsByRange(0);
        }
        break;
    }
  };
}

```



```

    case 'g':
      if (e.ctrlKey) {
        e.preventDefault();
        (grid as GridComponent).groupColumn('CustomerID');
      }
      break;
    case 'enter':
      e.preventDefault();
      e.cancel = true;
      (grid as GridComponent).refreshColumns();
      break;
    case 'insert':
      e.preventDefault();
      e.cancel = true;
      break;
    case 'delete':
      e.preventDefault();
      e.cancel = true;
      break;
    case 'f2':
      e.preventDefault();
      e.cancel = true;
      break;
    case '" ":
      if (e.ctrlKey) {
        e.preventDefault();
        e.cancel = true;
      }
      break;
    // Add more custom shortcuts as needed
  }
}

return <GridComponent ref={g => grid = g} dataSource={data}
keyPressed={keyPressed} allowGrouping={true}
  editSettings={editOptions} toolbar={toolbarOptions} height={315}
selectionSettings={selectionSettings}>
  <ColumnsDirective>
    <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" isPrimaryKey={true} />
    <ColumnDirective field='CustomerID' headerText='Customer ID'
width='120' />
    <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' />
  </ColumnsDirective>
  <Inject services={[Edit, Toolbar, Group]} />
</GridComponent>
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),

```

```

      ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
      ShipAddress: '59 rue de l Abbaye',
      ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
      Freight: 32.38, Verified: !0
    },
    {
      OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
      Date(836505e6),
      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
      'Luisenstr. 48',
      ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
      Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
      Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
      Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),

```

```

      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),

```

```
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',  
      ShipAddress: '2817 Milton Dr.',  
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',  
      Freight: 48.29, Verified: !0  
    }  
  ];  
};
```

DATASOURCE.TSX

```
export let data: Object[] = [  
  {  
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new  
Date(8364186e5),  
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',  
    ShipAddress: '59 rue de l Abbaye',  
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',  
    Freight: 32.38, Verified: !0  
  },  
  {  
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new  
Date(836505e6),  
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:  
'Luisenstr. 48',  
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',  
    Freight: 11.61, Verified: !1  
  },  
  {  
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new  
Date(8367642e5),  
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:  
'Rua do Paço, 67',  
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',  
    Freight: 65.83, Verified: !0  
  },  
  {  
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new  
Date(8367642e5),  
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,  
rue du Commerce',  
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',  
    Freight: 41.34, Verified: !0  
  },  
  {  
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new  
Date(8368506e5),  
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:  
'Boulevard Tirou, 255',  
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',  
    Freight: 51.3, Verified: !0  
  },  
  {  
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new  
Date(836937e6),  
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:  
'Rua do Paço, 67',
```

```

        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]];

```

Ensuring accessibility

The Grid component's accessibility levels are ensured through an [accessibility-checker](#) and [axe-core](#) software tools during automated testing.

The accessibility compliance of the Grid component is shown in the following sample. Open the [sample](#) in a new window to evaluate the accessibility of the Grid component with accessibility tools.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, AggregateColumnsDirective,
AggregateColumnDirective, AggregateDirective, AggregatesDirective,
GridComponent } from '@syncfusion/ej2-react-grids';
import { Inject, Page, Sort, ColumnChooser, Toolbar, Edit, RowDD, Reorder,
Filter, Group, Aggregate } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const pageSettings = { pageCount: 2, pageSizes: true };
  const sortSettings = { columns: [{ field: 'OrderID', direction:
'Ascending' }, { field: 'ShipCity', direction: 'Descending' }] };
  const filterSettings = { type: "Excel" };
  const editSettings = { allowEditing: true, allowAdding: true,
allowDeleting: true };
  const groupSettings = { columns: ['CustomerID'] };
  const toolbar = ['Add', 'Edit', 'Delete', 'Update', 'Cancel', 'Search',
'ColumnChooser'];
  const selectionSettings = { type: 'Multiple', mode: 'Both' };
  const searchSettings = { fields: ['ShipCountry'], operator: 'contains',
key: 'a', ignoreCase: true };
  const footerTemplate = (props) => {
    return <span>Sum: {props.Sum}</span>;
  };
  const groupFooterTemplate = (props) => {
    return <span>Sum: {props.Sum}</span>;
  };
  const groupCaptionTemplate = (props) => {

```

```

    return (<span>Max: {props.Max}</span>);
  };
  return <GridComponent dataSource={data} allowPaging={true}
pageSettings={pageSettings} toolbar={toolbar} searchSettings={searchSettings}
showColumnChooser={true}
    allowFiltering={true} filterSettings={filterSettings}
allowGrouping={true} groupSettings={groupSettings}
editSettings={editSettings}
    allowSorting={true} sortSettings={sortSettings}
allowRowDragAndDrop={true} selectionSettings={selectionSettings}
selectedRowIndex={6} height={180}>
    <ColumnsDirective>
      <ColumnDirective type="checkbox" width='50' />
      <ColumnDirective field='OrderID' width='100' textAlign="Right" />
      <ColumnDirective field='CustomerID' width='100' />
      <ColumnDirective field='OrderDate' headerText='Order Date'
textAlign='Right' format='yMd' width='120' />
      <ColumnDirective field='Freight' headerText='Freight ($)'
textAlign='Right' format='C2' width='90' />
      <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
      <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='140' />
      <ColumnDirective field='ShipName' headerText='Shipped Name'
textAlign='Right' width='140' />
    </ColumnsDirective>
    <AggregatesDirective>
      <AggregateDirective>
        <AggregateColumnsDirective>
          <AggregateColumnDirective field='Freight' type='Sum'
format='C2' footerTemplate={footerTemplate} />
        </AggregateColumnsDirective>
      </AggregateDirective>
      <AggregateDirective>
        <AggregateColumnsDirective>
          <AggregateColumnDirective field='Freight' type='Sum'
format='C2' groupFooterTemplate={groupFooterTemplate} />
        </AggregateColumnsDirective>
      </AggregateDirective>
      <AggregateDirective>
        <AggregateColumnsDirective>
          <AggregateColumnDirective field='Freight' type='Max'
format='C2' groupCaptionTemplate={groupCaptionTemplate} />
        </AggregateColumnsDirective>
      </AggregateDirective>
    </AggregatesDirective>
    <Inject services={[Page, Sort, Filter, Group, ColumnChooser, Toolbar,
Edit, RowDD, Reorder, Aggregate]} />
  </GridComponent>;
}
;
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, EditSettingsModel,
FilterSettingsModel, ToolbarItems, SearchSettingsModel,
SelectionSettingsModel, GridComponent,
GroupSettingsModel, AggregateColumnsDirective, AggregateColumnDirective,
AggregateDirective, AggregatesDirective, SortSettingsModel } from
'@syncfusion/ej2-react-grids';
import { Inject, Page, PageSettingsModel, Sort, ColumnChooser, Toolbar, Edit,
RowDD, Reorder, Filter, Group, Aggregate } from 'syncfusion/ej2-react-
grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const pageSettings: PageSettingsModel = { pageCount: 2, pageSizes: true
};
  const sortSettings: SortSettingsModel = { columns: [{ field: 'OrderID',
direction: 'Ascending' }, { field: 'ShipCity', direction: 'Descending' }] };
  const filterSettings: FilterSettingsModel = { type: "Excel" };
  const editSettings: EditSettingsModel = { allowEditing: true,
allowAdding: true, allowDeleting: true };
  const groupSettings: GroupSettingsModel = { columns: ['CustomerID'] };
  const selectionSettings: SelectionSettingsModel = { type: 'Multiple',
mode: 'Both' };
  const toolbar: ToolbarItems[] = ['Add', 'Edit', 'Delete', 'Update',
'Cancel', 'Search', 'ColumnChooser'];
  const searchSettings: SearchSettingsModel = { fields: ['ShipCountry'],
operator: 'contains', key: 'a', ignoreCase: true };

  const footerTemplate = (props) => {
    return (<span>Sum: {props.Sum}</span>)
  }
  const groupFooterTemplate = (props) => {
    return (<span>Sum: {props.Sum}</span>)
  }
  const groupCaptionTemplate = (props) => {
    return (<span>Max: {props.Max}</span>)
  }

  return <GridComponent dataSource={data} allowPaging={true} pageSettings={
pageSettings } toolbar={toolbar} searchSettings={searchSettings}
showColumnChooser={true}
allowFiltering={true} filterSettings = {filterSettings}
allowGrouping={true} groupSettings={ groupSettings }
editSettings={editSettings}
allowSorting={true} sortSettings={ sortSettings }
allowRowDragAndDrop={true} selectionSettings={selectionSettings}
selectedRowIndex={6}>
    <ColumnsDirective>
      <ColumnDirective type="checkbox" width='50' />
      <ColumnDirective field='OrderID' width='100'
isPrimaryKey={true} textAlign="Right"/>
      <ColumnDirective field='CustomerID' width='100' />
      <ColumnDirective field='OrderDate' headerText='Order Date'
textAlign='Right' format='yMd' width='120' />
      <ColumnDirective field='Freight' headerText='Freight ($)'
textAlign='Right' format='C2' width='90' />

```



```

        <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
        <ColumnDirective field='ShipCountry' headerText='Ship
Country' width='140' />
        <ColumnDirective field='ShipName' headerText='Shipped Name'
textAlign='Right' width='140' />
    </ColumnsDirective>
    <AggregatesDirective>
        <AggregateDirective>
            <AggregateColumnsDirective>
                <AggregateColumnDirective field='Freight' type='Sum'
format='C2' footerTemplate={footerTemplate} />
            </AggregateColumnsDirective>
        </AggregateDirective>
        <AggregateDirective>
            <AggregateColumnsDirective>
                <AggregateColumnDirective field='Freight' type='Sum'
format='C2' groupFooterTemplate={groupFooterTemplate} />
            </AggregateColumnsDirective>
        </AggregateDirective>
        <AggregateDirective>
            <AggregateColumnsDirective>
                <AggregateColumnDirective field='Freight' type='Max'
format='C2' groupCaptionTemplate={groupCaptionTemplate} />
            </AggregateColumnsDirective>
        </AggregateDirective>
    </AggregatesDirective>
    <Inject services={[Page, Sort, Filter, Group, ColumnChooser, Toolbar,
Edit, RowDD, Reorder, Aggregate]} />
</GridComponent>
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 2, OrderDate: new
Date(8367642e5),

```

```

      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
      Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
      'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
      Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
      'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
      Date(8374554e5),

```

```

      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
      'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
      'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
      Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 7, OrderDate: new
      Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
      'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
      Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 2, OrderDate: new
      Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    },
    {
      OrderID: 10263, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
      Date(8364186e5),
      ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
      ShipAddress: '59 rue de l Abbaye',
      ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
      Freight: 32.38, Verified: !0
    },
    {
      OrderID: 10264, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
      Date(836505e6),

```

```

      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
      'Luisenstr. 48',
      ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
      Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10265, CustomerID: 'HANAR', EmployeeID: 2, OrderDate: new
      Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10266, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
      Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10267, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10268, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10269, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10270, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
      'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10271, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
      Date(837369e6),

```

```

      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
      'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10272, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
      Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
      'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
      'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10273, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
      Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10274, CustomerID: 'CENTC', EmployeeID: 7, OrderDate: new
      Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10275, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
      'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
      Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10276, CustomerID: 'QUEDE', EmployeeID: 2, OrderDate: new
      Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10277, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    },
    {
      OrderID: 10278, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
      Date(8364186e5),

```

```

      ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
      ShipAddress: '59 rue de l Abbaye',
      ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
      Freight: 32.38, Verified: !0
    },
    {
      OrderID: 10279, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
      Date(836505e6),
      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
      'Luisenstr. 48',
      ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
      Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10280, CustomerID: 'HANAR', EmployeeID: 2, OrderDate: new
      Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10281, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
      Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10282, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10283, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10284, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10285, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),

```

```

      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10286, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10287, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10288, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10289, CustomerID: 'CENTC', EmployeeID: 7, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10290, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10291, CustomerID: 'QUEDE', EmployeeID: 2, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10292, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),

```

```

    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
    ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
    Freight: 48.29, Verified: !0
  },
  {
    OrderID: 10293, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10294, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10295, CustomerID: 'HANAR', EmployeeID: 2, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10296, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10297, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10298, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10299, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),

```



```

      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10300, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10301, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10302, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10303, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10304, CustomerID: 'CENTC', EmployeeID: 7, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10305, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10306, CustomerID: 'QUEDE', EmployeeID: 2, OrderDate: new
Date(8377146e5),

```

```

      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10307, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    },
    {
      OrderID: 10308, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
      Date(8364186e5),
      ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
      ShipAddress: '59 rue de l Abbaye',
      ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
      Freight: 32.38, Verified: !0
    },
    {
      OrderID: 10309, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
      Date(836505e6),
      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
      'Luisenstr. 48',
      ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
      Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10310, CustomerID: 'HANAR', EmployeeID: 2, OrderDate: new
      Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10311, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
      Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10312, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10313, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),

```

```

      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10314, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10315, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
      'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10316, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
      Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
      'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10317, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
      Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
      'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
      'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10318, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
      Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10319, CustomerID: 'CENTC', EmployeeID: 7, OrderDate: new
      Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10320, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
      Date(8377146e5),

```

```

      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10321, CustomerID: 'QUEDE', EmployeeID: 2, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10322, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
  ]
];

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DATASOURCE.TSX

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export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 2, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 7, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 2, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      },
      {
        OrderID: 10263, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
        Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
      },
      {
        OrderID: 10264, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
      },
      {
        OrderID: 10265, CustomerID: 'HANAR', EmployeeID: 2, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',

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```

        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10266, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10267, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10268, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10269, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10270, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10271, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10272, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',

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      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
      'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10273, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
      Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10274, CustomerID: 'CENTC', EmployeeID: 7, OrderDate: new
      Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10275, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
      'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
      Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10276, CustomerID: 'QUEDE', EmployeeID: 2, OrderDate: new
      Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10277, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    },
    {
      OrderID: 10278, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
      Date(8364186e5),
      ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
      ShipAddress: '59 rue de l Abbaye',
      ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
      Freight: 32.38, Verified: !0
    },
    {
      OrderID: 10279, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
      Date(836505e6),
      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
      'Luisenstr. 48',

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        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
      },
      {
        OrderID: 10280, CustomerID: 'HANAR', EmployeeID: 2, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10281, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10282, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10283, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10284, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10285, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10286, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',

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```

        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10287, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10288, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10289, CustomerID: 'CENTC', EmployeeID: 7, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10290, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10291, CustomerID: 'QUEDE', EmployeeID: 2, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10292, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      },
      {
        OrderID: 10293, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
        Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',

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```

        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
      },
      {
        OrderID: 10294, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
      },
      {
        OrderID: 10295, CustomerID: 'HANAR', EmployeeID: 2, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10296, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10297, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10298, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10299, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10300, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10301, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10302, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10303, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10304, CustomerID: 'CENTC', EmployeeID: 7, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10305, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10306, CustomerID: 'QUEDE', EmployeeID: 2, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10307, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',

```

```

      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    },
    {
      OrderID: 10308, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
      Date(8364186e5),
      ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
      ShipAddress: '59 rue de l Abbaye',
      ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
      Freight: 32.38, Verified: !0
    },
    {
      OrderID: 10309, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
      Date(836505e6),
      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
      'Luisenstr. 48',
      ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
      Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10310, CustomerID: 'HANAR', EmployeeID: 2, OrderDate: new
      Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10311, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
      Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10312, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10313, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10314, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10315, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10316, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10317, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10318, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10319, CustomerID: 'CENTC', EmployeeID: 7, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10320, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10321, CustomerID: 'QUEDE', EmployeeID: 2, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',

```

```

        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10322, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]
  ];

```

See also

- [Accessibility in Syncfusion React components](#)

Clipboard in React Grid component

The clipboard feature in the Syncfusion React Grid provides an easy way to copy selected rows or cells data into the clipboard. You can use keyboard shortcuts to perform the copy operation. The following list of keyboard shortcuts is supported in the Grid to copy selected rows or cells data into clipboard.

Interaction keys | Description

Ctrl + C | Copy selected rows or cells data into clipboard.

Ctrl + Shift + H | Copy selected rows or cells data with header into clipboard.

By using these keyboard shortcuts, you can quickly copy data from the grid to the clipboard, making it easy to paste the data into other applications or documents.

To enable the clipboard feature, you can use the grid component with your data source and selection property.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const settings = { type: 'Multiple' };
  return <GridComponent dataSource={data} selectionSettings={settings}
  height={272}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='120'
      textAlign="Right"/>
      <ColumnDirective field='CustomerID' headerText='Customer ID'
      width='150' />
      <ColumnDirective field='ShipCity' headerText='Ship City' width='150' />
      <ColumnDirective field='ShipName' headerText='Ship Name' width='150' />
    </ColumnsDirective>
  </GridComponent>;
}
;

```

```
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent,
SelectionSettingsModel } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const settings: SelectionSettingsModel = { type: 'Multiple' };
  return <GridComponent dataSource={data} selectionSettings={settings}
height={272}>
  <ColumnsDirective>
    <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
    <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
    <ColumnDirective field='ShipCity' headerText='Ship City' width='150' />
    <ColumnDirective field='ShipName' headerText='Ship Name' width='150' />
  </ColumnsDirective>
</GridComponent >
};
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
```



```

        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]
  };

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },

```

```
{
  OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
  ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
  ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
},
{
  OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
  ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
  ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
},
{
  OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
  ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
  ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
},
{
  OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
  ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
  ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
},
{
  OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
  ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
  ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
},
{
  OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
  ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
  ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
},
{
  OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
  ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
  ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
},
}
```

```

    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

Copy to clipboard by external buttons

Copying data to the clipboard by using external buttons in the Syncfusion React Grid allows you to programmatically trigger the copy operation, making it more friendly, especially for those who may not be familiar with keyboard shortcuts or manual copying.

To copy selected rows or cells data into the clipboard with the help of external buttons, you can utilize the [copy](#) method available in the grid component. This is demonstrated in the following example,

APP.JSX

```
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  const settings = { type: 'Multiple' };
  const copy = () => {
    if (grid) {
      grid.copy();
    }
  }
  const copyHeader = () => {
    if (grid) {
      grid.copy(true);
    }
  }
  return (<div>
    <ButtonComponent onClick={copy}>Copy</ButtonComponent>
    <ButtonComponent onClick={copyHeader}>CopyHeader</ButtonComponent>
    <GridComponent dataSource={data} height={280} ref={g => grid = g}
      selectionSettings={settings}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
        <ColumnDirective field='ShipCity' headerText='Ship City' width='150'
/>
        <ColumnDirective field='ShipName' headerText='Ship Name' width='150'
/>
      </ColumnsDirective>
    </GridComponent>
  </div>)
}
export default App;
```

APP.TSX

```
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, GridComponent,
SelectionSettingsModel } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid: GridComponent | null;
  const settings: SelectionSettingsModel = { type: 'Multiple' };
  const copy = () => {
    if (grid) {
      (grid as GridComponent).copy();
    }
  }
  const copyHeader = () => {
```

```

    if (grid) {
      (grid as GridComponent).copy(true);
    }
  }
  return (<div>
    <ButtonComponent onClick={copy}>Copy</ButtonComponent>
    <ButtonComponent onClick={copyHeader}>CopyHeader</ButtonComponent>
    <GridComponent dataSource={data} height={280} ref={g => grid = g}
      selectionSettings={settings}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
        <ColumnDirective field='ShipCity' headerText='Ship City' width='150'
/>
        <ColumnDirective field='ShipName' headerText='Ship Name' width='150'
/>
      </ColumnsDirective>
    </GridComponent>
  </div>)
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
      }
    ]
  };

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {

```



```

OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
},
{
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
},
{
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
},
{
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
},
{
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
},
{
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
},
{
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
},
{

```

```

    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

AutoFill

The AutoFill feature in the Syncfusion React Grid allows you to copy the data of selected cells and paste it into other cells by simply dragging the autofill icon of the selected cells to the desired cells. This feature provides a convenient way to quickly populate data in a grid.

how to use the autofill feature

1. Select the cells from which you want to copy data.
2. Hover over the bottom-right corner of the selection to reveal the autofill icon.
3. Click and hold the autofill icon, then drag it to the target cells where you want to paste the copied data.
4. Release the mouse to complete the autofill action, and the data from the source cells will be copied and pasted into the target cells.

This feature is enabled by defining [enableAutoFill](#) property as **true**.

The following example demonstrates, how to enable autofill feature in the grid.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Edit, Inject, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  const editOptions = { allowEditing: true, allowAdding: true,
allowDeleting: true, mode: 'Batch' };
  const settings = { cellSelectionMode: 'Box', type: 'Multiple', mode:
'Cell' };
  const toolbarOptions = ['Add', 'Update', 'Cancel'];
  return <GridComponent dataSource={data} toolbar={toolbarOptions}
editSettings={editOptions} selectionSettings={settings} enableAutoFill={true}
height={272}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" isPrimaryKey={true} visible={false}/>
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150'/>
      <ColumnDirective field='ShipCity' headerText='Ship City' width='150'/>
      <ColumnDirective field='ShipCountry' headerText='ShipCountry'
width='150'/>
      <ColumnDirective field='ShipName' headerText='Ship Name' width='150'/>
    </ColumnsDirective>
    <Inject services={[Edit, Toolbar]}/>
  </GridComponent>;
}
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent,
SelectionSettingsModel } from '@syncfusion/ej2-react-grids';
import { Edit, EditSettingsModel, Inject, Toolbar, ToolbarItems } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  const editOptions: EditSettingsModel = { allowEditing: true, allowAdding:
true, allowDeleting: true, mode: 'Batch' };
  const settings: SelectionSettingsModel = { cellSelectionMode: 'Box', type:
'Multiple', mode: 'Cell' };
}
```

```

const toolbarOptions: ToolbarItems[] = ['Add', 'Update', 'Cancel'];
return <GridComponent dataSource={data} toolbar={toolbarOptions}
  editSettings={editOptions} selectionSettings={settings}
  enableAutoFill={true} height={272}>
  <ColumnsDirective>
    <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" isPrimaryKey={true} visible={false} />
    <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
    <ColumnDirective field='ShipCity' headerText='Ship City' width='150' />
    <ColumnDirective field='ShipCountry' headerText='ShipCountry'
width='150' />
    <ColumnDirective field='ShipName' headerText='Ship Name' width='150' />
  </ColumnsDirective>
  <Inject services={[Edit, Toolbar]} />
</GridComponent >
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
  },
  {

```

```

    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
        },
        {
            OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
            ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
            ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
            },
            {
                OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
                ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
                ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
                },
                {
                    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
                    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
                    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
                    },
                    {
                        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
                        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
                        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
                        },
                        {
                            OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
                            ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
                            ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
                            },
                            {

```

```

    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),

```

```

      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
      Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
      'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
      Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
      'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
      Date(8374554e5),

```

```

      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
      'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
      'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
      Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
      Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
      'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
      Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }
  ]];

```

* If [enableAutoFill](#) is set to **true**, then the autofill icon will be displayed on cell selection to copy cells.

* It requires the selection **mode** to be **Cell**, **cellSelectionMode** to be **Box** and also **editMode** to be **Batch**.

Limitations

- AutoFill does not automatically convert string values to number or date types. If the selected cells contain string data and are dragged to number-type cells, the target cells will display **NaN**.

Similarly, when dragging string-type cells to date-type cells, the target cells will display as an **empty cell**. It is important to ensure data types are compatible before using autofill to avoid unexpected results.

- The AutoFill feature does not support generating non-linear series or sequential data automatically. Cannot create complex series or patterns by simply dragging cells with non-sequential data. The autofill feature is designed for copying and pasting data from a selected range of cells.
- The Auto Fill feature can only be applied to the viewport cell when enabling the features of virtual scrolling, infinite scrolling, or column virtualization in the grid.

Paste

The Syncfusion React Grid provides a paste feature that allows you to copy the content of a cell or a group of cells and paste it into another set of cells. This feature allows you to quickly copy and paste content within the grid, making it convenient for data entry and manipulation.

Follow the steps below to use the Paste feature in the grid:

1. Select the cells from which you want to copy the content.
2. Press the `Ctrl + C` shortcut key to copy the selected cells' content to the clipboard.
3. Select the target cells where you want to paste the copied content.
4. Press the `Ctrl + V` shortcut key to paste the copied content into the target cells.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Edit, Inject, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  const editOptions = { allowEditing: true, allowAdding: true,
allowDeleting: true, mode: 'Batch' };
  const settings = { cellSelectionMode: 'Box', type: 'Multiple', mode:
'Cell' };
  const toolbarOptions = ['Add', 'Update', 'Cancel'];
  return <GridComponent dataSource={data} toolbar={toolbarOptions}
editSettings={editOptions} selectionSettings={settings} enableAutoFill={true}
height={272}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" isPrimaryKey={true} visible={false}/>
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
      <ColumnDirective field='ShipCity' headerText='Ship City' width='150' />
      <ColumnDirective field='ShipCountry' headerText='ShipCountry'
width='150' />
      <ColumnDirective field='ShipName' headerText='Ship Name' width='150' />
    </ColumnsDirective>
    <Inject services={[Edit, Toolbar]} />
  </GridComponent>;
}
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent,
SelectionSettingsModel } from '@syncfusion/ej2-react-grids';
import { Edit, EditSettingsModel, Inject, Toolbar, ToolbarItems } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const editOptions: EditSettingsModel = { allowEditing: true, allowAdding:
true, allowDeleting: true, mode: 'Batch' };
  const settings: SelectionSettingsModel = { cellSelectionMode: 'Box', type:
'Multiple', mode: 'Cell' };
  const toolbarOptions: ToolbarItems[] = ['Add', 'Update', 'Cancel'];
  return <GridComponent dataSource={data} toolbar={toolbarOptions}
    editSettings={editOptions} selectionSettings={settings}
    enableAutoFill={true} height={272}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" isPrimaryKey={true} visible={false} />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
      <ColumnDirective field='ShipCity' headerText='Ship City' width='150' />
      <ColumnDirective field='ShipCountry' headerText='ShipCountry'
width='150' />
      <ColumnDirective field='ShipName' headerText='Ship Name' width='150' />
    </ColumnsDirective>
    <Inject services={[Edit, Toolbar]} />
  </GridComponent >
};
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
```

```

      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
      Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
      'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
      Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
      'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
      Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
      Date(8374554e5),

```

```

      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
      'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
      'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
      Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
      6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
      Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
      Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
      ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
      Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
      'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
      Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
      Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }
  ]
};

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
      },
      {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
      },
      {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',

```

```

    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
    Freight: 148.33, Verified: !0
  },
  {
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
    Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
    'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
    Freight: 13.97, Verified: !1
  },
  {
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
    Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
    'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
    'Venezuela', Freight: 81.91, Verified: !0
  },
  {
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
    Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
    6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
    Freight: 140.51, Verified: !0
  },
  {
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
    Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
    ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
    Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
    Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
    'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
    Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
    Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
    Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
    Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
    ShipAddress: '2817 Milton Dr.',

```

```
ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',  
Freight: 48.29, Verified: !0  
}];
```

To perform paste functionality, it requires the selection **mode** to be **Cell**, **cellSelectionMode** to be **Box** and also Batch Editing should be enabled.

Limitations

- The Paste feature does not automatically convert string values to number or date types. If the selected cells contain string data and are dragged to number-type cells, the target cells will display **NaN**. Similarly, when dragging string-type cells to date-type cells, the target cells will display as an **empty cell**. It is important to ensure data types are compatible before using AutoFill to avoid unexpected results.

Context menu in React Grid component

The Syncfusion React Grid component comes equipped with a context menu feature, which is triggered when a user right-clicks anywhere within the grid. This feature serves to enrich the user experience by offering immediate access to a variety of supplementary actions and operations that can be executed on the data displayed in the grid.

In essence, the context menu provides a convenient and efficient way for users to interact with and manipulate the grid's content, enabling them to perform tasks such as sorting, filtering, editing, or any other relevant actions without the need for navigating through the grid's interface. This user-friendly feature streamlines the overall usability of the React Grid, making it a powerful tool for data management and manipulation.

To activate the context menu within the grid, you have an option to configure the grid's [contextMenuItems](#) property. You can set this property to either include the default context menu items or define your own custom context menu items, tailoring the menu options to suit your specific needs. This customization allows you to enhance the grid's functionality by providing context-sensitive actions for interacting with your data.

To use the context menu, you need to inject the **ContextMenu** module in the grid.

The context menu is triggered when you right-click on different areas of the grid, including:

- Header: When you right-click on the grid's header section.
- Content: When you right-click on the grid's main content area.
- Pager: When you right-click on the pager section.

The context menu items that appear vary depending on the area you have clicked. For instance, the items available in the context menu when clicking on the header area differ from those in the content area or pager.

The default context menu items in the header area of the grid are as follows:

Items | Description

Edit | Edit the currently selected record in the grid.

Delete | Delete the currently selected record.

Save | Save the changes made to the edited record.

Cancel | Cancel the edit state and revert changes made to the edited record.

Copy | Copy the selected records to the clipboard.

PdfExport | Export the grid data as a PDF document.

ExcelExport | Export the grid data as an Excel document.

CsvExport | Export the grid data as a CSV document.

The default context menu items in the pager area of the grid are as follows:

Items | Description

FirstPage | Navigate to the first page of the grid.

PrevPage | Navigate to the previous page of the grid.

LastPage | Navigate to the last page of the grid.

NextPage | Navigate to the next page of the grid.

The following example demonstrates how to enable context menu feature in the grid.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { ContextMenu, Edit, Filter, Group, Inject, Page, Sort } from
 '@syncfusion/ej2-react-grids';
import { ExcelExport, PdfExport } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  const contextMenuItems = ['AutoFit', 'AutoFitAll',
    'SortAscending', 'SortDescending', 'Copy', 'Edit', 'Delete', 'Save',
    'Cancel', 'PdfExport', 'ExcelExport', 'CsvExport', 'FirstPage',
    'PrevPage',
    'LastPage', 'NextPage'];
  const editing = { allowDeleting: true, allowEditing: true };
  return (
    <div>
      <GridComponent dataSource={data} allowPaging={true} allowSorting={true}
        allowExcelExport={true} allowPdfExport={true}
        contextMenuItems={contextMenuItems} editSettings={editing}
        allowGrouping={true}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='140'
            textAlign='Right' isPrimaryKey={true}/>
          <ColumnDirective field='CustomerID' headerText='Customer Name'
            width='140'/>
          <ColumnDirective field='Freight' headerText='Freight' format='C2'
            textAlign='Right' editType='numericedit' width='140'/>
          <ColumnDirective field='ShipName' headerText='Ship Name'
            width='200'/>
        </ColumnsDirective>
        <Inject services={[Sort, ContextMenu, Filter, Page, ExcelExport,
          Edit, PdfExport, Group]}/>
      </GridComponent>
    </div>
  );
}
```



```

    </div>);
  }
;
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { ContextMenu, Edit, EditSettingsModel, Filter, Group, Inject, Page,
 Sort } from '@syncfusion/ej2-react-grids';
import { ContextMenuItem, ExcelExport, PdfExport } from '@syncfusion/ej2-
 react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const contextMenuItems: ContextMenuItem[] = ['AutoFit', 'AutoFitAll',
    'SortAscending', 'SortDescending', 'Copy', 'Edit', 'Delete', 'Save',
    'Cancel', 'PdfExport', 'ExcelExport', 'CsvExport', 'FirstPage',
    'PrevPage',
    'LastPage', 'NextPage'];
  const editing: EditSettingsModel = { allowDeleting: true, allowEditing:
 true };
  return (
    <div>
      <GridComponent dataSource={data} allowPaging={true} allowSorting={true}
        allowExcelExport={true} allowPdfExport={true}
        contextMenuItems={contextMenuItems}
        editSettings={editing} allowGrouping={true}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='140'
            textAlign='Right' isPrimaryKey={true} />
          <ColumnDirective field='CustomerID' headerText='Customer Name'
            width='140' />
          <ColumnDirective field='Freight' headerText='Freight' format='C2'
            textAlign='Right' editType='numericedit' width='140' />
          <ColumnDirective field='ShipName' headerText='Ship Name'
            width='200' />
        </ColumnsDirective>
        <Inject services={[Sort, ContextMenu, Filter, Page, ExcelExport,
          Edit, PdfExport, Group]} />
      </GridComponent>
    </div>
  );
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
      },
      {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
      },
      {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
      },
      {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
      },
      {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
      },
      {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
      },
      {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
      },
      {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
      },
      {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
      },
      {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
      },
      {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
      },
      {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
      },
      {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
      },
      {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
      },
      {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',

```

```
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',  
        Freight: 48.29, Verified: !0  
    }  
];
```

DATASOURCE.TSX

```
export let data: Object[] = [  
    {  
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new  
Date(8364186e5),  
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',  
        ShipAddress: '59 rue de l Abbaye',  
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',  
        Freight: 32.38, Verified: !0  
    },  
    {  
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new  
Date(836505e6),  
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:  
'Luisenstr. 48',  
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',  
        Freight: 11.61, Verified: !1  
    },  
    {  
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new  
Date(8367642e5),  
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:  
'Rua do Paço, 67',  
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',  
        Freight: 65.83, Verified: !0  
    },  
    {  
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new  
Date(8367642e5),  
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,  
rue du Commerce',  
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',  
        Freight: 41.34, Verified: !0  
    },  
    {  
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new  
Date(8368506e5),  
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:  
'Boulevard Tirou, 255',  
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',  
        Freight: 51.3, Verified: !0  
    },  
    {  
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new  
Date(836937e6),  
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:  
'Rua do Paço, 67',  
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',  
        Freight: 58.17, Verified: !0  
    },  
];
```

```

    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {

```

```

    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
    ];

```

Custom context menu items

The Syncfusion React Grid empowers you to enhance your user experience by incorporating custom context menu items into the default context menu. These customized options enable you to tailor the context menu to meet the unique requirements of your application.

By adding custom context menu items, you can introduce additional actions or operations that are directly relevant to your specific use case. This flexibility allows you to create a highly personalized and efficient interaction with your grid, making it a powerful tool for data management and manipulation.

To add custom context menu items by defining the [contextMenuItems](#) property as a collection of [contextMenuItemModel](#). You can also define actions for these customized items using the [contextMenuClick](#) event.

To incorporate custom context menu items in the Syncfusion React Grid, you can achieve this by specifying the [contextMenuItems](#) property as a collection of [contextMenuItemModel](#). This allows you to define and customize the appearance and behavior of these additional context menu items according to your requirements.

Furthermore, you can assign actions to these custom items by utilizing the [contextMenuClick](#) event. This event provides you with the means to handle user interactions with the custom context menu items, enabling you to execute specific actions or operations when these items are clicked.

The following example demonstrates how to add custom context menu items in the Grid component.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
'@syncfusion/ej2-react-grids';
import { ContextMenu, Inject, Page } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
    let grid;
    const contextMenuItems = [
        { text: 'Copy with headers', target: '.e-content', id:
'copywithheader' }
    ];
    const contextMenuClick = (args) => {
        if (grid && args.item.id === 'copywithheader') {

```

```

        grid.copy(true);
    }
};
return (<div>
    <GridComponent dataSource={data} allowPaging={true}
contextMenuItems={contextMenuItems} ref={g => grid = g}
contextMenuClick={contextMenuClick}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID' width='140'
textAlign='Right' />
            <ColumnDirective field='CustomerID' headerText='Customer ID'
width='140' />
            <ColumnDirective field='Freight' headerText='Freight' format='C2'
textAlign='Right' width='140' />
            <ColumnDirective field='ShipName' headerText='Ship Name'
width='200' />
        </ColumnsDirective>
        <Inject services={[ContextMenu, Page]} />
    </GridComponent>
</div>);
}
;
export default App;

```

APP.TSX

```

import { MenuEventArgs } from '@syncfusion/ej2-navigations';
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { ContextMenu, ContextMenuItemModel, Inject, Page } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { employeeData } from '../datasource';
function App() {
    let grid: GridComponent | null;
    const contextMenuItems: ContextMenuItemModel[] = [
        { text: 'Copy with headers', target: '.e-content', id: 'copywithheader' }
    ];
    const contextMenuClick = (args: MenuEventArgs) => {
        if (grid && args.item.id === 'copywithheader') {
            grid.copy(true);
        }
    }
    return (
        <div>
            <GridComponent dataSource={employeeData} allowPaging={true}
allowSelection={true} contextMenuItems={contextMenuItems}
                ref={g => grid = g} contextMenuClick={contextMenuClick}>
                <ColumnsDirective>
                    <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='140' textAlign='Right' isPrimaryKey={true} />
                    <ColumnDirective field='FirstName' headerText='First Name'
width='140' />
                    <ColumnDirective field='LastName' headerText='Last Name'
textAlign='Right' width='140' />
                    <ColumnDirective field='City' headerText='City' width='200' />

```

```

        </ColumnsDirective>
        <Inject services={[ContextMenu, Page]} />
    </GridComponent>
</div>
);
};
export default App;

```

DATASOURCE.JSX

```

export let employeeData = [{
    'EmployeeID': 1,
    'LastName': 'Davolio',
    'FirstName': 'Nancy',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-664743600000),
    'HireDate': new Date(704692800000),
    'Address': '507 - 20th Ave. E.\r\nApt. 2A',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98122',
    'Country': 'USA',
    'HomePhone': '(206) 555-9857',
    'Extension': '5467',
    'Photo': { 'Length': 21626 },
    'Notes': 'Education includes a BA in psychology from Colorado State University in 1970. She also completed\'
    \'The Art of the Cold Call.\' Nancy is a member of Toastmasters International.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
    'EmployeeID': 2,
    'LastName': 'Fuller',
    'FirstName': 'Andrew',
    'Title': 'Vice President, Sales',
    'TitleOfCourtesy': 'Dr.',
    'BirthDate': new Date(-563828400000),
    'HireDate': new Date(713764800000),
    'Address': '908 W. Capital Way',
    'City': 'Tacoma',
    'Region': 'WA',
    'PostalCode': '98401',
    'Country': 'USA',
    'HomePhone': '(206) 555-9482',
    'Extension': '3457',
    'Photo': { 'Length': 21626 },
    'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in international marketing from the University of \
    Dallas in 1981. He is fluent in French and Italian and reads German. He joined the company as a sales representative, \
    was promoted to sales manager in January 1992 and to vice president of sales in March 1993. Andrew is a member of the \

```



```

    Sales Management Roundtable, the Seattle Chamber of Commerce, and the
    Pacific Rim Importers Association.',
    'ReportsTo': 0,
    'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
  },
  {
    'EmployeeID': 3,
    'LastName': 'Leverling',
    'FirstName': 'Janet',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-200088000000),
    'HireDate': new Date(702104400000),
    'Address': '722 Moss Bay Blvd.',
    'City': 'Kirkland',
    'Region': 'WA',
    'PostalCode': '98033',
    'Country': 'USA',
    'HomePhone': '(206) 555-3412',
    'Extension': '3355',
    'Photo': { 'Length': 21722 },
    'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
    \
    She has also completed a certificate program in food retailing
    management.\
    Janet was hired as a sales associate in 1991 and promoted to sales
    representative in February 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
  },
  {
    'EmployeeID': 4,
    'LastName': 'Peacock',
    'FirstName': 'Margaret',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mrs.',
    'BirthDate': new Date(-1018814400000),
    'HireDate': new Date(736401600000),
    'Address': '4110 Old Redmond Rd.',
    'City': 'Redmond',
    'Region': 'WA',
    'PostalCode': '98052',
    'Country': 'USA',
    'HomePhone': '(206) 555-8122',
    'Extension': '5176',
    'Photo': { 'Length': 21626 },
    'Notes': 'Margaret holds a BA in English literature from Concordia
    College (1958) and an MA from the American \
    Institute of Culinary Arts (1966). She was assigned to the London office
    temporarily from July through November 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
  },
  {
    'EmployeeID': 5,
    'LastName': 'Buchanan',
    'FirstName': 'Steven',

```

```

    'Title': 'Sales Manager',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-468010800000),
    'HireDate': new Date(750830400000),
    'Address': '14 Garrett Hill',
    'City': 'London',
    'Region': null,
    'PostalCode':
        'SW1 8JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-4848',
    'Extension': '3453',
    'Photo': { 'Length': 21626 },
    'Notes': 'Steven Buchanan graduated from St. Andrews University,
    Scotland, with a BSC degree in 1976. Upon joining the company as \
    a sales representative in 1992, he spent 6 months in an orientation
    program at the Seattle office and then returned to his permanent \
    post in London. He was promoted to sales manager in March 1993. Mr.
    Buchanan has completed the courses \'Successful \
    Telemarketing\' and \'International Sales Management.\' He is fluent in
    French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
},
{
    'EmployeeID': 6,
    'LastName': 'Suyama',
    'FirstName': 'Michael',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-205185600000),
    'HireDate': new Date(750830400000),
    'Address': 'Coventry House\r\nMiner Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'EC2 7JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-7773',
    'Extension': '428',
    'Photo': { 'Length': 21626 },
    'Notes': 'Michael is a graduate of Sussex University (MA, economics,
    1983) and the University of California at Los Angeles \
    (MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
    Selling\' and \'Time Management for the Sales Professional.\' \
    He is fluent in Japanese and can read and write French, Portuguese, and
    Spanish.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
    'EmployeeID': 7,
    'LastName': 'King',
    'FirstName': 'Robert',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-302731200000),
    'HireDate': new Date(757486800000),

```

```

    'Address': 'Edgeham Hollow\r\nWinchester Way',
    'City': 'London',
    'Region': null,
    'PostalCode': 'RG1 9SP',
    'Country': 'UK',
    'HomePhone': '(71) 555-5598',
    'Extension': 465,
    'Photo': { 'Length': 21626 },
    'Notes': 'Robert King served in the Peace Corps and traveled extensively
before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 8,
    'LastName': 'Callahan',
    'FirstName': 'Laura',
    'Title': 'Inside Sales Coordinator',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-377982000000),
    'HireDate': new Date(762843600000),
    'Address': '4726 - 11th Ave. N.E.',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98105',
    'Country': 'USA',
    'HomePhone': '(206) 555-1189',
    'Extension': 2344,
    'Photo': { 'Length': 21626 },
    'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 9,
    'LastName': 'Dodsworth',
    'FirstName': 'Anne',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-123966000000),
    'HireDate': new Date(784875600000),
    'Address': '7 Houndstooth Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'WG2 7LT',
    'Country': 'UK',
    'HomePhone': '(71) 555-4444',
    'Extension': 452,
    'Photo': { 'Length': 21626 },
    'Notes': 'Anne has a BA degree in English from St. Lawrence College. She
is fluent in French and German.',
    'ReportsTo': 5,
  }

```

```
'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
}];
```

DATASOURCE.TSX

```
export let employeeData: Object[] = [{
  'EmployeeID': 1,
  'LastName': 'Davolio',
  'FirstName': 'Nancy',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-664743600000),
  'HireDate': new Date(704692800000),
  'Address': '507 - 20th Ave. E.\r\nApt. 2A',
  'City': 'Seattle',
  'Region': 'WA',
  'PostalCode': '98122',
  'Country': 'USA',
  'HomePhone': '(206) 555-9857',
  'Extension': '5467',
  'Photo': { 'Length': 21626 },
  'Notes': 'Education includes a BA in psychology from Colorado State University in 1970. She also completed \'The Art of the Cold Call.\' Nancy is a member of Toastmasters International.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
  'EmployeeID': 2,
  'LastName': 'Fuller',
  'FirstName': 'Andrew',
  'Title': 'Vice President, Sales',
  'TitleOfCourtesy': 'Dr.',
  'BirthDate': new Date(-563828400000),
  'HireDate': new Date(713764800000),
  'Address': '908 W. Capital Way',
  'City': 'Tacoma',
  'Region': 'WA',
  'PostalCode': '98401',
  'Country': 'USA',
  'HomePhone': '(206) 555-9482',
  'Extension': '3457',
  'Photo': { 'Length': 21626 },
  'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in international marketing from the University of \ Dallas in 1981. He is fluent in French and Italian and reads German. He joined the company as a sales representative, \ was promoted to sales manager in January 1992 and to vice president of sales in March 1993. Andrew is a member of the \ Sales Management Roundtable, the Seattle Chamber of Commerce, and the Pacific Rim Importers Association.',
  'ReportsTo': 0,
  'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
},
{
```

```

      'EmployeeID': 3,
      'LastName': 'Leverling',
      'FirstName': 'Janet',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-200088000000),
      'HireDate': new Date(702104400000),
      'Address': '722 Moss Bay Blvd.',
      'City': 'Kirkland',
      'Region': 'WA',
      'PostalCode': '98033',
      'Country': 'USA',
      'HomePhone': '(206) 555-3412',
      'Extension': '3355',
      'Photo': { 'Length': 21722 },
      'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
\
      She has also completed a certificate program in food retailing
management.\
      Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
    },
    {
      'EmployeeID': 4,
      'LastName': 'Peacock',
      'FirstName': 'Margaret',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mrs.',
      'BirthDate': new Date(-1018814400000),
      'HireDate': new Date(736401600000),
      'Address': '4110 Old Redmond Rd.',
      'City': 'Redmond',
      'Region': 'WA',
      'PostalCode': '98052',
      'Country': 'USA',
      'HomePhone': '(206) 555-8122',
      'Extension': '5176',
      'Photo': { 'Length': 21626 },
      'Notes': 'Margaret holds a BA in English literature from Concordia
College (1958) and an MA from the American \
      Institute of Culinary Arts (1966). She was assigned to the London office
temporarily from July through November 1992.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
    },
    {
      'EmployeeID': 5,
      'LastName': 'Buchanan',
      'FirstName': 'Steven',
      'Title': 'Sales Manager',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-468010800000),
      'HireDate': new Date(750830400000),
      'Address': '14 Garrett Hill',
      'City': 'London',

```

```

    'Region': null,
    'PostalCode':
      'SW1 8JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-4848',
    'Extension': '3453',
    'Photo': { 'Length': 21626 },
    'Notes': 'Steven Buchanan graduated from St. Andrews University,
Scotland, with a BSC degree in 1976. Upon joining the company as \
a sales representative in 1992, he spent 6 months in an orientation
program at the Seattle office and then returned to his permanent \
post in London. He was promoted to sales manager in March 1993. Mr.
Buchanan has completed the courses \'Successful \
Telemarketing\' and \'International Sales Management.\' He is fluent in
French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
  },
  {
    'EmployeeID': 6,
    'LastName': 'Suyama',
    'FirstName': 'Michael',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-205185600000),
    'HireDate': new Date(750830400000),
    'Address': 'Coventry House\r\nMiner Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'EC2 7JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-7773',
    'Extension': '428',
    'Photo': { 'Length': 21626 },
    'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese, and
Spanish.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 7,
    'LastName': 'King',
    'FirstName': 'Robert',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-302731200000),
    'HireDate': new Date(757486800000),
    'Address': 'Edgeham Hollow\r\nWinchester Way',
    'City': 'London',
    'Region': null,
    'PostalCode': 'RG1 9SP',
    'Country': 'UK',
    'HomePhone': '(71) 555-5598',

```

```

        'Extension': '465',
        'Photo': { 'Length': 21626 },
        'Notes': 'Robert King served in the Peace Corps and traveled extensively
before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
        'ReportsTo': 5,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
        'EmployeeID': 8,
        'LastName': 'Callahan',
        'FirstName': 'Laura',
        'Title': 'Inside Sales Coordinator',
        'TitleOfCourtesy': 'Ms.',
        'BirthDate': new Date(-377982000000),
        'HireDate': new Date(762843600000),
        'Address': '4726 - 11th Ave. N.E.',
        'City': 'Seattle',
        'Region': 'WA',
        'PostalCode': '98105',
        'Country': 'USA',
        'HomePhone': '(206) 555-1189',
        'Extension': '2344',
        'Photo': { 'Length': 21626 },
        'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
        'ReportsTo': 2,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
        'EmployeeID': 9,
        'LastName': 'Dodsworth',
        'FirstName': 'Anne',
        'Title': 'Sales Representative',
        'TitleOfCourtesy': 'Ms.',
        'BirthDate': new Date(-123966000000),
        'HireDate': new Date(784875600000),
        'Address': '7 Houndstooth Rd.',
        'City': 'London',
        'Region': null,
        'PostalCode': 'WG2 7LT',
        'Country': 'UK',
        'HomePhone': '(71) 555-4444',
        'Extension': '452',
        'Photo': { 'Length': 21626 },
        'Notes': 'Anne has a BA degree in English from St. Lawrence College. She
is fluent in French and German.',
        'ReportsTo': 5,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    }
    ];

```

Show context menu on left click

The Syncfusion React Grid provides the ability to show the context menu items on a left mouse click instead of the default right mouse click action.

This can be achieved by using the `created` event and the context menu's `beforeOpen` event of the Grid.

By using the `onclick` event listener of the Grid, you can obtain the clicked position values through the `ngAfterViewInit` method. This method is appropriate for interacting with the Document Object Model (DOM) and performing operations that require access to the rendered elements. The obtained positions are then sent to the `open` method of the context menu within the `onclick` event of the Grid.

Additionally, the default action of right-clicking to open the context menu items is prevented by utilizing the `created` event of the Grid.

The following example demonstrates how to show context menu on left click using `created` event.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { ContextMenu, Inject, Page, Sort, ExcelExport, PdfExport } from
 '@syncfusion/ej2-react-grids';
import React, { useEffect } from 'react';
import { data } from './datasource';
function App() {
  let grid;
  let values;
  const contextMenuItems = ['SortAscending', 'SortDescending', 'FirstPage',
    'PrevPage', 'LastPage', 'NextPage', 'PdfExport', 'ExcelExport',];
  const created = () => {
    grid.contextMenuModule.contextMenu.beforeOpen = (args) => {
      if (args.event instanceof MouseEvent && args.event.which === 3) {
        args.cancel = true;
      }
      args.event = values;
      grid.contextMenuModule.contextMenuBeforeOpen(args);
    };
  }
  useEffect(() => {
    const gridElement = document.getElementById('Grid');
    gridElement.onclick = (event) => {
      values = event;
      grid.contextMenuModule.contextMenu.open(
        values.pageY + pageYOffset,
        values.pageX + pageXOffset
      );
    }
  }, [])
  return (
    <div>
      <GridComponent id='Grid' dataSource={data} allowPaging={true}
        contextMenuItems={contextMenuItems} allowSorting={true}
        allowExcelExport={true}
        allowPdfExport={true} ref={g => grid = g} created={created} >
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID'
            isPrimaryKey={true} width='100' textAlign='Right' />

```



```

        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='120' />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' />
        <ColumnDirective field='ShipName' headerText='Ship Name'
width='120' />
    </ColumnsDirective>
    <Inject services={[ContextMenu, Page, Sort, ExcelExport, PdfExport]}
/>
    </GridComponent>
  </div>
);
}
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
'@syncfusion/ej2-react-grids';
import { ContextMenu, ContextMenuItem, Inject, Page, Sort, ExcelExport,
PdfExport } from '@syncfusion/ej2-react-grids';
import { BeforeOpenCloseMenuEventArgs } from '@syncfusion/ej2-react-
navigations';
import React, { useEffect } from 'react';
import { data } from './datasource';
function App() {
  let grid: GridComponent | null;
  let values;
  const contextMenuItems: ContextMenuItem[] = ['SortAscending',
'SortDescending', 'FirstPage', 'PrevPage', 'LastPage', 'NextPage',
'PdfExport', 'ExcelExport',];
  const created = () => {
    (grid as GridComponent).contextMenuModule.contextMenu.beforeOpen = (args:
BeforeOpenCloseMenuEventArgs) => {
      if (args.event instanceof MouseEvent && args.event.which === 3) {
        args.cancel = true;
      }
      args.event = values;
      (grid as GridComponent).contextMenuModule.contextMenuBeforeOpen(args);
    };
  }
  useEffect(() =>{
    const gridElement = document.getElementById('Grid');
    (gridElement as HTMLElement).onclick = (event: MouseEvent) => {
      values = event;
      (grid as GridComponent).contextMenuModule.contextMenu.open(
        values.pageY + pageYOffset,
        values.pageX + pageXOffset
      );
    }
  }, [])
  return (
    <div>
      <GridComponent id='Grid' dataSource={data} allowPaging={true}
contextMenuItems={contextMenuItems} allowSorting={true}
allowExcelExport={true}

```

```

        allowPdfExport={true} ref={g => grid = g} created={created} >
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID'
isPrimaryKey={true} width='100' textAlign='Right' />
            <ColumnDirective field='CustomerID' headerText='Customer ID'
width='120' />
            <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' />
            <ColumnDirective field='ShipName' headerText='Ship Name'
width='120' />
        </ColumnsDirective>
        <Inject services={[ContextMenu, Page, Sort, ExcelExport, PdfExport]}
/>
    </GridComponent>
</div>
);
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {

```

```

    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
        },
        {
            OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
            ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
            ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
            },
            {
                OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
                ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
                ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
                },
                {
                    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
                    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
                    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
                    },
                    {
                        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
                        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
                        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
                        },
                        {
                            OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
                            ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
                            ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
                            },
                            {

```

```

    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
  },
  {
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),

```

```

        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),

```

```

        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]
};

```

You can hide or show an item in context menu for specific area inside of grid by defining the [target](#) property.

Enable or disable context menu items

With the Syncfusion React Grid, you have the ability to manage the activation or deactivation of both default and custom context menu items. This feature provides you with the flexibility to tailor the behavior of context menu items to suit specific conditions or individual interactions within your application.

By enabling or disabling context menu items, you can ensure that certain options are available or restricted based on the context of the data or the needs of your users. This level of control allows you to create a more dynamic and user-centric experience with the grid, aligning it with your application's requirements and enhancing usability.

This can be achieved using the [enableItems](#) method of the context menu. By setting the enable parameter in the enableItems method to **true**, you can enable context menu items, and by setting it to **false**, you can disable them. Based on your specific condition or requirements, you can enable or disable the context menu item using the [enableItems](#) method.

In the following example, the [EJ2 Toggle Switch Button](#) component is added to enable and disable the context menu items using [enableItems](#) method. When the switch is toggled, the [change](#) event is triggered, and the **Copy** items is updated accordingly.

APP.JSX

```
import { ChangeEventArgs, SwitchComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, EditSettingsModel, GridComponent }
  from '@syncfusion/ej2-react-grids';
import { ContextMenu, ContextMenuItem, Inject, Page, Edit } from
  '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  let grid;
  const contextMenuItems = ['Copy', 'Edit', 'Delete'];
  const editSettings = { allowEditing: true, allowDeleting: true };
  const change = (args) => {
    grid.contextMenuModule.contextMenu.enableItems(['Copy'], !args.checked);
  }
  return (
    <div>
      <label style={{ padding: "10px 10px" }}>Enable or disable context menu
      items</label>
      <SwitchComponent change={change}></SwitchComponent>
      <GridComponent dataSource={data} allowPaging={true}
      contextMenuItems={contextMenuItems} editSettings={editSettings} ref={g =>
      grid = g} >
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID'
            isPrimaryKey={true} width='100' textAlign='Right' />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
            width='120' />
          <ColumnDirective field='Freight' headerText='Freight' format='C'
            width='150' />
          <ColumnDirective field='ShipCity' headerText='Ship City'
            width='120' />
        </ColumnsDirective>
        <Inject services={[ContextMenu, Page, Edit]} />
      </GridComponent>
    </div>
  );
}
export default App;
```

APP.TSX

```

import { ChangeEventArgs, SwitchComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, EditSettingsModel, GridComponent }
  from '@syncfusion/ej2-react-grids';
import { ContextMenu, ContextMenuItem, Inject, Page, Edit } from
  '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  let grid: GridComponent | null;
  const contextMenuItems: ContextMenuItem[] = ['Copy', 'Edit', 'Delete'];
  const editSettings: EditSettingsModel = { allowEditing: true,
allowDeleting: true };
  const change = (args: ChangeEventArgs) => {
    (grid as
GridComponent).contextMenuModule.contextMenu.enableItems(['Copy'],
!args.checked);
  }
  return (
    <div>
      <label style={{ padding: "10px 10px" }}>Enable or disable context menu
items</label>
      <SwitchComponent change={change}></SwitchComponent>
      <GridComponent dataSource={data} allowPaging={true}
contextMenuItems={contextMenuItems} editSettings={editSettings} ref={g =>
grid = g} >
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID'
isPrimaryKey={true} width='100' textAlign='Right' />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
width='120' />
          <ColumnDirective field='Freight' headerText='Freight' format='C'
width='150' />
          <ColumnDirective field='ShipCity' headerText='Ship City'
width='120' />
        </ColumnsDirective>
        <Inject services={[ContextMenu, Page, Edit]} />
      </GridComponent>
    </div>
  );
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },

```



```

{
  OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
  ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
  ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
},
{
  OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
  ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
  ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
},
{
  OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
  ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
  ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
},
{
  OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
  ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
  ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
},
{
  OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
  ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
  ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
},
{
  OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
  ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
  ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
},
{
  OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
  ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
  ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
},
{

```

```

    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```
export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
```

```

      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),

```

```

      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
      Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
      Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
      ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
      Freight: 48.29, Verified: !0
    }
  ]];

```

Show or hide context menu items

The Syncfusion React Grid provides the flexibility to show or hide both default and custom context menu items. This feature allows you to customize the context menu items based on various conditions or individuals interactions.

This can be achieved using the [showItems](#) and [hideItems](#) methods of the context menu by specifying the item you want to show or hide as an argument.

In the following example, the [EJ2 Toggle Switch Button](#) component is added to show or hide the context menu items using [showItems](#) and [hideItems](#) methods. When the switch is toggled, the [change](#) event is triggered, and the **Copy** items is updated accordingly.

APP.JSX

```

import { ChangeEventArgs, SwitchComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, EditSettingsModel, GridComponent }
  from '@syncfusion/ej2-react-grids';
import { ContextMenu, ContextMenuItem, Inject, Page, Edit } from
  '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  const contextMenuItems = ['Copy', 'Edit', 'Delete'];
  const editSettings = { allowEditing: true, allowDeleting: true };
  const change = (args) => {
    if (args.checked) {
      grid.contextMenuModule.contextMenu.hideItems(['Edit Record', 'Delete
      Record']);
    } else {
      grid.contextMenuModule.contextMenu.showItems(['Edit Record', 'Delete
      Record']);
    }
  }
  return (
    <div>
      <label style={{ padding: "10px 10px" }}>Show or hide context menu
      items</label>
      <SwitchComponent change={change}></SwitchComponent>
    </div>
  );
}

```

```

    <GridComponent dataSource={data} allowPaging={true}
    contextMenuItems={contextMenuItems} editSettings={editSettings} ref={g =>
    grid = g} >
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID'
        isPrimaryKey={true} width='100' textAlign='Right' />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
        width='120' />
        <ColumnDirective field='Freight' headerText='Freight' format='C'
        width='150' />
        <ColumnDirective field='ShipCity' headerText='Ship City'
        width='120' />
      </ColumnsDirective>
      <Inject services={[ContextMenu, Page, Edit]} />
    </GridComponent>
  </div>
);
}
export default App;

```

APP.TSX

```

import { ChangeEventArgs, SwitchComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, EditSettingsModel, GridComponent }
from '@syncfusion/ej2-react-grids';
import { ContextMenu, ContextMenuItem, Inject, Page, Edit } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid: GridComponent | null;
  const contextMenuItems: ContextMenuItem[] = ['Copy', 'Edit', 'Delete'];
  const editSettings: EditSettingsModel = { allowEditing: true,
allowDeleting: true };
  const change = (args: ChangeEventArgs) => {
    if (args.checked) {
      (grid as GridComponent).contextMenuModule.contextMenu.hideItems(['Edit
Record', 'Delete Record']);
    } else {
      (grid as GridComponent).contextMenuModule.contextMenu.showItems(['Edit
Record', 'Delete Record']);
    }
  }
  return (
    <div>
      <label style={{ padding: "10px 10px" }}>Show or hide context menu
items</label>
      <SwitchComponent change={change}></SwitchComponent>
      <GridComponent dataSource={data} allowPaging={true}
contextMenuItems={contextMenuItems} editSettings={editSettings} ref={g =>
grid = g} >
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID'
isPrimaryKey={true} width='100' textAlign='Right' />

```

```

        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='120' />
        <ColumnDirective field='Freight' headerText='Freight' format='C'
width='150' />
        <ColumnDirective field='ShipCity' headerText='Ship City'
width='120' />
    </ColumnsDirective>
    <Inject services={[ContextMenu, Page, Edit]} />
    </GridComponent>
</div>
);
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    }
]

```

```

    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
      ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
      ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
      OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
  ],

```



```

    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
  ]
};

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),

```

```

        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),

```

```

        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]
};

```

Style and appearance in React Grid component

The Grid component offers various ways to customize its appearance using both default CSS and custom themes. Let's go over some common approaches:

Default CSS overrides:

You can use custom CSS to override the default styles of the Grid component. This allows you to change colors, fonts, paddings, and more. You can inspect the generated HTML of the Grid using browser developer tools to identify the relevant CSS classes and styles.

Here's a basic example of how you can override the header background color of the Grid:

```
`css
```

```
/ In your component's CSS file /
```

```
.e-grid .e-headercell {
```

```
background-color: #333; / Override the header background color /
```

```
color: #fff;
}
```

ORDER ID	CUSTOMER ID	FREIGHT	ORDER DATE
10248	VINET	\$32.38	7/4/1996
10249	TOMSP	\$11.61	7/5/1996
10250	HANAR	\$65.83	7/8/1996
10251	VICTE	\$41.34	7/8/1996
10252	SUPRD	\$51.30	7/9/1996
10253	HANAR	\$58.17	7/10/1996

Using theme studio:

Syncfusion's Theme Studio tool allows you to create custom themes for all their controls, including the Grid. This is a more advanced approach that lets you define a comprehensive set of styles to achieve a consistent look and feel throughout your application.

1. Visit the [Syncfusion Theme Studio](#).
2. Select the Grid control from the left panel.
3. Customize various aspects of the control's appearance, such as colors, typography, and spacing.
4. Once done, you can download the generated CSS file and include it in your React project.

Customizing the grid root element

To customize the appearance of the root element of the Syncfusion React Grid component, you can use CSS. Here's an example of how to modify the font family and row colors using CSS:

```
`css
.e-grid {
font-family: cursive;
}
```

ORDER ID ▼	CUSTOMER ID ▼	FREIGHT ▼	ORDER DATE ▼
10248	VINET	\$32.38	7/4/1996
10249	TOMSP	\$11.61	7/5/1996
10250	HANAR	\$65.83	7/8/1996
10251	VICTE	\$41.34	7/8/1996
10252	SUPRD	\$51.30	7/9/1996
10253	HANAR	\$58.17	7/10/1996

The above code snippet, the **.e-grid** class targets the root element of the Syncfusion React Grid component, and the **font-family** property is set to **cursive** to change the font family of the grid content.

In the following sample, the font family of grid content is changed to **cursive**, and the background color of rows, selected rows, alternate rows, and row hovering color is modified using the below CSS styles.

APP.JSX

```
import { ColumnDirective, ColumnsDirective } from '@syncfusion/ej2-react-grids';
import { GridComponent, Inject, Page, Selection } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    const pageOptions = {
        pageSize: 8
    };
    const settings = { type: 'Multiple' };
    return <GridComponent dataSource={data} allowPaging={true}
pageSettings={pageOptions} selectionSettings={settings} height={315}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID' type='number'
isPrimaryKey={true} textAlign="Right" width='100' />
            <ColumnDirective field='CustomerID' headerText='Customer ID'
type='string' width='120' />
            <ColumnDirective field='Freight' headerText='Freight' type='number'
textAlign="Right" format='C2' width='100' />
            <ColumnDirective field='ShipName' headerText='Ship Name' type='string'
width='180' />
        </ColumnsDirective>
        <Inject services={[Page, Selection]} />
    </GridComponent>;
}
;
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective } from '@syncfusion/ej2-react-grids';
import { GridComponent, Inject, Page, PageSettingsModel, Selection, SelectionSettingsModel } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const pageOptions: PageSettingsModel = {
    pageSize: 8
  };
  const settings: SelectionSettingsModel = { type: 'Multiple' };
  return <GridComponent dataSource={data} allowPaging={true}
    pageSettings={pageOptions} selectionSettings={settings} height={315}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' type='number'
        isPrimaryKey={true} textAlign="Right" width='100' />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
        type='string' width='120' />
      <ColumnDirective field='Freight' headerText='Freight' type='number'
        textAlign="Right" format='C2' width='100' />
      <ColumnDirective field='ShipName' headerText='Ship Name' type='string'
        width='180' />
    </ColumnsDirective>
    <Inject services={[Page, Selection]} />
  </GridComponent>
</App>
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
  }
];
```

```

    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {

```

```

    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),

```



```

      ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
      'Luisenstr. 48',
      ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
      Freight: 11.61, Verified: !1
    },
    {
      OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
      Date(8367642e5),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 65.83, Verified: !0
    },
    {
      OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
      Date(8367642e5),
      ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
      rue du Commerce',
      ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
      Freight: 41.34, Verified: !0
    },
    {
      OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
      Date(8368506e5),
      ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
      'Boulevard Tirou, 255',
      ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
      Freight: 51.3, Verified: !0
    },
    {
      OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
      Date(836937e6),
      ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
      'Rua do Paço, 67',
      ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
      Freight: 58.17, Verified: !0
    },
    {
      OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
      Date(8370234e5),
      ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
      'Hauptstr. 31',
      ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
      Freight: 22.98, Verified: !1
    },
    {
      OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
      Date(8371098e5),
      ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
      'Starenweg 5',
      ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
      Freight: 148.33, Verified: !0
    },
    {
      OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
      Date(837369e6),

```

```

        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]];

```

See also

- [Footer template styling in React Grid](#)

Ej1 api migration in React Grid component

This article describes the API migration process of Grid component from Essential JS 1 to Essential JS 2.

Sorting

| Behavior | API in Essential JS 1 | API in Essential JS 2 |

|-----|-----|-----|

| Default | **Property:** *allowSorting*

 <EJ.Grid allowSorting={true}>
 </EJ.Grid> | **Property:** *allowSorting*

 <GridComponent allowSorting={true}>
 </GridComponent> |

| Clear the Sorted columns | **Method:** *clearSorting()*

 <EJ.Grid
dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$(“.e-
grid”)
.ejGrid(“instance”);
gridObj.clearSorting(); | **Method:** *clearSorting()*

<GridComponent ref={ grid =>
this.gridInstance = grid}>
</GridComponent>

this.gridInstance.clearSorting()

| Get the Sorted Columns by using the Fieldname | **Method:** *getsortColumnByField(field)*

<EJ.Grid dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$(“.e-
grid”)
.ejGrid(“instance”);
 gridObj.getsortColumnByField(“OrderID”); | **Property:**
sortSettings.columns

 You can get a sorted column by iterating *sortSettings.columns* with
fieldname

| Remove the Sorted Columns | **Method:** *removeSortedColumns(fieldName)*

 <EJ.Grid
dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$(“.e-
grid”)
.ejGrid(“instance”);
 gridObj.removeSortedColumns(“OrderID”); | **Method:**
removeSortColumn(fieldName)

 <GridComponent ref={ grid =>
this.gridInstance =
grid}>
</GridComponent>
 this.gridInstance.removeSortColumn(“OrderID”)

| Sort a Column by using the method | **Method:** *sortColumn(columnName, [sortingDirection])*

<EJ.Grid dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$(“.e-
grid”)
.ejGrid(“instance”);
 gridObj.sortColumn(“OrderID”, “ascending”); | **Method:**
sortColumn(columnName, Direction)

 <GridComponent ref={ grid =>
this.gridInstance =
grid}>
</GridComponent>
 this.gridInstance.sortColumn(“OrderID”, “ascending”);

Grouping

| Behavior | API in Essential JS 1 | API in Essential JS 2 |

|-----|-----|-----|

| Default | **Property:** *allowGrouping*

 <EJ.Grid allowGrouping={true}>
 </EJ.Grid> | **Property:** *allowGrouping*

 <GridComponent allowGrouping={true}>

</GridComponent> |

| Group Columns initially | **Property:** *groupSettings.groupedColumns*

 var groupSettings = {
groupedColumns:[“CustomerID”] };
<EJ.Grid
allowGrouping={true}
groupSettings={groupSettings}>
 </EJ.Grid> | **Property:**

```
groupSettings.columns <br><br>public groupSettings : Object = { columns: ['CustomerID']
};<br><br><GridComponent allowGrouping={true}<br>groupSettings={this.groupSettings}>
<br></GridComponent>|
```

```
|Caption Template | Property: groupSettings.captionFormat <br><br> var groupSettings = {
captionFormat: "#template" };<br><br><EJ.Grid
allowGrouping={true}<br>groupSettings={groupSettings}> <br> </EJ.Grid>| Property:
groupSettings.captionTemplate <br><br>public groupSettings : Object = { captionTemplate:
"#template" };<br><br><GridComponent
allowGrouping={true}<br>groupSettings={this.groupSettings}> <br></GridComponent>|
```

```
|Show Drop Area | Property: groupSettings.showDropArea <br><br> var groupSettings = {
showDropArea: false };<br><br><EJ.Grid allowGrouping={true}<br>groupSettings={groupSettings}>
<br> </EJ.Grid>| Property: groupSettings.showDropArea <br><br>public groupSettings : Object = {
showDropArea: false };<br><br><GridComponent
allowGrouping={true}<br>groupSettings={this.groupSettings}> <br></GridComponent>|
```

```
|Collapse all group caption rows | Method: collapseAll() <br><br> <EJ.Grid
dataSource={window.gridData}><br> </EJ.Grid> <br> var gridObj = $("".e-
grid")<br>.ejGrid("instance"); <br> gridObj.collapseAll();| Method: collapseAll() <br><br>
<GridComponent ref={ grid =><br>this.gridInstance = grid}><br></GridComponent> <br>
this.gridInstance.groupModule.collapseAll()
```

```
|Expand all group caption rows | Method: expandAll() <br><br> <EJ.Grid
dataSource={window.gridData}><br> </EJ.Grid> <br> var gridObj = $("".e-
grid")<br>.ejGrid("instance"); <br> gridObj.expandAll();| Method: expandAll() <br><br>
<GridComponent ref={ grid =><br>this.gridInstance = grid}><br></GridComponent> <br>
this.gridInstance.groupModule.expandAll()
```

```
|Expand or collapse the row based <br>on the row state in grid | Method: expandCollapse($target)
<br><br> <EJ.Grid dataSource={window.gridData}><br> </EJ.Grid> <br> var gridObj = $("".e-
grid")<br>.ejGrid("instance"); <br> gridObj.expandCollapse($("tr td.recordplusexpend >
div").first());| Method: expandCollapseRows() <br><br> <GridComponent ref={ grid
=><br>this.gridInstance =
grid}><br></GridComponent><br>this.gridInstance.groupModule.expandCollapseRows(<br>this.
gridInstance.getContent().querySelectorAll('.e-recordplusexpend')[0])
```

```
|Collapse the group drop area in grid | Method: collapseGroupDropArea() <br><br> <EJ.Grid
dataSource={window.gridData}><br> </EJ.Grid> <br> var gridObj = $("".e-
grid")<br>.ejGrid("instance"); <br> gridObj.collapseGroupDropArea();| Not Applicable
```

```
|Expand the group drop area in grid | Method: expandGroupDropArea() <br><br> <EJ.Grid
dataSource={window.gridData}><br> </EJ.Grid> <br> var gridObj = $("".e-
grid")<br>.ejGrid("instance"); <br> gridObj.expandGroupDropArea();| Not Applicable
```

```
|Group a column by using the method | Method: groupColumn(fieldName) <br><br> <EJ.Grid
dataSource={window.gridData}><br> </EJ.Grid> <br> var gridObj = $("".e-
grid")<br>.ejGrid("instance"); <br> gridObj.groupColumn("OrderID");| Method:
```

```
groupColumn(fieldName) <br><br> <GridComponent ref={ grid =><br>this.gridInstance =
grid}><br></GridComponent> <br> this.gridInstance.groupColumn("OrderID")

| Ungroup a grouped column by using the method | Method: ungroupColumn(fieldName) <br><br>
<EJ.Grid dataSource={window.gridData}><br> </EJ.Grid> <br> var gridObj = $("".e-
grid")<br>.ejGrid("instance"); <br> gridObj.ungroupColumn("OrderID"); | Method:
ungroupColumn(fieldName) <br><br> <GridComponent ref={ grid =><br>this.gridInstance =
grid}><br></GridComponent> <br> this.gridInstance.ungroupColumn("OrderID")
```

Filtering

| Behavior | API in Essential JS 1 | API in Essential JS 2 |

|-----| -----| -----|

| Default | **Property:** *allowFiltering*

 <EJ.Grid allowFiltering={true}>
 </EJ.Grid> |
Property: *allowFiltering*

 <GridComponent allowFiltering={true}>
 </GridComponent> |

| Menu Filtering | **Property:** *filterSettings.filterType*

 var filterSettings = { filterType : "menu" };
<EJ.Grid allowFiltering={true}>
filterSettings={filterSettings}>
 </EJ.Grid> | **Property:** *filterSettings.type*

public filterSettings : Object = { type:'Menu' };
<GridComponent allowFiltering={true}>
filterSettings={this.filterSettings}>
 </GridComponent> |

| Excel Filtering | **Property:** *filterSettings.filterType*

 var filterSettings = { filterType : "excel" };
<EJ.Grid allowFiltering={true}>
filterSettings={filterSettings}>
 </EJ.Grid> | **Property:** *filterSettings.type*

public filterSettings : Object = { type:'Excel' };
<GridComponent allowFiltering={true}>
filterSettings={this.filterSettings}>
 </GridComponent> |

| Clear the Filtered values | **Method:** *clearFiltering(field)* - *field is optional*

 <EJ.Grid dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$("".e-grid")
.ejGrid("instance");
 gridObj.clearFiltering(); | **Method:** *clearFiltering()*

 <GridComponent ref={ grid =>
this.gridInstance = grid}>
</GridComponent>
 this.gridInstance.clearFiltering()

| Filter a column by using the method | **Method:** *filterColumn(fieldName, filterOperator, filterValue,
predicate, [matchcase],[actualFilterValue])*

 <EJ.Grid dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$("".e-grid")
.ejGrid("instance");
 gridObj.filterColumn("OrderID",
"equal","10248","and",true); | **Method:** *filterByColumn(fieldName, filterOperator, filterValue, predicate, matchCase, ignoreAccent, actualFilterValue, actualOperator)*

 <GridComponent ref={ grid =>
this.gridInstance = grid}>
</GridComponent>

this.gridInstance.filterByColumn("OrderID","equal",10248)

| Filter columns by Collection | **Method:** *filterColumn(filterCollection)*

 <EJ.Grid dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$("".e-grid")
.ejGrid("instance");
 gridObj.filterColumn([{field:"OrderID",
 operator:"lessthan",value:"10266",
predicate:"and",matchcase:true},
 {field:"EmployeeID",operator:
 "equal",value:2,predicate:"and", matchcase:true}]) | **Property:** *filterSettings.columns*

 <GridComponent ref={ grid =>
this.gridInstance = grid}>
</GridComponent>

```
<br>this.gridInstance.filterSettings:{columns: [{ field: 'ShipCity', matchCase: false, operator:
'startswith', predicate: 'and', value: 'reims' },<br>{ field: 'ShipCountry', matchCase: false,
operator: 'startswith', predicate: 'and', value: 'France' }]}
```

| Get the Filtered Records | **Method:** *getFilteredRecords()*

 <EJ.Grid
dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$("".e-
grid")
.ejGrid("instance");
 gridObj.getFilteredRecords(); | Not Applicable

Searching

| Behavior | API in Essential JS 1 | API in Essential JS 2 |

|-----|-----|-----|

| Default | **Property:** *toolbarSettings.toolbarItems*

 var toolbarSettings = { showToolbar:
true, toolbarItems: [ej.Grid.ToolBarItems.Search] };
<EJ.Grid
toolbarSettings={toolbarSettings}>
 </EJ.Grid> | **Property:** *toolbar*

 public toolbar:
Object = ['Search'];
<GridComponent toolbar={this.toolbar}>
</GridComponent> |

| Clear the Searched values | **Method:** *clearSearching()*

 <EJ.Grid
dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$("".e-
grid")
.ejGrid("instance");
 gridObj.clearSearching(); | **Method:** *searchModule.search()*

 <GridComponent ref={ grid =>
this.gridInstance = grid}>
</GridComponent>

 this.gridInstance.searchModule.search("");

| Search a value | **Method:** *search(searchString)*

 <EJ.Grid
dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$("".e-
grid")
.ejGrid("instance");
 gridObj.search("France"); | **Method:**
searchModule.search(searchString)

 <GridComponent ref={ grid =>
this.gridInstance =
grid}>
</GridComponent>
 this.gridInstance.searchModule.search("France");

Paging

| Behavior | API in Essential JS 1 | API in Essential JS 2 |

|-----|-----|-----|

| Default | **Property:** *allowPaging*

 <EJ.Grid allowPaging={true}>
 </EJ.Grid> | **Property:**
allowPaging

 <GridComponent allowPaging={true}>
 </GridComponent> |

| Customize Paging | **Property:** *pageSettings.pageSize*

 var pageSettings = { pageSize: 5
};
<EJ.Grid allowPaging={true}>
pageSettings={pageSettings}>
 </EJ.Grid> | **Property:**
pageSettings.pageSize

 public pageSettings: Object = {pageSize = 5,pageSizes:
[10,15]};
<GridComponent
allowPaging={true}>
pageSettings={this.pageSettings}>
</GridComponent> |

| Change Page Size | **Method:** *changePageSize(pageSize)*

 <EJ.Grid
dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$("".e-
grid")
.ejGrid("instance");
 gridObj.changePageSize(7); | **Property:** *pageSettings.pageSize*

 PageSize can be modified by using the below code
 public pageSettings: Object =
{pageSize = 7};
<GridComponent
allowPaging={true}>
pageSettings={this.pageSettings}>
</GridComponent> |

| Get Current Page Index | **Method:** `getCurrentIndex()`

 <EJ.Grid
 dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$(".e-
 grid")
.ejGrid("instance");
 gridObj.getCurrentIndex(); | **Property:** `pageSettings.currentPage`

 <GridComponent ref={ grid =>
this.gridInstance = grid}>
</GridComponent>

 var currentPage = this.gridInstance.pageSettings.currentPage;

| Get Pager Element | **Method:** `getPager()`

 <EJ.Grid dataSource={window.gridData}>

 </EJ.Grid>
 var gridObj = \$(".e-grid")
.ejGrid("instance");
 gridObj.getPager(); |
Method: `getPager()`

 <GridComponent ref={ grid =>
this.gridInstance =
 grid}>
</GridComponent>
 this.gridInstance.getPager();

| Send a paging request to specified Page | **Method:** `gotoPage(pageIndex)`

 <EJ.Grid
 dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$(".e-
 grid")
.ejGrid("instance");
 gridObj.gotoPage(3); | **Method:** `gotoPage(pageIndex)`

 <GridComponent ref={ grid =>
this.gridInstance = grid}>
</GridComponent>

 this.gridInstance.gotoPage(3);

| Calculate Pagesize of grid by using its Parent height(containerHeight) | **Method:**
`calculatePageSizeByParentHeight(containerHeight)`

 <EJ.Grid
 dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$(".e-
 grid")
.ejGrid("instance");
 gridObj.
calculatePageSizeByParentHeight(400); | Not
 Applicable

Selection

| Behavior | API in Essential JS 1 | API in Essential JS 2 |

| ----- | ----- | ----- |

| Default | **Property:** `allowSelection`

 <EJ.Grid allowSelection={true}>
 </EJ.Grid> |
Property: `allowSelection`

 <GridComponent allowSelection={true}>

</GridComponent> |

| Single Selection | **Property:** `selectionType`

 <EJ.Grid
 allowSelection={true}
selectionType="single">
 </EJ.Grid> | **Property:**
`selectionSettings.type`

 public selectionSettings : Object = { type : "Single"
 };
<GridComponent allowSelection={true}
selectionSettings={this.selectionSettings}>

</GridComponent> |

| Multiple Selection | **Property:** `selectionType`

 <EJ.Grid
 allowSelection={true}
selectionType="multiple">
 </EJ.Grid> | **Property:**
`selectionSettings.type`

 public selectionSettings : Object = { type : "Multiple"
 };
<GridComponent allowSelection={true}
selectionSettings={this.selectionSettings}>

</GridComponent> |

| Row Selection | **Property:** `selectionSettings.selectionMode`

 var selectionSettings = {
 selectionMode: ["row"] };
<EJ.Grid
 allowSelection={true}
selectionSettings={selectionSettings}>
 </EJ.Grid> | **Property:**
`selectionSettings.mode`

 public selectionSettings: Object = { mode: 'Row'


```
};<br><GridComponent allowSelection={true}<br>selectionSettings={this.selectionSettings}>
<br></GridComponent>|
```

| Cell Selection | **Property:** *selectionSettings.selectionMode*

 var selectionSettings = {
selectionMode: ["cell"] };
<EJ.Grid
allowSelection={true}
selectionSettings={selectionSettings}>
 </EJ.Grid> | **Property:**
selectionSettings.mode

public selectionSettings: Object = { mode: 'Cell'
};
<GridComponent allowSelection={true}
selectionSettings={this.selectionSettings}>

</GridComponent>|

| Clear the selected Cells | **Method:** *clearCellSelection()*

 <EJ.Grid
dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$("".e-
grid")
.ejGrid("instance");
 gridObj.clearCellSelection(); | **Method:** *clearCellSelection()*

 <GridComponent ref={ grid =>
this.gridInstance = grid}>
</GridComponent>

 this.gridInstance.selectionModule.clearCellSelection()

| Clear the selected Columns | **Method:** *clearColumnSelection([index])* - index is optional

<EJ.Grid dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$("".e-
grid")
.ejGrid("instance");
 gridObj.clearColumnSelection(); | Not Applicable

| Get the selected Records | **Method:** *getSelectedRecords()*

 <EJ.Grid
dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$("".e-
grid")
.ejGrid("instance");
 gridObj.getSelectedRecords(); | **Method:** *getSelectedRecords()*

 <GridComponent ref={ grid =>
this.gridInstance = grid}>
</GridComponent>

 this.gridInstance.getSelectedRecords();

| Get the selected Rows | **Method:** *getSelectedRows()*

 <EJ.Grid
dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$("".e-
grid")
.ejGrid("instance");
 gridObj.getSelectedRows(); | **Method:** *getSelectedRows()*

 <GridComponent ref={ grid =>
this.gridInstance = grid}>
</GridComponent>

 this.gridInstance.getSelectedRows();

| Select Cells | **Method:** *selectCells(rowCellIndexes)*

 <EJ.Grid
dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$("".e-
grid")
.ejGrid("instance");
 gridObj.selectCells([[1, [4, 3, 2]]]); | **Method:**
selectionModule.selectCells(rowCellIndexes);

 <GridComponent ref={ grid
=>
this.gridInstance = grid}>
</GridComponent>

this.gridInstance.selectionModule.selectCells([{ rowIndex: 0, cellIndexes: [0] }, { rowIndex: 1,
cellIndexes: [1] }]);;

| Select Rows | **Method:** *selectRows(fromIndex, toIndex)*

 <EJ.Grid
dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$("".e-
grid")
.ejGrid("instance");
 gridObj.selectRows(1, 4); | **Method:**
selectionModule.selectRows(rowIndexes)

 <GridComponent ref={ grid
=>
this.gridInstance = grid}>
</GridComponent>

this.gridInstance.selectionModule.selectRows([0, 2])

| Triggers when a
cell is selected | **Event:** *cellSelected*

 <EJ.Grid
cellSelected={cellSelected}>
 </EJ.Grid>
 function cellSelected (args){} | **Event:** *cellSelected*


```
<br><br> <GridComponent cellSelected = {cellSelected}> <br></GridComponent><br>function
cellSelected (args){}
```

| Triggers before the cell is being selected | **Event:** *cellSelecting*

 <EJ.Grid
cellSelecting={cellSelecting}>
 </EJ.Grid>
 function cellSelecting (args){} | **Event:**
cellSelecting

 <GridComponent cellSelecting = {cellSelecting}>

</GridComponent>
function cellSelecting (args){}

| Triggers when a
cell is deselected | **Event:** *cellDeselected*

 <EJ.Grid
cellDeselected={cellDeselected}>
 </EJ.Grid>
 function cellDeselected (args){} | **Event:**
cellDeselected

 <GridComponent cellDeselected = {cellDeselected}>

</GridComponent>
function cellDeselected (args){}

| Triggers before the cell is being deselected | **Event:** *cellDeselecting*

 <EJ.Grid
cellDeselecting={cellDeselecting}>
 </EJ.Grid>
 function cellDeselecting (args){} | **Event:**
cellDeselecting

 <GridComponent cellDeselecting = {cellDeselecting}>

</GridComponent>
function cellDeselecting (args){}

| Triggers when the
row is selected | **Event:** *rowSelected*

 <EJ.Grid
rowSelected={rowSelected}>
 </EJ.Grid>
 function rowSelected (args){} | **Event:**
rowSelected

 <GridComponent rowSelected = {rowSelected}>

</GridComponent>
function rowSelected (args){}

| Triggers before the row is being selected | **Event:** *rowSelecting*

 <EJ.Grid
rowSelecting={rowSelecting}>
 </EJ.Grid>
 function rowSelecting (args){} | **Event:**
rowSelecting

 <GridComponent rowSelecting = {rowSelecting}>

</GridComponent>
function rowSelecting (args){}

| Triggers when the
row is deselected | **Event:** *rowDeselected*

 <EJ.Grid
rowDeselected={rowDeselected}>
 </EJ.Grid>
 function rowDeselected (args){} | **Event:**
rowDeselected

 <GridComponent rowDeselected = {rowDeselected}>

</GridComponent>
function rowDeselected (args){}

| Triggers before the row is being deselected | **Event:** *rowDeselecting*

 <EJ.Grid
rowDeselecting={rowDeselecting}>
 </EJ.Grid>
 function rowDeselecting (args){} | **Event:**
rowDeselecting

 <GridComponent rowDeselecting = {rowDeselecting}>

</GridComponent>
function rowDeselecting (args){}

| Triggers when the column is selected | **Event:** *columnSelected*

 <EJ.Grid
columnSelected={columnSelected}>
 </EJ.Grid>
 function columnSelected (args){} | Not
Applicable

| Triggers before the column is being selected | **Event:** *columnSelecting*

 <EJ.Grid
columnSelecting={columnSelecting}>
 </EJ.Grid>
 function columnSelecting (args){} | Not
Applicable

| Triggers when the column is deselected | **Event:** *columnDeselected*

 <EJ.Grid
columnDeselected={columnDeselected}>
 </EJ.Grid>
 function columnDeselected
(args){} | Not Applicable

| Triggers before the column is being deselected | **Event:** *columnDeselecting*

 <EJ.Grid columnDeselecting={columnDeselecting}>
 </EJ.Grid>
 function columnDeselecting (args){}| Not Applicable

Editing

| Behavior | API in Essential JS 1 | API in Essential JS 2 |

|-----| -----| -----|

| Default | **Property:** *editSettings*

 var editSettings = { allowEditing: true, allowAdding: true, allowDeleting: true };
<EJ.Grid editSettings={editSettings}>
 </EJ.Grid>| **Property:** *editSettings*

public editSettings: Object = { allowEditing: true, allowAdding: true, allowDeleting: true };
<GridComponent allowSelection={true}>
editSettings={this.editSettings}>
</GridComponent>|

| Inline Editing | **Property:** *editSettings.editMode*

 var editSettings = { allowEditing: true, allowAdding: true, allowDeleting: true, editMode : "normal" };
<EJ.Grid editSettings={editSettings}>
 </EJ.Grid>| **Property:** *editSettings.mode*

public editSettings: Object = { allowEditing: true, allowAdding: true, allowDeleting: true, mode : "Normal" };
<GridComponent allowSelection={true}>
editSettings={this.editSettings}>
</GridComponent>|

| Dialog Editing | **Property:** *editSettings.editMode*

 var editSettings = { allowEditing: true, allowAdding: true, allowDeleting: true, editMode : "dialog" };
<EJ.Grid editSettings={editSettings}>
 </EJ.Grid>| **Property:** *editSettings.mode*

public editSettings: Object = { allowEditing: true, allowAdding: true, allowDeleting: true, mode : "Dialog" };
<GridComponent allowSelection={true}>
editSettings={this.editSettings}>
</GridComponent>|

| Batch Editing | **Property:** *editSettings.editMode*

 var editSettings = { allowEditing: true, allowAdding: true, allowDeleting: true, editMode : "batch" };
<EJ.Grid editSettings={editSettings}>
 </EJ.Grid>| **Property:** *editSettings.mode*

public editSettings: Object = { allowEditing: true, allowAdding: true, allowDeleting: true, mode : "Batch" };
<GridComponent allowSelection={true}>
editSettings={this.editSettings}>
</GridComponent>|

| Add a new Record | **Method:** *addRecord([data,[serverChange]])*

 <EJ.Grid dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$(".e-grid")
.ejGrid("instance");
 gridObj.addRecord({"OrderID":12333});| **Method:** *addRecord(data(optional), rowIndex(optional))*

 <GridComponent ref={ grid =>
this.gridInstance = grid}>
</GridComponent>
 this.gridInstance.addRecord({OrderID:10000});

| Batch Cancel | **Method:** *batchCancel()*

 <EJ.Grid dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$(".e-grid")
.ejGrid("instance");
 gridObj.batchCancel();| Not Applicable

| Batch Save | **Method:** *batchSave()*

 <EJ.Grid dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$(".e-grid")
.ejGrid("instance");
 gridObj.batchSave();|

Method: `editModule.batchSave()`
`<GridComponent ref={ grid =>
this.gridInstance = grid}>
</GridComponent>`
`this.gridInstance.editModule.batchSave()`

| Save a Cell - If *preventSaveEvent* is true, then it
will prevent the client side cellSave event|

Method: `saveCell([preventSaveEvent])`
`<EJ.Grid dataSource={window.gridData}>
</EJ.Grid>`
`var gridObj = $(".e-grid">ejGrid("instance");
gridObj.saveCell();|`

Method: `editModule.saveCell()`
`<GridComponent ref={ grid =>
this.gridInstance = grid}>
</GridComponent>`
`this.gridInstance.editModule.saveCell()`

| End Edit | **Method:** `endEdit()`
`<EJ.Grid dataSource={window.gridData}>
</EJ.Grid>`
`var gridObj = $(".e-grid">ejGrid("instance");
gridObj.endEdit();| Method: endEdit()

<GridComponent ref={ grid =>
this.gridInstance = grid}>
</GridComponent>

this.gridInstance.endEdit()`

| Cancel Edit | **Method:** `cancelEdit()`
`<EJ.Grid dataSource={window.gridData}>
</EJ.Grid>`
`var gridObj = $(".e-grid">ejGrid("instance");
gridObj.cancelEdit();|`

Method: `closeEdit()`
`<GridComponent ref={ grid =>
this.gridInstance = grid}>
</GridComponent>`
`this.gridInstance.closeEdit()`

| Delete Record | **Method:** `deleteRecord(fieldName, data)`
`<EJ.Grid dataSource={window.gridData}>
</EJ.Grid>`
`var gridObj = $(".e-grid">ejGrid("instance");
gridObj.deleteRecord("OrderID", { OrderID: 10249, EmployeeID: 3 });| Method: deleteRecord(field, data)- Field and
data are optional

<GridComponent ref={ grid =>
this.gridInstance = grid}>
</GridComponent>

this.gridInstance.deleteRecord()`

| Delete Row | **Method:** `deleteRow($tr)`
`<EJ.Grid dataSource={window.gridData}>
</EJ.Grid>`
`var gridObj = $(".e-grid">ejGrid("instance");
gridObj.deleteRow($(".gridcontent tr").first());| Method: deleteRow(tr)

<GridComponent ref={ grid =>
this.gridInstance = grid}>
</GridComponent>

this.gridInstance.deleteRow(this.gridInstance.getContentTable().querySelector("tbody").firstChild)`

| Edit a cell in Batch edit mode | **Method:** `editCell(index, fieldName)`
`<EJ.Grid dataSource={window.gridData}>
</EJ.Grid>`
`var gridObj = $(".e-grid">ejGrid("instance");
gridObj.editCell(2, "OrderID");| Method: editModule.editCell()

<GridComponent ref={ grid =>
this.gridInstance = grid}>
</GridComponent>

this.gridInstance.editModule.editCell(0,gridObj.columns[0].field)`

| Edit Form Validation | **Method:** `editFormValidate()`
`<EJ.Grid dataSource={window.gridData}>
</EJ.Grid>`
`var gridObj = $(".e-grid">ejGrid("instance");
gridObj.editFormValidate();| Method: editModule.formObj.validate()

<GridComponent ref={ grid =>
this.gridInstance = grid}>
</GridComponent>

this.gridInstance.editModule.formObj.validate()`

| Get Batch Changes | **Method:** `getBatchChanges()`
`<EJ.Grid dataSource={window.gridData}>
</EJ.Grid>`
`var gridObj = $(".e-grid">ejGrid("instance");
gridObj.getBatchChanges();| Method:`

```
editModule.getBatchChanges() <br><br> <GridComponent ref={ grid =><br>this.gridInstance =
grid}><br></GridComponent> <br>this.gridInstance.editModule.getBatchChanges()
```

| Refresh Batch Edit Changes | **Method:** *refreshBatchEditChanges()*

 <EJ.Grid
dataSource={window.gridData}>
</EJ.Grid>
 var gridObj = \$(".e-
grid")
.ejGrid("instance");
 gridObj.refreshBatchEditChanges(); | Not Applicable

| Set Default Data for adding | **Method:** *setDefaultData(defaultData)*

 <EJ.Grid
dataSource={window.gridData}>
</EJ.Grid>
 var gridObj = \$(".e-
grid")
.ejGrid("instance");
 var defaultData = {OrderID:"10000"};

gridObj.setDefaultData(defaultData); | **Method:** *editModule.addRecord(data)-data is optional*

 <GridComponent ref={ grid =>
this.gridInstance = grid}>
</GridComponent>

 this.gridInstance.editModule.addRecord({OrderID:10000})

| Start Edit | **Method:** *startEdit(\$tr)*

 <EJ.Grid dataSource={window.gridData}>

</EJ.Grid>
 var gridObj = \$(".e-grid")
.ejGrid("instance");

gridObj.startEdit(\$(".gridcontent tr").first()); | **Method:** *startEdit()*

 <GridComponent ref={
grid =>
this.gridInstance = grid}>
</GridComponent>

this.gridInstance.startEdit(gridObj.selectRow(0))

| Update Record | **Method:** *updateRecord(fieldName, data)*

 <EJ.Grid
dataSource={window.gridData}>
</EJ.Grid>
 var gridObj = \$(".e-
grid")
.ejGrid("instance");
 gridObj.updateRecord("OrderID", { OrderID: 10249,
EmployeeID: 3 }); | Not Applicable

| Set Cell value | **Method:** *setCellText(rowIndex, cellIndex, value)*

 <EJ.Grid
dataSource={window.gridData}>
</EJ.Grid>
 var gridObj = \$(".e-
grid")
.ejGrid("instance");
 gridObj.setCellText(0, 1, "France"); | **Method:** *setCellValue(key,
field, value)*

 <GridComponent ref={ grid =>
this.gridInstance =
grid}>
</GridComponent>
 this.gridInstance.setCellValue(10248,"CustomerID","A")

| Get Currently edited cell value | **Method:** *getCurrentEditCellData()*

 <EJ.Grid
dataSource={window.gridData}>
</EJ.Grid>
 var gridObj = \$(".e-
grid")
.ejGrid("instance");
 gridObj.getCurrentEditCellData(); | **Method:**
editModule.getCurrentEditCellData()

 <GridComponent ref={ grid =>
this.gridInstance =
grid}>
</GridComponent>
 this.gridInstance.
editModule.getCurrentEditCellData();

| Triggers when adding a
record in batch editing | **Event:** *batchAdd*

 <EJ.Grid
batchAdd={batchAdd}>
</EJ.Grid>
 function batchAdd (args){} | **Event:** *batchAdd*

 <GridComponent batchAdd={batchAdd}>
</GridComponent>
function
batchAdd (args){}

| Triggers when deleting a
record in batch editing | **Event:** *batchDelete*

 <EJ.Grid
batchDelete={batchDelete}>
</EJ.Grid>
function batchDelete (args){} | **Event:**
batchDelete

 <GridComponent batchDelete={batchDelete}>

</GridComponent>
function batchDelete (args){}

| Triggers before adding a record in batch editing | **Event:** *beforeBatchAdd*

 <EJ.Grid
beforeBatchAdd={beforeBatchAdd}>
</EJ.Grid>
 function beforeBatchAdd (args){} |

Event: *beforeBatchAdd*

 <GridComponent beforeBatchAdd={beforeBatchAdd}>

</GridComponent>
function beforeBatchAdd (args){}

| Triggers before deleting a record in batch editing | **Event:** *beforeBatchDelete*

 <EJ.Grid
beforeBatchDelete={beforeBatchDelete}>
</EJ.Grid>
function beforeBatchDelete
(args){} | **Event:** *beforeBatchDelete*

 <GridComponent beforeBatchDelete
={beforeBatchDelete}>
</GridComponent>
function beforeBatchDelete (args){}

| Triggers before saving a record in batch editing | **Event:** *beforeBatchSave*

 <EJ.Grid
beforeBatchSave={beforeBatchSave}>
</EJ.Grid>
function beforeBatchSave (args){} |
Event: *beforeBatchSave*

 <GridComponent beforeBatchSave={beforeBatchSave}>

</GridComponent>
function beforeBatchSave (args){}

| Triggers before the
record in being edited | **Event:** *beginEdit*

 <EJ.Grid
beginEdit={beginEdit}>
</EJ.Grid>
function beginEdit (args){} | **Event:** *beginEdit*

<GridComponent beginEdit={beginEdit}>
</GridComponent>
function beginEdit (args){}

| Triggers when the
cell is being edited | **Event:** *cellEdit*

 <EJ.Grid cellEdit={cellEdit}>

</EJ.Grid>
function cellEdit (args){} | **Event:** *cellEdit*

 <GridComponent cellEdit
={cellEdit}>
</GridComponent>
function cellEdit (args){}

| Triggers when the
cell is saved | **Event:** *cellSave*

 <EJ.Grid cellSave={cellSave}>

</EJ.Grid>
function cellSave (args){} | **Event:** *cellSave*

 <GridComponent cellSave
={cellSave}>
</GridComponent>
function cellSave (args){}

| Triggers when the record is added | **Event:** *endAdd*

 <EJ.Grid endAdd={endAdd}>

</EJ.Grid>
function endAdd (args){} | **Event:** *actionComplete*

 <GridComponent
actionComplete={actionComplete}>
</GridComponent>
function actionComplete
(args){}

| Triggers when the record is deleted | **Event:** *endDelete*

 <EJ.Grid
endDelete={endDelete}>
</EJ.Grid>
function endDelete (args){} | **Event:** *actionComplete*

 <GridComponent actionComplete={actionComplete}>

</GridComponent>
function actionComplete (args){}

| Triggers when the record is edited | **Event:** *endEdit*

 <EJ.Grid endEdit={endEdit}>

</EJ.Grid>
function endEdit (args){} | **Event:** *actionComplete*

 <GridComponent
actionComplete={actionComplete}>
</GridComponent>
function actionComplete
(args){}

Resizing

| Behavior | API in Essential JS 1 | API in Essential JS 2 |

|-----| -----| -----|

| Default | **Property:** *allowResizing*

 <EJ.Grid allowResizing={true}>
</EJ.Grid> |
Property: *allowResizing*

<GridComponent allowResizing={true}>
</GridComponent> |

| Resize a column by using the method | **Method:** *resizeColumns(column,width)*

 <EJ.Grid
dataSource={window.gridData}>
</EJ.Grid>
var gridObj = \$("".e-
grid")
.ejGrid("instance");
gridObj.resizeColumns("OrderID",'150'); | **Property:**

columns.width

To resize a column, set width to that particular column and then refresh the grid by using the refresh method.
<GridComponent ref={ grid =>
this.gridInstance = grid}>
</GridComponent>
 this.gridInstance.columns[1].width = 100;
this.gridInstance.refresh();

| Triggers when a column resize starts | **Event:** *resizeStart*

 <EJ.Grid resizeStart={resizeStart}>
 </EJ.Grid>
 function resizeStart (args){} | **Event:** *resizeStart*

 <GridComponent resizeStart = {resizeStart}>
</GridComponent>
function resizeStart (args){}

| Triggers when a column is resized | **Event:** *resized*

 <EJ.Grid resized={resized}>
 </EJ.Grid>
 function resized (args){} | **Event:** *resizeStop*

 <GridComponent resizeStop = {resizeStop}>
</GridComponent>
function resizeStop (args){}

| Triggers when a column resize stops | **Event:** *resizeEnd*

 <EJ.Grid resizeEnd={resizeEnd}>
 </EJ.Grid>
 function resizeEnd (args){} | Not Applicable

Reordering

| Behavior | API in Essential JS 1 | API in Essential JS 2 |

|-----|-----|-----|

| Default | **Property:** *allowReordering*

 <EJ.Grid allowReordering={true}>
 </EJ.Grid> | **Property:** *allowReordering*

 <GridComponent allowReordering={true}>
</GridComponent> |

| Reorder Columns | **Method:** *reorderColumns(fromFieldName, toFieldName)*

 <EJ.Grid dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$(\$.e-grid)
.ejGrid("instance");
 gridObj.reorderColumns("OrderID", "CustomerID"); | **Method:** *reorderColumns(fromFieldName, toFieldName)*

 <GridComponent ref={ grid =>
this.gridInstance = grid}>
</GridComponent>
 this.gridInstance.reorderColumns("OrderID", "CustomerID");

| Reorder Rows | **Method:** *reorderRows(indexes, toIndex)*

 <EJ.Grid dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$(\$.e-grid)
.ejGrid("instance");
 gridObj.reorderRows([0,1],3); | Not Applicable

Context Menu

| Behavior | API in Essential JS 1 | API in Essential JS 2 |

|-----|-----|-----|

| Default | **Property:** *contextMenuSettings.enableContextMenu*

 var contextMenuSettings = { enableContextMenu : true };
<EJ.Grid>contextMenuSettings={contextMenuSettings}>
 </EJ.Grid> | **Property:** *contextMenuItems*

 public contextMenuItems : Object = { 'AutoFit', 'AutoFitAll' };
<GridComponent>contextMenuItems={this.contextMenuItems}>
</GridComponent> |

| Triggers when context menu item is clicked | **Event:** *contextClick*

 <EJ.Grid contextClick={contextClick}>
 </EJ.Grid>
 function contextClick (args){} | **Event:** *contextMenuClick*

 <GridComponent contextMenuClick = {contextMenuClick}>
</GridComponent>
function contextMenuClick (args){}

|Triggers when context menu opens| **Event:** *contextOpen*

 <EJ.Grid
contextOpen={contextOpen}>
 </EJ.Grid>
 function contextOpen (args){} | **Event:**
contextMenuOpen

 <GridComponent contextMenuOpen = {contextMenuOpen}>

</GridComponent>
function contextMenuOpen (args){}

Toolbar

| Behavior | API in Essential JS 1 | API in Essential JS 2 |

|-----| -----| -----|

|Print| **Property:** *toolbarSettings.toolbarItems*

 var toolbarSettings = { showToolbar: true,
toolbarItems: [ej.Grid.ToolBarItems.Print] };
<EJ.Grid toolbarSettings={toolbarSettings}>

</EJ.Grid>| **Property:** *toolbar*

public toolbar: Object = ['Print'];
<GridComponent
toolbar={this.toolbar}>
</GridComponent>|

|Add| **Property:** *toolbarSettings.toolbarItems*

 var toolbarSettings = { showToolbar: true,
toolbarItems: [ej.Grid.ToolBarItems.Add] };
<EJ.Grid toolbarSettings={toolbarSettings}>

</EJ.Grid>| **Property:** *toolbar*

public toolbar: Object = ['Add'];
<GridComponent
toolbar={this.toolbar}>
</GridComponent>|

|Edit| **Property:** *toolbarSettings.toolbarItems*

 var toolbarSettings = { showToolbar: true,
toolbarItems: [ej.Grid.ToolBarItems.Edit] };
<EJ.Grid toolbarSettings={toolbarSettings}>

</EJ.Grid>| **Property:** *toolbar*

public toolbar: Object = ['Edit'];
<GridComponent
toolbar={this.toolbar}>
</GridComponent>|

|Delete| **Property:** *toolbarSettings.toolbarItems*

 var toolbarSettings = { showToolbar: true,
toolbarItems: [ej.Grid.ToolBarItems.Delete] };
<EJ.Grid
toolbarSettings={toolbarSettings}>
 </EJ.Grid>| **Property:** *toolbar*

public toolbar:
Object = ['Delete'];
<GridComponent toolbar={this.toolbar}>
</GridComponent>|

|Update| **Property:** *toolbarSettings.toolbarItems*

 var toolbarSettings = { showToolbar:
true, toolbarItems: [ej.Grid.ToolBarItems.Update] };
<EJ.Grid
toolbarSettings={toolbarSettings}>
 </EJ.Grid>| **Property:** *toolbar*

public toolbar:
Object = ['Update'];
<GridComponent toolbar={this.toolbar}>
</GridComponent>|

|Cancel| **Property:** *toolbarSettings.toolbarItems*

 var toolbarSettings = { showToolbar:
true, toolbarItems: [ej.Grid.ToolBarItems.Cancel] };
<EJ.Grid
toolbarSettings={toolbarSettings}>
 </EJ.Grid>| **Property:** *toolbar*

public toolbar:
Object = ['Cancel'];
<GridComponent toolbar={this.toolbar}>
</GridComponent>|

|ExcelExport| **Property:** *toolbarSettings.toolbarItems*

 var toolbarSettings = { showToolbar:
true, toolbarItems: [ej.Grid.ToolBarItems.ExcelExport] };
<EJ.Grid
toolbarSettings={toolbarSettings}>
 </EJ.Grid>| **Property:** *toolbar*

public toolbar:
Object = ['ExcelExport'];
<GridComponent toolbar={this.toolbar}>
</GridComponent>|

|WordExport| **Property:** *toolbarSettings.toolbarItems*

 var toolbarSettings = { showToolbar:
true, toolbarItems: [ej.Grid.ToolBarItems.WordExport] };
<EJ.Grid
toolbarSettings={toolbarSettings}>
 </EJ.Grid>| Not Applicable

| PdfExport | **Property:** *toolbarSettings.toolbarItems*

 `var toolbarSettings = { showToolBar: true, toolbarItems: [ej.Grid.ToolBarItems.PdfExport] };
<EJ.Grid toolbarSettings={toolbarSettings}>
 </EJ.Grid> | Property: toolbar

 public toolbar: Object = ['PdfExport'];
<GridComponent toolbar={this.toolbar}>
 </GridComponent> |`

| Refresh Toolbar | **Method:** *refreshToolBar()*

 `<EJ.Grid dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = $(".e-grid")
.ejGrid("instance");
 gridObj.refreshToolBar(); |`
Not Applicable

| Triggers when toolbar item is clicked | **Event:** *toolbarClick*

 `<EJ.Grid toolbarClick={toolbarClick}>
 </EJ.Grid>
 function toolbarClick (args){} | Event: toolbarClick

 <GridComponent toolbarClick = {toolbarClick}>
 </GridComponent>
 function toolbarClick (args){}`

GridLines

| Behavior | API in Essential JS 1 | API in Essential JS 2 |

| ----- | ----- | ----- |

| Default | **Property:** *gridLines*

 `<EJ.Grid gridLines='Default'>
 </EJ.Grid> | Property: gridLines

 <GridComponent gridLines='Default'>
 </GridComponent> |`

Templates

| Behavior | API in Essential JS 1 | API in Essential JS 2 |

| ----- | ----- | ----- |

| Detail Template | **Property:** *detailsTemplate*

 `<EJ.Grid detailsTemplate : "#detailsTemplate">
 </EJ.Grid> | Property: detailTemplate

 <GridComponent detailTemplate: '#detailTemplate'>
 </GridComponent> |`

| Row Template | **Property:** *rowTemplate*

 `<EJ.Grid rowTemplate : "#rowTemplate">
 </EJ.Grid> | Property: rowTemplate

 <GridComponent rowTemplate: '#rowtemplate'>
 </GridComponent> |`

| Refresh Template | **Method:** *refreshTemplate()*

 `<EJ.Grid dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = $(".e-grid")
.ejGrid("instance");
 gridObj.refreshTemplate(); |` Not Applicable

| Triggers when detail template row is clicked to collapse | **Event:** *detailsCollapse*

 `<EJ.Grid detailsCollapse={detailsCollapse}>
 </EJ.Grid>
 function detailsCollapse (args){} |` Not Applicable

| Triggers when detail template row is initialized | **Event:** *detailsDataBound*

 `<EJ.Grid detailsDataBound={detailsDataBound}>
 </EJ.Grid>
 function detailsDataBound (args){} |`
Not Applicable

| Triggers when detail template
row is clicked to expand | **Event:** *detailsExpand*

 `<EJ.Grid detailsExpand={detailsExpand}>
 </EJ.Grid>
 function detailsExpand (args){} | Event: detailDataBound

 <GridComponent detailDataBound = {detailDataBound}>
 </GridComponent>
 function detailDataBound (args){}`

| Triggers when refresh the template column elements in the Grid | **Event:** *templateRefresh*

 <EJ.Grid templateRefresh={templateRefresh}>
 </EJ.Grid>
 function templateRefresh (args){}| Not Applicable

Row/Column Drag and Drop

| Behavior | API in Essential JS 1 | API in Essential JS 2 |

| ----- | ----- | ----- |

| Default | **Property:** *allowRowDragAndDrop*

 <EJ.Grid allowRowDragAndDrop={true}>
 </EJ.Grid> | **Property:** *allowRowDragAndDrop*

 <GridComponent allowRowDragAndDrop={true}>
 </GridComponent> |

| Triggers when the row is
being dragged | **Event:** *rowDrag*

 <EJ.Grid rowDrag={rowDrag}>
 </EJ.Grid>
 function rowDrag (args){} | **Event:** *rowDrag*

 <GridComponent rowDrag = {rowDrag}>
 </GridComponent>
 function rowDrag (args){}

| Triggers when the row drag begins | **Event:** *rowDragStart*

 <EJ.Grid rowDragStart={rowDragStart}>
 </EJ.Grid>
 function rowDragStart (args){} | **Event:** *rowDragStart*

 <GridComponent rowDragStart = {rowDragStart}>
 </GridComponent>
 function rowDragStart (args){}

| Triggers when the row is dropped | **Event:** *rowDrop*

 <EJ.Grid rowDrop={rowDrop}>
 </EJ.Grid>
 function rowDrop (args){} | **Event:** *rowDrop*

 <GridComponent rowDrop = {rowDrop}>
 </GridComponent>
 function rowDrop (args){}

| Triggers before the row is being dropped | **Event:** *beforeRowDrop*

 <EJ.Grid beforeRowDrop={beforeRowDrop}>
 </EJ.Grid>
 function beforeRowDrop (args){}| Not Applicable

| Triggers when the
column is being dragged | **Event:** *columnDrag*

 <EJ.Grid columnDrag={columnDrag}>
 </EJ.Grid>
 function columnDrag (args){}| Not Applicable

| Triggers when the
column drag begins | **Event:** *columnDragStart*

 <EJ.Grid columnDragStart={columnDragStart}>
 </EJ.Grid>
 function columnDragStart (args){}| Not Applicable

| Triggers when the
column is dropped | **Event:** *columnDrop*

 <EJ.Grid columnDrop={columnDrop}>
 </EJ.Grid>
 function columnDrop (args){}| Not Applicable

Frozen Rows and Columns

| Behavior | API in Essential JS 1 | API in Essential JS 2 |

| ----- | ----- | ----- |

| Default | **Property:** *scrollSettings.frozenRows*

 var scrollSettings = {frozenRows:2,frozenColumns: 2}

 <EJ.Grid allowScrolling={true}>
 scrollSettings={scrollSettings}>
 </EJ.Grid> | **Property:** *frozenRows*

 <GridComponent frozenRows={2}>
 frozenColumns={2}>
 </GridComponent> |

| isFrozen | **Property:** *columns.isFrozen*

 <EJ.Grid>
 <columns>
 <column field="CustomerID" isFrozen={true}/>
 </columns>
 </EJ.Grid> | **Property:** *columns.isFrozen*

```
<br><br><GridComponent><br> <ColumnsDirective><br><ColumnDirective field='CustomerID'
isFrozen= {true}/><br></ColumnsDirective><br></GridComponent>|
```

ForeignKey

| Behavior | API in Essential JS 1 | API in Essential JS 2 |

|-----|-----|-----|

| Default | **Property:** *columns.foreignKeyValue*

<EJ.Grid>
<columns>
<column
field="EmployeeID" foreignKeyField="EmployeeID",
foreignKeyValue="FirstName",dataSource=window.employeeView/>
</columns>
</EJ.G
rid>| **Property:** *columns.foreignKeyValue*

<GridComponent>

<ColumnsDirective>
<ColumnDirective field='EmployeeID' foreignKeyValue= 'FirstName',
dataSource= employeeData/>
</ColumnsDirective>
</GridComponent>|

Auto Wrap

| Behavior | API in Essential JS 1 | API in Essential JS 2 |

|-----|-----|-----|

| Default | **Property:** *allowTextWrap*

<EJ.Grid allowTextWrap={true}>
 </EJ.Grid>|
Property: *allowTextWrap*

<GridComponent
allowTextWrap={true}>
</GridComponent>|

| Both | **Property:** *textWrapSettings.wrapMode*

 var textWrapSettings=
{wrapMode:"both"};
<EJ.Grid
allowTextWrap={true}
textWrapSettings=textWrapSettings>
 </EJ.Grid>| **Property:**
textWrapSettings.wrapMode

public textWrapSettings: Object = { wrapMode: 'Both'
};
<GridComponent allowTextWrap={true}
textWrapSettings={this.textWrapSettings}>
</GridComponent>|

| Header | **Property:** *textWrapSettings.wrapMode*

 var textWrapSettings=
{wrapMode:"header"};
<EJ.Grid
allowTextWrap={true}
textWrapSettings=textWrapSettings>
 </EJ.Grid>| **Property:**
textWrapSettings.wrapMode

public textWrapSettings: Object = { wrapMode: 'Header'
};
<GridComponent allowTextWrap={true}
textWrapSettings={this.textWrapSettings}>
</GridComponent>|

| Content | **Property:** *textWrapSettings.wrapMode*

 var textWrapSettings=
{wrapMode:"content"};
<EJ.Grid
allowTextWrap={true}
textWrapSettings=textWrapSettings>
 </EJ.Grid>| **Property:**
textWrapSettings.wrapMode

public textWrapSettings: Object = { wrapMode: 'Content'
};
<GridComponent allowTextWrap={true}
textWrapSettings={this.textWrapSettings}>
</GridComponent>|

Responsive

| Behavior | API in Essential JS 1 | API in Essential JS 2 |

|-----|-----|-----|

| Default | **Property:** *isResponsive*

 <EJ.Grid isResponsive={true}>
 </EJ.Grid> | Not Applicable

State Persistence

| Behavior | API in Essential JS 1 | API in Essential JS 2 |

|-----|-----|-----|

| Default | **Property:** *enablepersistence*

 <EJ.Grid enablepersistence={true}>
 </EJ.Grid> | **Property:** *enablepersistence*

<GridComponent enablepersistence={true}>
</GridComponent> |

Right to Left - RTL

| Behavior | API in Essential JS 1 | API in Essential JS 2 |

|-----|-----|-----|

| Default | **Property:** *enableRTL*

 <EJ.Grid enableRTL={true}>
 </EJ.Grid> | **Property:** *enableRTL*

<GridComponent enableRTL={true}>
</GridComponent> |

ToolTip

| Behavior | API in Essential JS 1 | API in Essential JS 2 |

|-----|-----|-----|

| Default | **Property:** *clipMode*

var columns = [
{ field: "ShipCity",clipMode:
ej.Grid.ClipMode.EllipsisWithTooltip}
{ field: "ShipCountry",clipMode:
ej.Grid.ClipMode.Ellipsis}
{ field: "ShipName",clipMode:
ej.Grid.ClipMode.Clip}];
<EJ.Grid columns={columns}>
</EJ.Grid> | **Property:** *clipMode*

<GridComponent>
<ColumnsDirective>
<ColumnDirective field='ShipCity' clipMode='EllipsisWithTooltip'/>
<ColumnDirective field='ShipCountry' clipMode='Ellipsis'/>
<ColumnDirective field='ShipName' clipMode='Clip'/>
</ColumnsDirective>
</GridComponent> |

Aggregate/Summary

| Behavior | API in Essential JS 1 | API in Essential JS 2 |

|-----|-----|-----|

| Footer Aggregate | **Property:** *showSummary*

 var summaryRows = [{
summaryColumns:[{ summaryType:
ej.Grid.SummaryType.Average,
displayColumn: "Freight",
dataMember: "Freight",
format: "{0:c2}",
prefix: "Average = "}]};
<EJ.Grid showSummary={true} summaryRows={summaryRows}>
 </EJ.Grid> | **Property:** *aggregates*

<GridComponent>
<AggregatesDirective>
<AggregateDirective>
<AggregateColumnsDirective>
field='Freight'
type='Sum'
format='C2'
footerTemplate={this.footerSum}>
</AggregateColumnDirective>
</AggregateDirective>
</AggregatesDirective>
</GridComponent> |

|Caption Aggregate | **Property:** *showSummary*

 `var summaryRows =`
`[{
showCaptionSummary:true,
summaryColumns:[{`
`summaryType:
ej.Grid.SummaryType.Average,
displayColumn:`
`"Freight",
dataMember: "Freight",
format: "{0:c2}",
prefix: "Average =`
`"}},
showTotalSummary: false }];
<EJ.Grid showSummary={true}`
`summaryRows={summaryRows}>
 </EJ.Grid> | Property: aggregates

<GridComponent>
<AggregatesDirective>
<AggregateDirective>
<Aggregate`
`ColumnsDirective>
field='Freight'
type='Sum'
format='C2'
groupCaptionTemplate`
`={this.groupcFootertMax}>
</AggregateColumnDirective>
</AggregateDirective>
</`
`AggregatesDirective>
</GridComponent> |`

|Get Summary values | **Method:** *getSummaryValues(summaryCol, summaryData)*

 <EJ.Grid
`dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = $("".e-`
`grid")
.ejGrid("instance");
 gridObj.getSummaryValues(summaryCol, window.gridData);|`
Not Applicable

Grid Export

|Behavior | API in Essential JS 1 | API in Essential JS 2 |

|----- | ----- | ----- |

|Adds a grid model property which is
to be ignored on exporting grid | **Method:**
`addIgnoreOnExport(propertyNames)

 <EJ.Grid dataSource={window.gridData}>
`
`</EJ.Grid>
 var gridObj = $("".e-grid")
.ejGrid("instance");
`
`gridObj.addIgnoreOnExport("filterSettings");|` Not Applicable |

Columns

|Behavior | API in Essential JS 1 | API in Essential JS 2 |

|----- | ----- | ----- |

|Add or Remove Columns | **Method:** *columns(columnDetails, [action])()*

 <EJ.Grid
`dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = $("".e-`
`grid")
.ejGrid("instance");
 gridObj.columns("OrderID", "remove");
`
`gridObj.columns("CustomerID", "add");|` **Property:** *columns*

 Grid is initially rendered with
OrderID and CustomerId columns. Then if you want to add ShipAddress column, you have to reset the
value for column property as `gridObj.columns = [{field:"OrderID"}, {field:"CustomerID"},`
`{field:"ShipAddress"}];` Then to remove the CustomerId column, reset the column property as,
`gridObj.columns = [{field:"OrderID"}, {field:"ShipAddress"}];`

|Get Column By Field | **Method:** *getColumnByField(fieldName)*

 <EJ.Grid
`dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = $("".e-`
`grid")
.ejGrid("instance");
 gridObj.getColumnByField("OrderID");|` **Method:**
`getColumnByField(fieldName)

 <GridComponent ref={ grid =>
this.gridInstance =`
`grid}>
</GridComponent>
this.gridInstance.getColumnByField("OrderID")`

|Get Column By HeaderText | **Method:** *getColumnByHeaderText(headerText)*

 <EJ.Grid
`dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = $("".e-`
`grid")
.ejGrid("instance");
 gridObj.getColumnByHeaderText("Order ID");|` You can get the
column object by iterating the `gridObj.columns` with the corresponding headerText

| Get Column By Index | **Method:** `getColumnByIndex(columnIndex)`

 <EJ.Grid
 dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$(".e-
 grid")
.ejGrid("instance");
 gridObj.getColumnByIndex(1); | **Method:**
`getColumnByIndex(columnIndex)`

 <GridComponent ref={ grid =>
this.gridInstance =
 grid}>
</GridComponent>
this.gridInstance.getColumnByIndex(1)

| Get Column Fieldnames | **Method:** `getColumnFieldNames()`

 <EJ.Grid
 dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$(".e-
 grid")
.ejGrid("instance");
 gridObj.getColumnFieldNames(); | **Method:**
`getColumnFieldNames()`

 <GridComponent ref={ grid =>
this.gridInstance =
 grid}>
</GridComponent>
this.gridInstance.getColumnFieldNames()

| Get Column Index By Field | **Method:** `getColumnIndexByField(fieldName)`

 <EJ.Grid
 dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$(".e-
 grid")
.ejGrid("instance");
 gridObj.getColumnIndexByField("OrderID"); | **Method:**
`getColumnIndexByField(fieldName)`

 <GridComponent ref={ grid =>
this.gridInstance =
 grid}>
</GridComponent>
this.gridInstance.getColumnIndexByField("OrderID");

| Get Column Index By headerText | **Method:** `getColumnIndexByHeaderText(headerText, [field])`

 <EJ.Grid dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$(".e-
 grid")
.ejGrid("instance");
 gridObj.getColumnIndexByHeaderText("Order ID"); | You can
 get the Column object with the index value by iterating the gridObj.columns with headerText

| Set Width to columns | **Method:** `setWidthToColumns()`

 <EJ.Grid
 dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$(".e-
 grid")
.ejGrid("instance");
 gridObj.setWidthToColumns(); | **Method:**
`widthService.setWidthToColumns()`

 <GridComponent ref={ grid =>
this.gridInstance =
 grid}>
</GridComponent>
this.gridInstance.widthService.setWidthToColumns()

| Get HeaderText By FieldName | **Method:** `getHeaderTextByFieldName()`

 <EJ.Grid
 dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$(".e-
 grid")
.ejGrid("instance");
 gridObj.getHeaderTextByFieldName("OrderID"); | Not
 Applicable

| Get Hidden Columnname | **Method:** `getHiddenColumnNames()`

 <EJ.Grid
 dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$(".e-
 grid")
.ejGrid("instance");
 gridObj.getHiddenColumnNames(); | Not Applicable

| Get Visible Columnsname | **Method:** `getVisibleColumnNames()`

 <EJ.Grid
 dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$(".e-
 grid")
.ejGrid("instance");
 gridObj.getVisibleColumnNames(); | **Method:**
`getVisibleColumns()`

 <GridComponent ref={ grid =>
this.gridInstance =
 grid}>
</GridComponent>
 this.gridInstance.getVisibleColumns();

| Select Columns | **Method:** `selectColumns(fromIndex)`

 <EJ.Grid
 dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$(".e-
 grid")
.ejGrid("instance");
 gridObj.selectColumns(1); | Not Applicable

| Select the Specified Columns based on the index provided | **Method:**
selectColumns(columnIndex,[toIndex])

 <EJ.Grid dataSource={window.gridData}>

 </EJ.Grid>
 var gridObj = \$(".e-grid")
.ejGrid("instance");

 gridObj.selectColumns(1,4); | Not Applicable

Row

| Behavior | API in Essential JS 1 | API in Essential JS 2 |

|-----|-----|-----|

| EnableHover | **Property:** *enableRowHover*

 <EJ.Grid enableRowHover={true}>

 </EJ.Grid> | **Property:** *enableHover*

<GridComponent
 enableHover={true}>
</GridComponent> |

| Get Row Height | **Method:** *getRowHeight()*

 <EJ.Grid dataSource={window.gridData}>

 </EJ.Grid>
 var gridObj = \$(".e-grid")
.ejGrid("instance");
 gridObj.getRowHeight(); |
Method: *getRowHeight()*

 <GridComponent ref={ grid =>
this.gridInstance =
 grid}>
</GridComponent>
 this.gridInstance.getRowHeight();

| Refresh Row Height | **Method:** *rowHeightRefresh()*

 <EJ.Grid
 dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$(".e-
 grid")
.ejGrid("instance");
 gridObj.rowHeightRefresh(); | Not Applicable

| Get index by Row Element | **Method:** *getIndexByRow(\$tr)*

 <EJ.Grid
 dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$(".e-
 grid")
.ejGrid("instance");
 gridObj.getIndexByRow(\$(".gridcontent tr").first()); | Not
 Applicable

| Get Row by its Index | **Method:** *getRowByIndex(from, to)*

 <EJ.Grid
 dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$(".e-
 grid")
.ejGrid("instance");
 gridObj.getRowByIndex(3, 6); | **Method:** *getRowByIndex(index)*

 <GridComponent ref={ grid =>
this.gridInstance = grid}>
</GridComponent>

 this.gridInstance.getRowByIndex(1);

| Get rendered rows | **Method:** *getRows()*

 <EJ.Grid dataSource={window.gridData}>

 </EJ.Grid>
 var gridObj = \$(".e-grid")
.ejGrid("instance");
 gridObj.getRows(); |
Method: *getRows()*

 <GridComponent ref={ grid =>
this.gridInstance =
 grid}>
</GridComponent>
 this.gridInstance.getRows();

| Triggers while hover the grid row | **Event:** *rowHover*

 <EJ.Grid rowHover={rowHover}>

 </EJ.Grid>
 function rowHover (args){} | Not Applicable

Show/Hide Columns

| Behavior | API in Essential JS 1 | API in Essential JS 2 |

|-----|-----|-----|

| Hide Columns by using method | **Method:** *hideColumns(headerText)*

 <EJ.Grid
 dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$(".e-
 grid")
.ejGrid("instance");
 gridObj.hideColumns("Order ID"); | **Method:**


```
hideColumns(headerText) <br><br> <GridComponent ref={ grid =><br>this.gridInstance =
grid}><br></GridComponent> <br> this.gridInstance.hideColumns("Order ID");
```

| Show Columns by using method | **Method:** *showColumns(headerText)*

 <EJ.Grid
dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$("".e-
grid")
.ejGrid("instance");
 gridObj.showColumns("Order ID"); | **Method:**
showColumns(headerText)

 <GridComponent ref={ grid =>
this.gridInstance =
grid}>
</GridComponent>
 this.gridInstance.showColumns("Order ID");

Column Chooser

| Behavior | API in Essential JS 1 | API in Essential JS 2 |

|-----|-----|-----|

| Default | **Property:** *showColumnChooser*

var columns = [
{ field:
"ShipCity",
showInColumnChooser={false}}
{ field: "ShipCountry"}
<EJ.Grid
showColumnChooser={true} columns={columns}>
</EJ.Grid> | **Property:** *showColumnChooser*

<GridComponent showColumnChooser={true}>

<ColumnsDirective>
<ColumnDirective field='ShipCity'
showInColumnChooser={false}/>
<ColumnDirective field='ShipCountry'
showInColumnChooser={true}/>
</ColumnsDirective>
</GridComponent> |

Header

| Behavior | API in Essential JS 1 | API in Essential JS 2 |

|-----|-----|-----|

| Refresh Header | **Method:** *refreshHeader()*

 <EJ.Grid dataSource={window.gridData}>

</EJ.Grid>
 var gridObj = \$("".e-grid")
.ejGrid("instance");
 gridObj.refreshHeader(); |
Method: *refreshHeader()*

 <GridComponent ref={ grid =>
this.gridInstance =
grid}>
</GridComponent>
 this.gridInstance.refreshHeader();

| Triggers every time a request is made to access particular header cell information, element and data. |
Event: *mergeHeaderCellInfo*

 <EJ.Grid mergeHeaderCellInfo={mergeHeaderCellInfo}>

</EJ.Grid>
 function mergeHeaderCellInfo (args){} | Not Applicable

| Triggers every time a request is made to access particular cell information, element and data | **Event:**
mergeCellInfo

 <EJ.Grid mergeCellInfo={mergeCellInfo}>
 </EJ.Grid>
 function
mergeCellInfo (args){} | Not Applicable

DataSource

| Behavior | API in Essential JS 1 | API in Essential JS 2 |

|-----|-----|-----|

| DataSource | **Method:** *dataSource(newdatasource,[templateRefresh])*

 <EJ.Grid
dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$("".e-
grid")
.ejGrid("instance");
 gridObj.dataSource(newdatasource); | **Property:** *dataSource*

 <GridComponent ref={ grid =>
this.gridInstance = grid}>
</GridComponent>

 this.gridInstance.datasource = newdatasource

Print

| Behavior | API in Essential JS 1 | API in Essential JS 2 |

|-----|-----|-----|

| Print the grid | **Method:** `print()`

 <EJ.Grid dataSource={window.gridData}>
 </EJ.Grid>

 var gridObj = \$\$(".e-grid")
.ejGrid("instance");
 gridObj.print(); | **Method:** `print()`

 <GridComponent ref={ grid =>
this.gridInstance = grid}>
</GridComponent>

 this.gridInstance.print();

| Triggers before printing the grid | **Event:** `beforePrint`

 <EJ.Grid beforePrint={beforePrint}>

 </EJ.Grid>
 function beforePrint (args){} | **Event:** `beforePrint`

 <GridComponent
beforePrint = {beforePrint}>
</GridComponent>
function beforePrint (args){}

Scrolling

| Behavior | API in Essential JS 1 | API in Essential JS 2 |

|-----|-----|-----|

| Get ScrollObject | **Method:** `getScrollObject()`

 <EJ.Grid
dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$\$(".e-
grid")
.ejGrid("instance");
 gridObj.getScrollObject(); | **Property:** `grid.scrollModule`

<GridComponent ref={ grid =>
this.gridInstance = grid}>
</GridComponent>
 var
scrollObj = this.gridInstance.scrollModule;

PrimaryKey

| Behavior | API in Essential JS 1 | API in Essential JS 2 |

|-----|-----|-----|

| Set PrimaryKey Column | **Property:** `columns.isPrimaryKey`

 var columns = [
{ field:
"OrderID",
isPrimaryKey={true}}]
<EJ.Grid columns={columns}>
</EJ.Grid> | **Property:**
`columns.isPrimaryKey`

 <GridComponent>
 <ColumnsDirective>
<ColumnDirective
field='OrderID' isPrimaryKey={true}/>
<ColumnDirective field='ShipCountry'

</ColumnDirective>
</GridComponent> |

| Get the PrimaryKey fieldnames | **Method:** `getPrimaryKeyFieldNames()`

 <EJ.Grid
dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$\$(".e-
grid")
.ejGrid("instance");
 gridObj.getPrimaryKeyFieldNames(); | **Method:**

 <getPrimaryKeyFieldNames()

 <GridComponent ref={ grid =>
this.gridInstance =
grid}>
</GridComponent>
 this.gridInstance.getPrimaryKeyFieldNames();

Grid

| Behavior | API in Essential JS 1 | API in Essential JS 2 |

|-----|-----|-----|

| Get the Browser Details | **Method:** `getBrowserDetails()`

 <EJ.Grid
dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$\$(".e-
grid")
.ejGrid("instance");
 gridObj.getBrowserDetails(); | In Essential JS 2, it can be

achieved by using `Browser` class of `ej2-base`

|Set dimension for the grid | **Method:** *setDimension(height, width)*

 <EJ.Grid
dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$(".e-
grid")
.ejGrid("instance");
 gridObj.setDimension(300,400); | Not Applicable

|set maximum width for mobile | **Method:** *setPhoneModeMaxWidth(value)*

 <EJ.Grid
dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$(".e-
grid")
.ejGrid("instance");
 gridObj.setPhoneModeMaxWidth(500); | Not Applicable

|Render the grid| **Method:** *render()*

 <EJ.Grid dataSource={window.gridData}>

</EJ.Grid>
 var gridObj = \$(".e-grid")
.ejGrid("instance");
 gridObj.render(); | **Method:**
render()

 <GridComponent ref={ grid =>
this.gridInstance =
grid}>
</GridComponent>
 this.gridInstance.render();

|Reset the model collections like pageSettings,
groupSettings, filterSettings, sortSettings and
summaryRows. | **Method:** *resetModelCollections()*

 <EJ.Grid
dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$(".e-
grid")
.ejGrid("instance");
 gridObj.resetModelCollections(); | Not Applicable

|Destroy the grid| **Method:** *destroy()*

 <EJ.Grid dataSource={window.gridData}>

</EJ.Grid>
 var gridObj = \$(".e-grid")
.ejGrid("instance");
 gridObj.destroy(); |
Method: *destroy()*

 <GridComponent ref={ grid =>
this.gridInstance =
grid}>
</GridComponent>
 this.gridInstance.destroy()

|Get Content Element| **Method:** *getContent()*

 <EJ.Grid
dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$(".e-
grid")
.ejGrid("instance");
 gridObj.getContent(); | **Method:** *getContent()*

<GridComponent ref={ grid =>
this.gridInstance = grid}>
</GridComponent>

this.gridInstance.getContent();

|Get Content Table | **Method:** *getContentTable()*

 <EJ.Grid
dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$(".e-
grid")
.ejGrid("instance");
 gridObj.getContentTable(); | **Method:** *getContentTable()*

 <GridComponent ref={ grid =>
this.gridInstance = grid}>
</GridComponent>

 this.gridInstance.getContentTable();

|Get Current View Data | **Method:** *getCurrentViewData()*

 <EJ.Grid
dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$(".e-
grid")
.ejGrid("instance");
 gridObj.getCurrentViewData(); | **Method:**
getCurrentViewRecords()

 <GridComponent ref={ grid =>
this.gridInstance =
grid}>
</GridComponent>
 this.gridInstance.getCurrentViewRecords();

|Get Data Row| **Method:** *getDataByIndex(rowIndex)*

 <EJ.Grid
dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$(".e-
grid")
.ejGrid("instance");
 gridObj.getDataByIndex(0); | **Method:** *getDataRows()*

<GridComponent ref={ grid =>
this.gridInstance = grid}>
</GridComponent>

this.gridInstance.getDataRows();

|Get Fieldname by using the headertext| **Method:** *getFieldNameByHeaderText(headerText)*

<EJ.Grid dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$(".e-

grid")
.ejGrid("instance");
 gridObj.getFieldNameByHeaderText("Order ID"); | Not Applicable

| Get FooterContent | **Method:** *getFooterContent()*

 <EJ.Grid
dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$("".e-
grid")
.ejGrid("instance");
 gridObj.getFooterContent(); | **Method:** *getFooterContent()*

 <GridComponent ref={ grid =>
this.gridInstance = grid}>
</GridComponent>

 this.gridInstance.getFooterContent();

| Get FooterContent Table | **Method:** *getFooterTable()*

 <EJ.Grid
dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$("".e-
grid")
.ejGrid("instance");
 gridObj.getFooterTable(); | **Method:** *getFooterContentTable()*

 <GridComponent ref={ grid =>
this.gridInstance = grid}>
</GridComponent>

 this.gridInstance.getFooterContentTable();

| Get HeaderComponent | **Method:** *getHeaderContent()*

 <EJ.Grid
dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$("".e-
grid")
.ejGrid("instance");
 gridObj.getHeaderContent(); | **Method:** *getHeaderContent()*

 <GridComponent ref={ grid =>
this.gridInstance = grid}>
</GridComponent>

 this.gridInstance.getHeaderContent();

| Get HeaderComponent Table | **Method:** *getHeaderTable()*

 <EJ.Grid
dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$("".e-
grid")
.ejGrid("instance");
 gridObj.getHeaderTable(); | **Method:** *getHeaderTable()*

<GridComponent ref={ grid =>
this.gridInstance = grid}>
</GridComponent>

this.gridInstance.getHeaderTable();

| Refresh Content | **Method:** *refreshContent()*

 <EJ.Grid
dataSource={window.gridData}>
 </EJ.Grid>
 var gridObj = \$("".e-
grid")
.ejGrid("instance");
 gridObj.refreshContent(); | **Method:**

contentModule.refreshContentRows()

 <GridComponent ref={ grid =>
this.gridInstance
= grid}>
</GridComponent>

this.gridInstance.
contentModule.refreshContentRows();

| Refresh Data | **Method:** *refreshData()*

 <EJ.Grid dataSource={window.gridData}>

</EJ.Grid>
 var gridObj = \$("".e-grid")
.ejGrid("instance");
 gridObj.refreshData(); | Not
Applicable

| Triggers every time a request is
made to access particular cell
information, element and data |
Event: *queryCellInfo*

 <EJ.Grid queryCellInfo={queryCellInfo}>
 </EJ.Grid>
 function
queryCellInfo (args){} | **Event:** *queryCellInfo*

 <GridComponent queryCellInfo
={queryCellInfo}>
</GridComponent>
function queryCellInfo (args){}

| Triggers every time a request is
made to access row information,
element and data | **Event:**
rowDataBound

 <EJ.Grid rowDataBound={rowDataBound}>
 </EJ.Grid>
 function
rowDataBound (args){} | **Event:** *rowDataBound*

 <GridComponent rowDataBound
={rowDataBound}>
</GridComponent>
function rowDataBound (args){}

| Triggers for every grid
action before it get started| **Event:** *actionBegin*

 <EJ.Grid
 actionBegin={actionBegin}>
 </EJ.Grid>
 function actionBegin (args){} | **Event:** *actionBegin*

 <GridComponent actionBegin = {actionBegin}>
</GridComponent>
function
 actionBegin (args){}

| Triggers for every grid
action success event| **Event:** *actionComplete*

 <EJ.Grid
 actionComplete={actionComplete}>
 </EJ.Grid>
 function actionComplete (args){} |
Event: *actionComplete*

 <GridComponent actionComplete = {actionComplete}>

</GridComponent>
function actionComplete (args){}

| Triggers for every grid
server failure event| **Event:** *actionFailure*

 <EJ.Grid
 actionFailure={actionFailure}>
 </EJ.Grid>
 function actionFailure (args){} | **Event:**
actionFailure

 <GridComponent actionFailure = {actionFailure}>

</GridComponent>
function actionFailure (args){}

| Triggers when the grid is bound
with data during rendering| **Event:** *dataBound*

 <EJ.Grid
 dataBound={dataBound}>
 </EJ.Grid>
 function dataBound (args){} | **Event:** *dataBound*

 <GridComponent dataBound = {dataBound}>
</GridComponent>
function
 dataBound (args){}

| Triggers when the grid is
going to destroy| **Event:** *destroy*

 <EJ.Grid
 destroy={destroy}>
 </EJ.Grid>
 function destroy (args){} | **Event:** *destroyed*

 <GridComponent destroyed = {destroyed}>
</GridComponent>
function destroyed
 (args){}

| Triggers when initial load of the grid| **Event:** *load*

 <EJ.Grid load={load}>
 </EJ.Grid>

 function load (args){} | **Event:** *load*

 <GridComponent load = {load}>

</GridComponent>
function load (args){}

| Triggers when the grid is rendered completely| **Event:** *create*

 <EJ.Grid
 create={create}>
 </EJ.Grid>
 function create (args){} | **Event:** *created*

 <GridComponent created = {created}>
</GridComponent>
function created (args){}

| Triggers when the record is clicked| **Event:** *recordClick*

 <EJ.Grid
 recordClick={recordClick}>
 </EJ.Grid>
 function recordClick (args){} | Not Applicable

| Triggers when right clicked on grid element| **Event:** *rightClick*

 <EJ.Grid
 rightClick={rightClick}>
 </EJ.Grid>
 function rightClick (args){} | Not Applicable

| Triggers when the
record is double clicked| **Event:** *recordDoubleClick*

 <EJ.Grid
 recordDoubleClick={recordDoubleClick}>
 </EJ.Grid>
 function recordDoubleClick
 (args){} | **Event:** *recordDoubleClick*

 <GridComponent recordDoubleClick
 = {recordDoubleClick}>
</GridComponent>
function recordDoubleClick (args){}

How To

Enable or disable grid and its actions in React Grid component

Enabling or disabling the Syncfusion React Grid and its associated actions is essential for controlling access and interaction with the grid based on specific scenarios. This can help to improve the user experience and application functionality.

You can enable or disable the grid by applying or removing corresponding CSS styles. In this example, ngClass directive is used to conditionally apply the CSS class `is-disabled` to the `<div>` containing the grid based on the value of `isDisabled`. You can define your custom CSS styles for the `is-disabled` class to visually enable or disable the grid and its actions as needed.

```
`css
.is-disabled {
  pointer-events: none;
  opacity: 0.5;
}
```

Here's an example demonstrating how to achieve this:

APP.JSX

```
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Edit, Inject, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  const editOptions = { allowAdding: true, allowEditing: true,
allowDeleting: true };
  const toolbarOptions = ['Add', 'Edit', 'Delete', 'Update', 'Cancel'];
  let grid;
  const btnClick = () => {
    if (grid && grid.element.classList.contains('disablegrid')) {
      grid.element.classList.remove('disablegrid');
    }

    document.getElementById("GridParent").classList.remove('wrapper');
  }
  else if (grid) {
    grid.element.classList.add('disablegrid');
    document.getElementById("GridParent").classList.add('wrapper');
  }
};
return (<div>
  <ButtonComponent cssClass='e-flat e-primary' iconCss='e-icons e-play-
icon' isToggle={true} onClick={btnClick}>Enable/Disable
Grid</ButtonComponent>
  <div id="GridParent">
    <GridComponent dataSource={data} editSettings={editOptions}
toolbar={toolbarOptions} height={265} ref={(scope) => { grid = scope; }}>
      <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID'
width='100' textAlign="Right" isPrimaryKey={true}/>
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='120'/>
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150'/>
      </ColumnsDirective>
    </GridComponent>
  </div>
</div>);
```

```

        <Inject services={[Edit, Toolbar]}/>
      </GridComponent>
    </div>
  </div>);
}
;
export default App;

```

APP.TSX

```

import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, EditSettingsModel, GridComponent
} from '@syncfusion/ej2-react-grids';
import { Edit, Grid, Inject, Toolbar, ToolbarItems } from '@syncfusion/ej2-
react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  const editOptions: EditSettingsModel = { allowAdding:true, allowEditing:
true, allowDeleting:true };
  const toolbarOptions: ToolbarItems[] = ['Add', 'Edit', 'Delete', 'Update',
'Cancel'];
  let grid: Grid | null;
  const btnClick = (): void => {
    if (grid && grid.element.classList.contains('disablegrid')) {
      grid.element.classList.remove('disablegrid');
      (document.getElementById("GridParent") as
HTMLElement).classList.remove('wrapper');
    }
    else if (grid) {
      grid.element.classList.add('disablegrid');
      (document.getElementById("GridParent") as
HTMLElement).classList.add('wrapper');
    }
  }
  return (
    <div>
      <ButtonComponent cssClass='e-flat e-primary' iconCss='e-icons e-play-
icon'
        isToggle={true} onClick={ btnClick }>Enable/Disable
Grid</ButtonComponent>
      <div id="GridParent">
        <GridComponent dataSource={data} editSettings={editOptions}
toolbar={toolbarOptions}
          height={265} ref={(scope) => { grid = scope; }}>
          <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID'
width='100' textAlign="Right" isPrimaryKey={true}/>
            <ColumnDirective field='CustomerID' headerText='Customer ID'
width='120'/>
            <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150'/>
          </ColumnsDirective>
          <Inject services={[Edit, Toolbar]} />
        </GridComponent>
      </div>
    </div>
  );
}

```

```

    </div>)
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {

```

```

    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {

```

```

    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    }
];

```



```

        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),

```

```

        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]];

```

To enable or disable specific grid actions, such as editing, sorting, or filtering, please refer to this [section](#) in the documentation.

Cascading drop down list with grid editing in React Grid component

You can achieve the Cascading DropDownList with grid Editing by using the Cell Edit Template feature.

In the below demo, Cascading DropDownList rendered for **ShipCountry** and **ShipState** column.

APP.JSX

```

import { DataManager, Query } from '@syncfusion/ej2-data';
import { DropDownList } from '@syncfusion/ej2-dropdowns';
import { ColumnDirective, ColumnsDirective, GridComponent } from '@syncfusion/ej2-react-grids';
import { Edit, Inject, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { cascadeData } from './datasource';

function App() {
    let countryElem;
    let countryObj;
    let stateElem;
    let stateObj;

    const editOptions = { allowEditing: true, allowAdding: true,
allowDeleting: true };
    const toolbarOptions = ['Add', 'Edit', 'Delete', 'Update', 'Cancel'];
    const countryParams = {

```

```

        create: () => {
            countryElem = document.createElement('input');
            return countryElem;
        },
        destroy: () => {
            countryObj.destroy();
        },
        read: () => {
            return countryObj.text;
        },
        write: () => {
            countryObj = new DropDownList({
                change: () => {
                    stateObj.enabled = true;
                    const tempQuery = new Query().where('countryId', 'equal',
countryObj.value);
                    stateObj.query = tempQuery;
                    stateObj.text = '';
                    stateObj.dataBind();
                },
                dataSource: new DataManager(country),
                fields: { value: 'countryId', text: 'countryName' },
                floatLabelType: 'Never',
                placeholder: 'Select a country'
            });
            countryObj.appendTo(countryElem);
        }
    };
    const stateParams = {
        create: () => {
            stateElem = document.createElement('input');
            return stateElem;
        },
        destroy: () => {
            stateObj.destroy();
        },
        read: () => {
            return stateObj.text;
        },
        write: () => {
            stateObj = new DropDownList({
                dataSource: new DataManager(stateColl),
                enabled: false,
                fields: { value: 'stateId', text: 'stateName' },
                floatLabelType: 'Never',
                placeholder: 'Select a state'
            });
            stateObj.appendTo(stateElem);
        }
    };
    const country = [
        { countryName: 'United States', countryId: '1' },
        { countryName: 'Australia', countryId: '2' }
    ];
    const stateColl = [
        { stateName: 'New York', countryId: '1', stateId: '101' },
        { stateName: 'Virginia', countryId: '1', stateId: '102' },
    ];

```

```

        { stateName: 'Washington', countryId: '1', stateId: '103' },
        { stateName: 'Queensland', countryId: '2', stateId: '104' },
        { stateName: 'Tasmania ', countryId: '2', stateId: '105' },
        { stateName: 'Victoria', countryId: '2', stateId: '106' }
    ];
    return <GridComponent dataSource={cascadeData} editSettings={editOptions}
toolbar={toolbarOptions} height={273}>
    <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" isPrimaryKey={true}/>
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='120' />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' editType='dropdownedit' edit={countryParams} textAlign="Right"/>
        <ColumnDirective field='ShipState' headerText='Ship State'
editType='dropdownedit' edit={stateParams} width='150' />
    </ColumnsDirective>
    <Inject services={[Edit, Toolbar]} />
</GridComponent>;
}
;
export default App;

```

APP.TSX

```

import { DataManager, Query } from '@syncfusion/ej2-data';
import { DropDownList } from '@syncfusion/ej2-dropdowns';
import { ColumnDirective, ColumnsDirective, EditSettingsModel, GridComponent
} from '@syncfusion/ej2-react-grids';
import { Edit, IEditCell, Inject, Toolbar, ToolbarItems } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { cascadeData } from '../datasource';
function App() {
    let countryElem: HTMLElement;
    let countryObj: DropDownList;
    let stateElem: HTMLElement;
    let stateObj: DropDownList;
    const editOptions: EditSettingsModel = { allowEditing: true, allowAdding:
true, allowDeleting: true };
    const toolbarOptions: ToolbarItems[] = ['Add', 'Edit', 'Delete', 'Update',
'Cancel'];
    const countryParams: IEditCell = {
        create: () => {
            countryElem = document.createElement('input');
            return countryElem;
        },
        destroy: () => {
            countryObj.destroy();
        },
        read: () => {
            return countryObj.text;
        },
        write: () => {
            countryObj = new DropDownList({
                change: () => {

```

```

        stateObj.enabled = true;
        const tempQuery: Query = new Query().where('countryId', 'equal',
countryObj.value);
        stateObj.query = tempQuery;
        stateObj.text = '';
        stateObj.dataBind();
    },
    dataSource: new DataManager(country),
    fields: { value: 'countryId', text: 'countryName' },
    floatLabelType: 'Never',
    placeholder: 'Select a country'
    });
    countryObj.appendTo(countryElem);
}
};
const stateParams: object = {
    create: () => {
        stateElem = document.createElement('input');
        return stateElem;
    },
    destroy: () => {
        stateObj.destroy();
    },
    read: () => {
        return stateObj.text;
    },
    write: () => {
        stateObj = new DropDownList({
            dataSource: new DataManager(stateColl),
            enabled: false,
            fields: { value: 'stateId', text: 'stateName' },
            floatLabelType: 'Never',
            placeholder: 'Select a state'
        });
        stateObj.appendTo(stateElem);
    }
};
const country: object[] = [
    { countryName: 'United States', countryId: '1' },
    { countryName: 'Australia', countryId: '2' }
];
const stateColl: object[] = [
    { stateName: 'New York', countryId: '1', stateId: '101' },
    { stateName: 'Virginia ', countryId: '1', stateId: '102' },
    { stateName: 'Washington', countryId: '1', stateId: '103' },
    { stateName: 'Queensland', countryId: '2', stateId: '104' },
    { stateName: 'Tasmania ', countryId: '2', stateId: '105' },
    { stateName: 'Victoria', countryId: '2', stateId: '106' }
];
return <GridComponent dataSource={cascadeData} editSettings={editOptions}
    toolbar={toolbarOptions} height={273}>
    <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" isPrimaryKey={true} />
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='120' />

```

```

    <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' editType='dropdownedit' edit={countryParams} textAlign="Right" />
    <ColumnDirective field='ShipState' headerText='Ship State'
editType='dropdownedit' edit={stateParams} width='150' />
  </ColumnsDirective>
  <Inject services={[Edit, Toolbar]} />
</GridComponent>
};
export default App;

```

DATASOURCE.JSX

```

export let cascadeData = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'Australia',
    ShipState: 'Queensland', Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Australia',
    ShipState: 'Tasmania', Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'United
States', ShipState: 'New York', Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'Australia',
    ShipState: 'Queensland', Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 2, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'United
States', ShipState: 'New York', Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 7, OrderDate: new
Date(836937e6),

```

```

        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'United
        States', ShipState: 'New York', Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'United
        States', ShipState: 'Virginia', Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Australia',
        ShipState: 'Tasmania', Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'United
        States', ShipState: 'Virginia', Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry: 'United
        States', ShipState: 'Virginia', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'United
        States', ShipState: 'Washington', Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'United
        States', ShipState: 'Washington', Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),

```

```

        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Australia',
ShipState: 'Victoria', Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'United
States', ShipState: 'Washington', Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'Australia',
ShipState: 'Victoria', Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```

export let cascadeData: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'Australia',
ShipState: 'Queensland', Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Australia',
ShipState: 'Tasmania', Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'United
States', ShipState: 'New York', Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',

```



```

        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'Australia',
        ShipState: 'Queensland', Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 2, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'United
        States', ShipState: 'New York', Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 7, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'United
        States', ShipState: 'New York', Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'United
        States', ShipState: 'Virginia', Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Australia',
        ShipState: 'Tasmania', Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'United
        States', ShipState: 'Virginia', Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry: 'United
        States', ShipState: 'Virginia', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'United
States', ShipState: 'Washington', Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'United
States', ShipState: 'Washington', Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Australia',
ShipState: 'Victoria', Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'United
States', ShipState: 'Washington', Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'Australia',
ShipState: 'Victoria', Freight: 48.29, Verified: !0
    }
    ]
};

```

Import excel data in to grid

The Syncfusion Grid component allows you to import data from Excel files into your web application for display and manipulation within the grid. This functionality is particularly useful for scenarios where data needs to be easily loaded into the grid from Excel files. This can be achieved by using Uploader component [change](#) event.

To import excel data in to grid, you can follow these steps:

1. Import excel file using uploader control.
2. Parse the excel file data to JSON using the **XLSX** library.
3. Bind the JSON to the grid control.

The following example demonstrates how to import Excel data into the grid by utilizing the **Uploader** component's [change](#) event along with the **XLSX** library:

APP.JSX

```
import { L10n } from '@syncfusion/ej2-base';
```

```

import { GridComponent } from '@syncfusion/ej2-react-grids';
import { UploaderComponent } from '@syncfusion/ej2-react-inputs';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  const path = {
    saveUrl: 'https://aspnetmvc.syncfusion.com/services/api/uploadbox/Save',
    removeUrl:
'https://aspnetmvc.syncfusion.com/services/api/uploadbox/Remove'
  };
  const dropElement = document.getElementsByClassName('control-fluid')[0];
  const parseExcel = (file) => {
    var reader = new FileReader();
    reader.onload = (e) => {
      var data = (e.target).result;
      var workbook = XLSX.read(data, { type: 'array' });
      workbook.SheetNames.forEach((sheetName) => {
        var XL_row_object =
XLSX.utils.sheet_to_json(workbook.Sheets[sheetName]);
        grid.dataSource = XL_row_object;
      });
    };
    reader.readAsArrayBuffer(file.rawFile);
  };
  const onSuccess = (args) => {
    var files = args.file;
    if (files)
      parseExcel(files[0]);
  }
  const onRemove = () => {
    grid.dataSource = [];
  }
  return (<div>
    <UploaderComponent asyncSettings={path} removing={onRemove}
dropArea={dropElement} change={onSuccess}></UploaderComponent>
    <GridComponent ref={g => grid = g}></GridComponent>
  </div>
  );
};
export default App;

```

APP.TSX

```

import { L10n } from '@syncfusion/ej2-base';
import { GridComponent } from '@syncfusion/ej2-react-grids';
import { UploaderComponent } from '@syncfusion/ej2-react-inputs';
import * as React from 'react';
import { data } from './datasource';
// import * as XLSX from 'xlsx';
function App() {
  let grid: GridComponent | null;
  const path: Object = {
    saveUrl: 'https://aspnetmvc.syncfusion.com/services/api/uploadbox/Save',
    removeUrl:
'https://aspnetmvc.syncfusion.com/services/api/uploadbox/Remove'
  };

```

```

    };
    const dropElement: HTMLElement = document.getElementsByClassName('control-
fluid')[0] as HTMLElement;
    const parseExcel = (file: any) => {
        var reader = new FileReader();
        reader.onload = (e) => {
            var data = ((e as any).target).result;
            var workbook = XLSX.read(data, { type: 'array' });
            workbook.SheetNames.forEach((sheetName: any) => {
                var XL_row_object =
XLSX.utils.sheet_to_json(workbook.Sheets[sheetName]);
                (grid as GridComponent).dataSource = XL_row_object;
            });
        };
        reader.readAsArrayBuffer(file.rawFile);
    };
    const onSuccess = (args: any) => {
        var files = args.file;
        if (files)
            parseExcel(files[0]);
    }
    const onRemove = (args: any) => {
        (grid as GridComponent).dataSource = [];
    }
    return (<div>
        <UploaderComponent asyncSettings={path} removing={onRemove}
dropArea={dropElement} change={onSuccess}></UploaderComponent>
        <GridComponent ref={g => grid = g}></GridComponent>
    </div>
    );
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),

```

```

        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),

```

```

      ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
      ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
      OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
      ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
      ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
      OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
      ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
      ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
  ]
};

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',

```



```

        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }]];

```

Exporting grid in cordova application in React Grid component

Exporting the Syncfusion React Grid in a Cordova application can be beneficial in various scenarios where users need to generate and download reports, share data in Excel or PDF formats, or archive information for offline use. A Cordova application does not support direct file download. To export the Syncfusion React Grid component in a Cordova application, you need to utilize Blob streams. This can be achieved by using the appropriate exporting methods and export complete events to obtain the Blob stream.

The following example illustrates how to export a Syncfusion React Grid in a Cordova application. It utilizes the [excelExportComplete](#) and [pdfExportComplete](#) events to manage the export process for Excel and PDF formats and obtain the Blob stream. The `exportBlob` function is responsible for creating a downloadable link for the exported file.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, PdfExport } from
 '@syncfusion/ej2-react-grids';
import { Inject, ExcelExport, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
    let grid;
    const toolbar = ['ExcelExport', 'PdfExport'];
    const toolbarClick = (args) => {
        if (args.item.id === 'Grid_excelexport') {
            // pass fourth parameter as true to get the blob data of exported grid
            grid.excelExport(undefined, undefined, undefined, true);
        }
        if (args.item.id === 'Grid_pdfexport') {
            // pass fourth parameter as true to get the blob data of exported grid
            grid.pdfExport(undefined, undefined, undefined, true);
        }
    }
    const excelExportComplete = (args) => {
        // This event will be triggered when excel exporting.
        args.promise.then((e) => {
            // In this `then` function, you can get blob data through the arguments
            // after promise resolved.
            exportBlob(e.blobData);
        });
    }
    const pdfExportComplete = (args) => {
        // This event will be triggered when pdf exporting.
        args.promise.then((e) => {
            // In this `then` function, you can get blob data through the arguments
            // after promise resolved.
            exportBlob(e.blobData);
        });
    }
    const exportBlob = (blob) => {
        const a = document.createElement('a');

```

```

    document.body.appendChild(a);
    a.style.display = 'none';
    const url = window.URL.createObjectURL(blob); // Fix typo here
    a.href = url;
    a.download = 'Export';
    a.click();
    window.URL.revokeObjectURL(url); // Fix typo here
    document.body.removeChild(a);
  }
  return (
    <div>
      <GridComponent id='Grid' dataSource={data} toolbar={toolbar}
allowExcelExport={true} allowPdfExport={true}
        toolbarClick={toolbarClick} excelExportComplete={excelExportComplete}
pdfExportComplete={pdfExportComplete} ref={g => grid = g}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign='Right' />
          <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
          <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
        </ColumnsDirective>
        <Inject services={[Toolbar, ExcelExport, PdfExport]} />
      </GridComponent>
    </div>
  );
}
export default App;

```

APP.TSX

```

import { ClickEventArgs } from '@syncfusion/ej2-navigations';
import { ColumnDirective, ColumnsDirective, GridComponent, PdfExport,
ToolbarItems } from '@syncfusion/ej2-react-grids';
import { Inject, ExcelExport, ExcelExportCompleteArgs, Toolbar,
PdfExportCompleteArgs } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  let grid: GridComponent | null;
  const toolbar: ToolbarItems[] = ['ExcelExport', 'PdfExport'];
  const toolbarClick = (args: ClickEventArgs) => {
    if (args.item.id === 'Grid_excelexport') {
      // pass fourth parameter as true to get the blob data of exported grid
      (grid as GridComponent).excelExport(undefined, undefined, undefined,
true);
    }
    if (args.item.id === 'Grid_pdfexport') {
      // pass fourth parameter as true to get the blob data of exported grid
      (grid as GridComponent).pdfExport(undefined, undefined, undefined,
true);
    }
  }
  const excelExportComplete = (args: ExcelExportCompleteArgs) => {
    // This event will be triggered when excel exporting.
  }
}

```

```

    args.promise.then((e: { blobData: Blob }) => {
        // In this `then` function, you can get blob data through the arguments
        // after promise resolved.
        exportBlob(e.blobData);
    });
}
const pdfExportComplete = (args: PdfExportCompleteArgs) => {
    // This event will be triggered when pdf exporting.
    args.promise.then((e: { blobData: Blob }) => {
        // In this `then` function, you can get blob data through the arguments
        // after promise resolved.
        exportBlob(e.blobData);
    });
}
const exportBlob = (blob: Blob) => {
    const a: HTMLAnchorElement = document.createElement('a');
    document.body.appendChild(a);
    a.style.display = 'none';
    const url: string = window.URL.createObjectURL(blob); // Fix typo here
    a.href = url;
    a.download = 'Export';
    a.click();
    window.URL.revokeObjectURL(url); // Fix typo here
    document.body.removeChild(a);
}
return (
    <div>
        <GridComponent id='Grid' dataSource={data} toolbar={toolbar}
allowExcelExport={true} allowPdfExport={true}
        toolbarClick={toolbarClick} excelExportComplete={excelExportComplete}
pdfExportComplete={pdfExportComplete} ref={g => grid = g}>
            <ColumnsDirective>
                <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign='Right' />
                <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
                <ColumnDirective field='ShipCity' headerText='Ship City'
width='150' />
            </ColumnsDirective>
            <Inject services={[Toolbar, ExcelExport, PdfExport]} />
        </GridComponent>
    </div>
);
}
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    }
]

```

```

    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    },

```

```

    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```
export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
    Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
    Date(8370234e5),
```

```

        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),

```

```

        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
];

```

Customize pager drop down in React Grid component

To customize default values of pager dropdown, you need to define [pageSizes](#) as array of strings.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject } from
 '@syncfusion/ej2-react-grids';
import { Page } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    const pageOptions = { pageSizes: ["5", "10", "All"] };
    return <GridComponent dataSource={data} allowPaging={true}
    pageSettings={pageOptions} height={273}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID' width='100'
            textAlign="Right" isPrimaryKey={true}/>
            <ColumnDirective field='CustomerID' headerText='Customer ID'
            width='120'/>
            <ColumnDirective field='Freight' headerText='Freight' width='120'
            format="C2" textAlign="Right"/>
            <ColumnDirective field='ShipCountry' headerText='Ship Country'
            width='150'/>
        </ColumnsDirective>
        <Inject services={[Page]}/>
    </GridComponent>;
}
;
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject } from
 '@syncfusion/ej2-react-grids';
import { Page, PageSettingsModel } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    const pageOptions: PageSettingsModel = { pageSizes: ["5", "10", "All"] };
    return <GridComponent dataSource={data} allowPaging={true}
    pageSettings={pageOptions} height={273}>
        <ColumnsDirective>

```



```

    <ColumnDirective field='OrderID' headerText='Order ID' width='100'
    textAlign="Right" isPrimaryKey={true} />
    <ColumnDirective field='CustomerID' headerText='Customer ID'
    width='120' />
    <ColumnDirective field='Freight' headerText='Freight' width='120'
    format="C2" textAlign="Right" />
    <ColumnDirective field='ShipCountry' headerText='Ship Country'
    width='150' />
  </ColumnsDirective>
  <Inject services={[Page]} />
</GridComponent>
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  }
]

```

```

    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    },

```

```

    {
      OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
      ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
      OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
      ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
      ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
      OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
      ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
      ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
  ]
};

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),

```

```

        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),

```

```

        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]];

```

Hide the expand collapse icon in parent row in React Grid component

By default, the expand/collapse icon will be visible even if the child grid is empty.

You can use [rowDataBound](#) event to hide the icon when there is no record in child grid.

To hide the expand/collapse icon in parent row with no record in child grid, follow the given steps:

Step 1:

Create CSS class with custom style to override the default style of Grid.

```

`css
.e-row[aria-selected="true"] .e-customizedExpandcell {
background-color: #e0e0e0;
}
.e-grid.e-gridhover tr[role='row']:hover {

```

```
background-color: #eee;
}
`
```

Step 2:

Add the CSS class to the Grid in the [rowDataBound](#) event handler of Grid.

```
`ts
const rowDataBound = (args:any): void => {
  if (grid) {
    const filter:string = args.data.EmployeeID;
    const childrecord: object[] = new DataManager(grid.childGrid.dataSource as object[])
      .executeLocal(new Query().where("EmployeeID", "equal", parseInt(filter, 0), true));
    if(childrecord.length === 0) {
      // here hide which parent row has no child records
      args.row.querySelector('td').innerHTML=" ";
      args.row.querySelector('td').className = "e-customizedExpandcell";
    }
  }
}
`
```

In the below demo, the expand/collapse icon in the row with *EmployeeID* as 1 is hidden as it does not have record in child Grid.

APP.JSX

```
import { DataManager, Query } from '@syncfusion/ej2-data';
import { ColumnDirective, ColumnsDirective, GridComponent, Inject } from
 '@syncfusion/ej2-react-grids';
import { DetailRow } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { employeeData, childData } from './datasource';
function App() {
  let childGrid = {
    columns: [
      { field: 'Order', headerText: 'Order ID', textAlign: 'Right', width:
120 },
      { field: 'EmployeeID', headerText: 'EmployeeID', width: 150 },
      { field: 'ShipName', headerText: 'Ship Name', width: 150 }
    ],
    dataSource: childData,
    queryString: 'EmployeeID',
    allowPaging: true
  };
  const rowDataBound = (args) => {
```

```

    const filter = args.data.EmployeeID;
    const childrecord = new DataManager(childData)
        .executeLocal(new Query().where("EmployeeID", "equal", filter,
true));
    if (childrecord.length === 0) {
        // here hide which parent row has no child records
        const rowElement = args.row;
        const cellElement = rowElement.querySelector('td');
        cellElement.innerHTML = ' ';
        cellElement.className = 'e-customizedexpandcell';
    }
}
return <GridComponent dataSource={employeeData} childGrid={childGrid}
    rowDataBound={rowDataBound}>
    <ColumnsDirective>
        <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='100' textAlign="Right" />
        <ColumnDirective field='FirstName' headerText='First Name' width='100'
/>
        <ColumnDirective field='City' headerText='City' width='100' />
        <ColumnDirective field='Country' headerText='Country' width='100' />
    </ColumnsDirective>
    <Inject services={[DetailRow]} />
    </GridComponent>
};
export default App;

```

APP.TSX

```

import { DataManager, Query } from '@syncfusion/ej2-data';
import { ColumnDirective, ColumnsDirective, GridComponent, Inject,
RowDataBoundEventArgs } from '@syncfusion/ej2-react-grids';
import { DetailRow, GridModel } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { employeeData, childData } from './datasource';
function App() {
    let childGrid: GridModel = {
        columns: [
            { field: 'Order', headerText: 'Order ID', textAlign: 'Right', width:
120 },
            { field: 'EmployeeID', headerText: 'EmployeeID', width: 150 },
            { field: 'ShipName', headerText: 'Ship Name', width: 150 }
        ],
        dataSource: childData,
        queryString: 'EmployeeID',
        allowPaging: true
    };
    const rowDataBound = (args: RowDataBoundEventArgs): void => {
        const filter: string = args.data.EmployeeID;
        const childrecord: object[] = new DataManager(childData as JSON[])
            .executeLocal(new Query().where("EmployeeID", "equal", filter,
true));
        if (childrecord.length === 0) {
            // here hide which parent row has no child records
            const rowElement = args.row as HTMLTableRowElement;

```

```

        const cellElement= rowElement.querySelector('td') as
HTMLTableCellElement
        cellElement.innerHTML = ' ';
        cellElement.className = 'e-customizedexpandcell';
    }
}
return <GridComponent dataSource={employeeData} childGrid={childGrid}
rowDataBound={rowDataBound}>
    <ColumnsDirective>
        <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='100' textAlign="Right" />
        <ColumnDirective field='FirstName' headerText='First Name' width='100'
/>
        <ColumnDirective field='City' headerText='City' width='100' />
        <ColumnDirective field='Country' headerText='Country' width='100' />
    </ColumnsDirective>
    <Inject services={[DetailRow]} />
</GridComponent>
};
export default App;

```

DATASOURCE.JSX

```

export let childData=[
    {Order: 100, ShipName: 'Berlin', EmployeeID: 2},
    {Order: 101, ShipName: 'Capte', EmployeeID: 3},
    {Order: 102, ShipName: 'Marlon', EmployeeID: 4},
    {Order: 103, ShipName: 'Black pearl', EmployeeID: 5},
    {Order: 104, ShipName: 'Pearl', EmployeeID: 6},
    {Order: 105, ShipName: 'Noth bay', EmployeeID: 7},
    {Order: 106, ShipName: 'baratna', EmployeeID: 8},
    {Order: 107, ShipName: 'Charge', EmployeeID: 9}];
export let employeeData = [{
    'EmployeeID': 1,
    'LastName': 'Davolio',
    'FirstName': 'Nancy',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-664743600000),
    'HireDate': new Date(704692800000),
    'Address': '507 - 20th Ave. E.\r\nApt. 2A',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98122',
    'Country': 'USA',
    'HomePhone': '(206) 555-9857',
    'Extension': '5467',
    'Photo': { 'Length': 21626 },

    'Notes': 'Education includes a BA in psychology from Colorado State
University in 1970. She also completed\
    \'The Art of the Cold Call.\' Nancy is a member of Toastmasters
International.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},

```



```

{
    'EmployeeID': 2,
    'LastName': 'Fuller',
    'FirstName': 'Andrew',
    'Title': 'Vice President, Sales',
    'TitleOfCourtesy': 'Dr.',
    'BirthDate': new Date(-563828400000),
    'HireDate': new Date(713764800000),
    'Address': '908 W. Capital Way',
    'City': 'Tacoma',
    'Region': 'WA',
    'PostalCode': '98401',
    'Country': 'USA',
    'HomePhone': '(206) 555-9482',
    'Extension': '3457',
    'Photo': { 'Length': 21626 },

    'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
    Dallas in 1981. He is fluent in French and Italian and reads German.
He joined the company as a sales representative, \
    was promoted to sales manager in January 1992 and to vice president
of sales in March 1993. Andrew is a member of the \
    Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.',
    'ReportsTo': 0,
    'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
},
{
    'EmployeeID': 3,
    'LastName': 'Leverling',
    'FirstName': 'Janet',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-200088000000),
    'HireDate': new Date(702104400000),
    'Address': '722 Moss Bay Blvd.',
    'City': 'Kirkland',
    'Region': 'WA',
    'PostalCode': '98033',
    'Country': 'USA',
    'HomePhone': '(206) 555-3412',
    'Extension': '3355',
    'Photo': { 'Length': 21722 },

    'Notes': 'Janet has a BS degree in chemistry from Boston College
(1984). \
    She has also completed a certificate program in food retailing
management.\
    Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
},
{
    'EmployeeID': 4,
    'LastName': 'Peacock',

```

```

        'FirstName': 'Margaret',
        'Title': 'Sales Representative',
        'TitleOfCourtesy': 'Mrs.',
        'BirthDate': new Date(-1018814400000),
        'HireDate': new Date(736401600000),
        'Address': '4110 Old Redmond Rd.',
        'City': 'Redmond',
        'Region': 'WA',
        'PostalCode': '98052',
        'Country': 'USA',
        'HomePhone': '(206) 555-8122',
        'Extension': '5176',
        'Photo': { 'Length': 21626 },

        'Notes': 'Margaret holds a BA in English literature from Concordia
College (1958) and an MA from the American \
Institute of Culinary Arts (1966). She was assigned to the London
office temporarily from July through November 1992.',
        'ReportsTo': 2,
        'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
    },
    {
        'EmployeeID': 5,
        'LastName': 'Buchanan',
        'FirstName': 'Steven',
        'Title': 'Sales Manager',
        'TitleOfCourtesy': 'Mr.',
        'BirthDate': new Date(-468010800000),
        'HireDate': new Date(750830400000),
        'Address': '14 Garrett Hill',
        'City': 'London',
        'Region': null,
        'PostalCode':
        'SW1 8JR',
        'Country': 'UK',
        'HomePhone': '(71) 555-4848',
        'Extension': '3453',
        'Photo': { 'Length': 21626 },

        'Notes': 'Steven Buchanan graduated from St. Andrews University,
Scotland, with a BSC degree in 1976. Upon joining the company as \
a sales representative in 1992, he spent 6 months in an orientation
program at the Seattle office and then returned to his permanent \
post in London. He was promoted to sales manager in March 1993. Mr.
Buchanan has completed the courses \'Successful \
Telemarketing\' and \'International Sales Management.\' He is fluent
in French.',
        'ReportsTo': 2,
        'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
    },
    {
        'EmployeeID': 6,
        'LastName': 'Suyama',
        'FirstName': 'Michael',
        'Title': 'Sales Representative',
        'TitleOfCourtesy': 'Mr.',
        'BirthDate': new Date(-205185600000),

```

```

        'HireDate': new Date(750830400000),
        'Address': 'Coventry House\r\nMiner Rd.',
        'City': 'London',
        'Region': null,
        'PostalCode': 'EC2 7JR',
        'Country': 'UK',
        'HomePhone': '(71) 555-7773',
        'Extension': '428',
        'Photo': { 'Length': 21626 },

        'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-
Cultural Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese,
and Spanish.',
        'ReportsTo': 5,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
        'EmployeeID': 7,
        'LastName': 'King',
        'FirstName': 'Robert',
        'Title': 'Sales Representative',
        'TitleOfCourtesy': 'Mr.',
        'BirthDate': new Date(-302731200000),
        'HireDate': new Date(757486800000),
        'Address': 'Edgeham Hollow\r\nWinchester Way',
        'City': 'London',
        'Region': null,
        'PostalCode': 'RG1 9SP',
        'Country': 'UK',
        'HomePhone': '(71) 555-5598',
        'Extension': '465',
        'Photo': { 'Length': 21626 },

        'Notes': 'Robert King served in the Peace Corps and traveled
extensively before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company.
After completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
        'ReportsTo': 5,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
        'EmployeeID': 8,
        'LastName': 'Callahan',
        'FirstName': 'Laura',
        'Title': 'Inside Sales Coordinator',
        'TitleOfCourtesy': 'Ms.',
        'BirthDate': new Date(-377982000000),
        'HireDate': new Date(762843600000),
        'Address': '4726 - 11th Ave. N.E.',
        'City': 'Seattle',
        'Region': 'WA',
        'PostalCode': '98105',
        'Country': 'USA',

```

```

        'HomePhone': '(206) 555-1189',
        'Extension': '2344',
        'Photo': { 'Length': 21626 },

        'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
        'ReportsTo': 2,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
        'EmployeeID': 9,
        'LastName': 'Dodsworth',
        'FirstName': 'Anne',
        'Title': 'Sales Representative',
        'TitleOfCourtesy': 'Ms.',
        'BirthDate': new Date(-123966000000),
        'HireDate': new Date(784875600000),
        'Address': '7 Houndstooth Rd.',
        'City': 'London',
        'Region': null,
        'PostalCode': 'WG2 7LT',
        'Country': 'UK',
        'HomePhone': '(71) 555-4444',
        'Extension': '452',
        'Photo': { 'Length': 21626 },

        'Notes': 'Anne has a BA degree in English from St. Lawrence College.
She is fluent in French and German.',
        'ReportsTo': 5,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    }
    ];

```

DATASOURCE.TSX

```

export let childData: object[]=[
    {Order: 100, ShipName: 'Berlin', EmployeeID: 2},
    {Order: 101, ShipName: 'Capte', EmployeeID: 3},
    {Order: 102, ShipName: 'Marlon', EmployeeID: 4},
    {Order: 103, ShipName: 'Black pearl', EmployeeID: 5},
    {Order: 104, ShipName: 'Pearl', EmployeeID: 6},
    {Order: 105, ShipName: 'Noth bay', EmployeeID: 7},
    {Order: 106, ShipName: 'baratna', EmployeeID: 8},
    {Order: 107, ShipName: 'Charge', EmployeeID: 9}];
export let employeeData: Object[] = [{
    'EmployeeID': 1,
    'LastName': 'Davolio',
    'FirstName': 'Nancy',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-664743600000),
    'HireDate': new Date(704692800000),
    'Address': '507 - 20th Ave. E.\r\nApt. 2A',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98122',

```

```

        'Country': 'USA',
        'HomePhone': '(206) 555-9857',
        'Extension': '5467',
        'Photo': { 'Length': 21626 },

        'Notes': 'Education includes a BA in psychology from Colorado State
University in 1970. She also completed\
\'The Art of the Cold Call.\' Nancy is a member of Toastmasters
International.',
        'ReportsTo': 2,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
        'EmployeeID': 2,
        'LastName': 'Fuller',
        'FirstName': 'Andrew',
        'Title': 'Vice President, Sales',
        'TitleOfCourtesy': 'Dr.',
        'BirthDate': new Date(-563828400000),
        'HireDate': new Date(713764800000),
        'Address': '908 W. Capital Way',
        'City': 'Tacoma',
        'Region': 'WA',
        'PostalCode': '98401',
        'Country': 'USA',
        'HomePhone': '(206) 555-9482',
        'Extension': '3457',
        'Photo': { 'Length': 21626 },

        'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
Dallas in 1981. He is fluent in French and Italian and reads German.
He joined the company as a sales representative, \
was promoted to sales manager in January 1992 and to vice president
of sales in March 1993. Andrew is a member of the \
Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.',
        'ReportsTo': 0,
        'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
    },
    {
        'EmployeeID': 3,
        'LastName': 'Leverling',
        'FirstName': 'Janet',
        'Title': 'Sales Representative',
        'TitleOfCourtesy': 'Ms.',
        'BirthDate': new Date(-200088000000),
        'HireDate': new Date(702104400000),
        'Address': '722 Moss Bay Blvd.',
        'City': 'Kirkland',
        'Region': 'WA',
        'PostalCode': '98033',
        'Country': 'USA',
        'HomePhone': '(206) 555-3412',
        'Extension': '3355',
        'Photo': { 'Length': 21722 },

```

```

'Notes': 'Janet has a BS degree in chemistry from Boston College
(1984). \
  She has also completed a certificate program in food retailing
management.\
  Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
'ReportsTo': 2,
'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
},
{
  'EmployeeID': 4,
  'LastName': 'Peacock',
  'FirstName': 'Margaret',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Mrs.',
  'BirthDate': new Date(-1018814400000),
  'HireDate': new Date(736401600000),
  'Address': '4110 Old Redmond Rd.',
  'City': 'Redmond',
  'Region': 'WA',
  'PostalCode': '98052',
  'Country': 'USA',
  'HomePhone': '(206) 555-8122',
  'Extension': '5176',
  'Photo': { 'Length': 21626 },

  'Notes': 'Margaret holds a BA in English literature from Concordia
College (1958) and an MA from the American \
Institute of Culinary Arts (1966). She was assigned to the London
office temporarily from July through November 1992.',
'ReportsTo': 2,
'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
},
{
  'EmployeeID': 5,
  'LastName': 'Buchanan',
  'FirstName': 'Steven',
  'Title': 'Sales Manager',
  'TitleOfCourtesy': 'Mr.',
  'BirthDate': new Date(-468010800000),
  'HireDate': new Date(750830400000),
  'Address': '14 Garrett Hill',
  'City': 'London',
  'Region': null,
  'PostalCode':
  'SW1 8JR',
  'Country': 'UK',
  'HomePhone': '(71) 555-4848',
  'Extension': '3453',
  'Photo': { 'Length': 21626 },

  'Notes': 'Steven Buchanan graduated from St. Andrews University,
Scotland, with a BSC degree in 1976. Upon joining the company as \
a sales representative in 1992, he spent 6 months in an orientation
program at the Seattle office and then returned to his permanent \
post in London. He was promoted to sales manager in March 1993. Mr.
Buchanan has completed the courses \'Successful \

```

```

    Telemarketing\' and \'International Sales Management.\' He is fluent
in French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
},
{
    'EmployeeID': 6,
    'LastName': 'Suyama',
    'FirstName': 'Michael',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-205185600000),
    'HireDate': new Date(750830400000),
    'Address': 'Coventry House\r\nMiner Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'EC2 7JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-7773',
    'Extension': '428',
    'Photo': { 'Length': 21626 },

    'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-
Cultural Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese,
and Spanish.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
    'EmployeeID': 7,
    'LastName': 'King',
    'FirstName': 'Robert',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-302731200000),
    'HireDate': new Date(757486800000),
    'Address': 'Edgeham Hollow\r\nWinchester Way',
    'City': 'London',
    'Region': null,
    'PostalCode': 'RG1 9SP',
    'Country': 'UK',
    'HomePhone': '(71) 555-5598',
    'Extension': '465',
    'Photo': { 'Length': 21626 },

    'Notes': 'Robert King served in the Peace Corps and traveled
extensively before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company.
After completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{

```

```

        'EmployeeID': 8,
        'LastName': 'Callahan',
        'FirstName': 'Laura',
        'Title': 'Inside Sales Coordinator',
        'TitleOfCourtesy': 'Ms.',
        'BirthDate': new Date(-377982000000),
        'HireDate': new Date(762843600000),
        'Address': '4726 - 11th Ave. N.E.',
        'City': 'Seattle',
        'Region': 'WA',
        'PostalCode': '98105',
        'Country': 'USA',
        'HomePhone': '(206) 555-1189',
        'Extension': '2344',
        'Photo': { 'Length': 21626 },

        'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
        'ReportsTo': 2,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
        'EmployeeID': 9,
        'LastName': 'Dodsworth',
        'FirstName': 'Anne',
        'Title': 'Sales Representative',
        'TitleOfCourtesy': 'Ms.',
        'BirthDate': new Date(-123966000000),
        'HireDate': new Date(784875600000),
        'Address': '7 Houndstooth Rd.',
        'City': 'London',
        'Region': null,
        'PostalCode': 'WG2 7LT',
        'Country': 'UK',
        'HomePhone': '(71) 555-4444',
        'Extension': '452',
        'Photo': { 'Length': 21626 },

        'Notes': 'Anne has a BA degree in English from St. Lawrence College.
She is fluent in French and German.',
        'ReportsTo': 5,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    }
    ]
};

```

Complex column as foreign key column in React Grid component

The following example shows how to set the complex column as foreign key column.

In the following example, *Employee.EmployeeID* is a complex column and also declared as a foreign column which shows *FirstName* column from foreign data.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, ForeignKey, GridComponent, Inject
} from '@syncfusion/ej2-react-grids';
import * as React from 'react';

```



```
import { data, employeeData } from './datasource';
function App() {
  return <GridComponent dataSource={data} height={315}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right"/>
      <ColumnDirective field='Employee.EmployeeID'
foreignKeyValue='FirstName' foreignKeyField='EmployeeID'
dataSource={employeeData} headerText='Employee Name' width='150' />
      <ColumnDirective field='Freight' headerText='Freight' width='80'
textAlign="Right" format='C2' />
      <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='100' />
    </ColumnsDirective>
    <Inject services={[ForeignKey]} />
  </GridComponent>;
}
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, ForeignKey, GridComponent, Inject
} from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data, employeeData } from './datasource';
function App() {
  return <GridComponent dataSource={data} height={315}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
      <ColumnDirective field='Employee.EmployeeID'
foreignKeyValue='FirstName' foreignKeyField='EmployeeID'
dataSource={employeeData} headerText='Employee Name' width='150' />
      <ColumnDirective field='Freight' headerText='Freight' width='80'
textAlign="Right" format='C2' />
      <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='100' />
    </ColumnsDirective>
    <Inject services={[ForeignKey]} />
  </GridComponent>
}
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0,
    Employee: {
      EmployeeID: 1
    },
  },
];
```

```

    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1,
        Employee: {
            EmployeeID: 2
        },
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0,
        Employee: {
            EmployeeID: 3
        },
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0,
        Employee: {
            EmployeeID: 4
        },
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0,
        Employee: {
            EmployeeID: 5
        }
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
        , Employee: {
            EmployeeID: 6
        }
    },
    {

```

```

    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    , Employee: {
        EmployeeID: 7
    }
},
{
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    , Employee: {
        EmployeeID: 8
    }
},
{
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    , Employee: {
        EmployeeID: 9
    }
},
{
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    , Employee: {
        EmployeeID: 9
    }
},
{
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    , Employee: {
        EmployeeID: 6
    }
},
{
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),

```

```

        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
        , Employee: {
            EmployeeID: 2
        }
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
        , Employee: {
            EmployeeID: 3
        }
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
        , Employee: {
            EmployeeID: 4
        }
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
        , Employee: {
            EmployeeID: 3
        }
    }
    ]];
export let employeeData = [{
    'EmployeeID': 1,
    'LastName': 'Davolio',
    'FirstName': 'Nancy',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-664743600000),
    'HireDate': new Date(704692800000),
    'Address': '507 - 20th Ave. E.\r\nApt. 2A',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98122',
    'Country': 'USA',
    'HomePhone': '(206) 555-9857',
    'Extension': '5467',
    'Photo': { 'Length': 21626 },

```

```

    'Notes': 'Education includes a BA in psychology from Colorado State
University in 1970. She also completed\
    \'The Art of the Cold Call.\' Nancy is a member of Toastmasters
International.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
    'EmployeeID': 2,
    'LastName': 'Fuller',
    'FirstName': 'Andrew',
    'Title': 'Vice President, Sales',
    'TitleOfCourtesy': 'Dr.',
    'BirthDate': new Date(-563828400000),
    'HireDate': new Date(713764800000),
    'Address': '908 W. Capital Way',
    'City': 'Tacoma',
    'Region': 'WA',
    'PostalCode': '98401',
    'Country': 'USA',
    'HomePhone': '(206) 555-9482',
    'Extension': '3457',
    'Photo': { 'Length': 21626 },
    'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
    Dallas in 1981. He is fluent in French and Italian and reads German. He
joined the company as a sales representative, \
    was promoted to sales manager in January 1992 and to vice president of
sales in March 1993. Andrew is a member of the \
    Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.',
    'ReportsTo': 0,
    'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
},
{
    'EmployeeID': 3,
    'LastName': 'Leverling',
    'FirstName': 'Janet',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-200088000000),
    'HireDate': new Date(702104400000),
    'Address': '722 Moss Bay Blvd.',
    'City': 'Kirkland',
    'Region': 'WA',
    'PostalCode': '98033',
    'Country': 'USA',
    'HomePhone': '(206) 555-3412',
    'Extension': '3355',
    'Photo': { 'Length': 21722 },
    'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
\
    She has also completed a certificate program in food retailing
management.\
    Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
    'ReportsTo': 2,

```

```

    'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
  },
  {
    'EmployeeID': 4,
    'LastName': 'Peacock',
    'FirstName': 'Margaret',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mrs.',
    'BirthDate': new Date(-1018814400000),
    'HireDate': new Date(736401600000),
    'Address': '4110 Old Redmond Rd.',
    'City': 'Redmond',
    'Region': 'WA',
    'PostalCode': '98052',
    'Country': 'USA',
    'HomePhone': '(206) 555-8122',
    'Extension': '5176',
    'Photo': { 'Length': 21626 },
    'Notes': 'Margaret holds a BA in English literature from Concordia College (1958) and an MA from the American \
      Institute of Culinary Arts (1966). She was assigned to the London office temporarily from July through November 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
  },
  {
    'EmployeeID': 5,
    'LastName': 'Buchanan',
    'FirstName': 'Steven',
    'Title': 'Sales Manager',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-468010800000),
    'HireDate': new Date(750830400000),
    'Address': '14 Garrett Hill',
    'City': 'London',
    'Region': null,
    'PostalCode': 'SW1 8JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-4848',
    'Extension': '3453',
    'Photo': { 'Length': 21626 },
    'Notes': 'Steven Buchanan graduated from St. Andrews University, Scotland, with a BSC degree in 1976. Upon joining the company as \
      a sales representative in 1992, he spent 6 months in an orientation program at the Seattle office and then returned to his permanent \
      post in London. He was promoted to sales manager in March 1993. Mr. Buchanan has completed the courses \'Successful \
      Telemarketing\' and \'International Sales Management.\' He is fluent in French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
  },
  {
    'EmployeeID': 6,
    'LastName': 'Suyama',
    'FirstName': 'Michael',

```

```

        'Title': 'Sales Representative',
        'TitleOfCourtesy': 'Mr.',
        'BirthDate': new Date(-205185600000),
        'HireDate': new Date(750830400000),
        'Address': 'Coventry House\r\nMiner Rd.',
        'City': 'London',
        'Region': null,
        'PostalCode': 'EC2 7JR',
        'Country': 'UK',
        'HomePhone': '(71) 555-7773',
        'Extension': '428',
        'Photo': { 'Length': 21626 },
        'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese, and
Spanish.',
        'ReportsTo': 5,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
        'EmployeeID': 7,
        'LastName': 'King',
        'FirstName': 'Robert',
        'Title': 'Sales Representative',
        'TitleOfCourtesy': 'Mr.',
        'BirthDate': new Date(-302731200000),
        'HireDate': new Date(757486800000),
        'Address': 'Edgeham Hollow\r\nWinchester Way',
        'City': 'London',
        'Region': null,
        'PostalCode': 'RG1 9SP',
        'Country': 'UK',
        'HomePhone': '(71) 555-5598',
        'Extension': '465',
        'Photo': { 'Length': 21626 },
        'Notes': 'Robert King served in the Peace Corps and traveled extensively
before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
        'ReportsTo': 5,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
        'EmployeeID': 8,
        'LastName': 'Callahan',
        'FirstName': 'Laura',
        'Title': 'Inside Sales Coordinator',
        'TitleOfCourtesy': 'Ms.',
        'BirthDate': new Date(-377982000000),
        'HireDate': new Date(762843600000),
        'Address': '4726 - 11th Ave. N.E.',
        'City': 'Seattle',
        'Region': 'WA',
        'PostalCode': '98105',

```

```

    'Country': 'USA',
    'HomePhone': '(206) 555-1189',
    'Extension': '2344',
    'Photo': { 'Length': 21626 },
    'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 9,
    'LastName': 'Dodsworth',
    'FirstName': 'Anne',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-123966000000),
    'HireDate': new Date(784875600000),
    'Address': '7 Houndstooth Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'WG2 7LT',
    'Country': 'UK',
    'HomePhone': '(71) 555-4444',
    'Extension': '452',
    'Photo': { 'Length': 21626 },
    'Notes': 'Anne has a BA degree in English from St. Lawrence College. She
is fluent in French and German.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0,
    Employee: {
      EmployeeID: 1
    },
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1,
    Employee: {
      EmployeeID: 2
    },
  },

```



```

    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0,
        Employee: {
            EmployeeID: 3
        },
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0,
        Employee: {
            EmployeeID: 4
        },
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0,
        Employee: {
            EmployeeID: 5
        },
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
        , Employee: {
            EmployeeID: 6
        },
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
        , Employee: {
            EmployeeID: 7
        },
    },
    {

```

```

    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    , Employee: {
        EmployeeID: 8
    }
},
{
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    , Employee: {
        EmployeeID: 9
    }
},
{
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    , Employee: {
        EmployeeID: 9
    }
},
{
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    , Employee: {
        EmployeeID: 6
    }
},
{
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    , Employee: {
        EmployeeID: 2
    }
},
{
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),

```

```

        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
        , Employee: {
            EmployeeID: 3
        }
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
        , Employee: {
            EmployeeID: 4
        }
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
        , Employee: {
            EmployeeID: 3
        }
    }
    ]];
export let employeeData: Object[] = [{
    'EmployeeID': 1,
    'LastName': 'Davolio',
    'FirstName': 'Nancy',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-664743600000),
    'HireDate': new Date(704692800000),
    'Address': '507 - 20th Ave. E.\r\nApt. 2A',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98122',
    'Country': 'USA',
    'HomePhone': '(206) 555-9857',
    'Extension': '5467',
    'Photo': { 'Length': 21626 },
    'Notes': 'Education includes a BA in psychology from Colorado State
University in 1970. She also completed\
    \'The Art of the Cold Call.\' Nancy is a member of Toastmasters
International.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
    'EmployeeID': 2,
    'LastName': 'Fuller',
    'FirstName': 'Andrew',

```

```

    'Title': 'Vice President, Sales',
    'TitleOfCourtesy': 'Dr.',
    'BirthDate': new Date(-563828400000),
    'HireDate': new Date(713764800000),
    'Address': '908 W. Capital Way',
    'City': 'Tacoma',
    'Region': 'WA',
    'PostalCode': '98401',
    'Country': 'USA',
    'HomePhone': '(206) 555-9482',
    'Extension': '3457',
    'Photo': { 'Length': 21626 },
    'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
    Dallas in 1981. He is fluent in French and Italian and reads German. He
joined the company as a sales representative, \
    was promoted to sales manager in January 1992 and to vice president of
sales in March 1993. Andrew is a member of the \
    Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.',
    'ReportsTo': 0,
    'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
},
{
    'EmployeeID': 3,
    'LastName': 'Leverling',
    'FirstName': 'Janet',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-200088000000),
    'HireDate': new Date(702104400000),
    'Address': '722 Moss Bay Blvd.',
    'City': 'Kirkland',
    'Region': 'WA',
    'PostalCode': '98033',
    'Country': 'USA',
    'HomePhone': '(206) 555-3412',
    'Extension': '3355',
    'Photo': { 'Length': 21722 },
    'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
\
    She has also completed a certificate program in food retailing
management.\
    Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
},
{
    'EmployeeID': 4,
    'LastName': 'Peacock',
    'FirstName': 'Margaret',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mrs.',
    'BirthDate': new Date(-1018814400000),
    'HireDate': new Date(736401600000),
    'Address': '4110 Old Redmond Rd.',

```

```

    'City': 'Redmond',
    'Region': 'WA',
    'PostalCode': '98052',
    'Country': 'USA',
    'HomePhone': '(206) 555-8122',
    'Extension': '5176',
    'Photo': { 'Length': 21626 },
    'Notes': 'Margaret holds a BA in English literature from Concordia
College (1958) and an MA from the American \
Institute of Culinary Arts (1966). She was assigned to the London office
temporarily from July through November 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
},
{
    'EmployeeID': 5,
    'LastName': 'Buchanan',
    'FirstName': 'Steven',
    'Title': 'Sales Manager',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-468010800000),
    'HireDate': new Date(750830400000),
    'Address': '14 Garrett Hill',
    'City': 'London',
    'Region': null,
    'PostalCode':
        'SW1 8JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-4848',
    'Extension': '3453',
    'Photo': { 'Length': 21626 },
    'Notes': 'Steven Buchanan graduated from St. Andrews University,
Scotland, with a BSC degree in 1976. Upon joining the company as \
a sales representative in 1992, he spent 6 months in an orientation
program at the Seattle office and then returned to his permanent \
post in London. He was promoted to sales manager in March 1993. Mr.
Buchanan has completed the courses \'Successful \
Telemarketing\' and \'International Sales Management.\' He is fluent in
French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
},
{
    'EmployeeID': 6,
    'LastName': 'Suyama',
    'FirstName': 'Michael',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-205185600000),
    'HireDate': new Date(750830400000),
    'Address': 'Coventry House\r\nMiner Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'EC2 7JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-7773',
    'Extension': '428',

```

```

        'Photo': { 'Length': 21626 },
        'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese, and
Spanish.',
        'ReportsTo': 5,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
        'EmployeeID': 7,
        'LastName': 'King',
        'FirstName': 'Robert',
        'Title': 'Sales Representative',
        'TitleOfCourtesy': 'Mr.',
        'BirthDate': new Date(-302731200000),
        'HireDate': new Date(757486800000),
        'Address': 'Edgeham Hollow\r\nWinchester Way',
        'City': 'London',
        'Region': null,
        'PostalCode': 'RG1 9SP',
        'Country': 'UK',
        'HomePhone': '(71) 555-5598',
        'Extension': '465',
        'Photo': { 'Length': 21626 },
        'Notes': 'Robert King served in the Peace Corps and traveled extensively
before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
        'ReportsTo': 5,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
        'EmployeeID': 8,
        'LastName': 'Callahan',
        'FirstName': 'Laura',
        'Title': 'Inside Sales Coordinator',
        'TitleOfCourtesy': 'Ms.',
        'BirthDate': new Date(-377982000000),
        'HireDate': new Date(762843600000),
        'Address': '4726 - 11th Ave. N.E.',
        'City': 'Seattle',
        'Region': 'WA',
        'PostalCode': '98105',
        'Country': 'USA',
        'HomePhone': '(206) 555-1189',
        'Extension': '2344',
        'Photo': { 'Length': 21626 },
        'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
        'ReportsTo': 2,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {

```

```

    'EmployeeID': 9,
    'LastName': 'Dodsworth',
    'FirstName': 'Anne',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-123966000000),
    'HireDate': new Date(784875600000),
    'Address': '7 Houndstooth Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'WG2 7LT',
    'Country': 'UK',
    'HomePhone': '(71) 555-4444',
    'Extension': '452',
    'Photo': { 'Length': 21626 },
    'Notes': 'Anne has a BA degree in English from St. Lawrence College. She
is fluent in French and German.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  }];

```

List of array of objects in React Grid component

The following example shows how to set Complex field for datasource having Array Of Objects.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { complexData } from './datasource';
function App() {
  return (<div>
    <GridComponent dataSource={complexData} height={315}>
      <ColumnsDirective>
        <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='120' textAlign="Right"/>
        <ColumnDirective field='Names.0.FirstName' headerText='First Name'
width='120'/>
        <ColumnDirective field='Names.0.LastName' headerText='Last Name'
width='120'/>
        <ColumnDirective field='Region' headerText='Region' width='120'/>
        <ColumnDirective field='City' headerText='City' width='150'/>
      </ColumnsDirective>
    </GridComponent>
  </div>);
}
;
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { complexData } from './datasource';
function App() {

```

```

return (<div>
  <GridComponent dataSource={complexData} height={315}>
    <ColumnsDirective>
      <ColumnDirective field='EmployeeID' headerText='Employee ID'
width='120' textAlign="Right" />
      <ColumnDirective field='Names.0.LastName' headerText='Last Name'
width='120' />
      <ColumnDirective field='Region' headerText='Region' width='120' />
      <ColumnDirective field='City' headerText='City' width='150' />
    </ColumnsDirective>
  </GridComponent>
</div>)
};
export default App;

```

DATASOURCE.JSX

```

export let complexData = [{
  'EmployeeID': 1,
  'Name': {
    'LastName': 'Davolio',
    'FirstName': 'Nancy'
  },
  'Names': [{
    'LastName': 'Davolio',
    'FirstName': 'Nancy'
  }],
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-664743600000),
  'HireDate': new Date(704692800000),
  'Address': '507 - 20th Ave. E.\r\nApt. 2A',
  'City': 'Seattle',
  'Region': 'WA',
  'PostalCode': '98122',
  'Country': 'USA',
  'HomePhone': '(206) 555-9857',
  'Extension': '5467',
  'Photo': { 'Length': 21626 },
  'Notes': 'Education includes a BA in psychology from Colorado State
University in 1970. She also completed\
\'The Art of the Cold Call.\' Nancy is a member of Toastmasters
International.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
  'EmployeeID': 2,
  'Name': {
    'LastName': 'Fuller',
    'FirstName': 'Andrew'
  },
  'Names': [{
    'LastName': 'Fuller',
    'FirstName': 'Andrew'
  }],

```



```

        'Title': 'Vice President, Sales',
        'TitleOfCourtesy': 'Dr.',
        'BirthDate': new Date(-563828400000),
        'HireDate': new Date(713764800000),
        'Address': '908 W. Capital Way',
        'City': 'Tacoma',
        'Region': 'WA',
        'PostalCode': '98401',
        'Country': 'USA',
        'HomePhone': '(206) 555-9482',
        'Extension': '3457',
        'Photo': { 'Length': 21626 },
        'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
Dallas in 1981. He is fluent in French and Italian and reads German. He
joined the company as a sales representative, \
was promoted to sales manager in January 1992 and to vice president of
sales in March 1993. Andrew is a member of the \
Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.',
        'ReportsTo': 0,
        'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
    },
    {
        'EmployeeID': 3,
        'Name': {
            'LastName': 'Leverling',
            'FirstName': 'Janet'
        },
        'Names': [{
            'LastName': 'Leverling',
            'FirstName': 'Janet'
        }],
        'Title': 'Sales Representative',
        'TitleOfCourtesy': 'Ms.',
        'BirthDate': new Date(-200088000000),
        'HireDate': new Date(702104400000),
        'Address': '722 Moss Bay Blvd.',
        'City': 'Kirkland',
        'Region': 'WA',
        'PostalCode': '98033',
        'Country': 'USA',
        'HomePhone': '(206) 555-3412',
        'Extension': '3355',
        'Photo': { 'Length': 21722 },
        'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
\
She has also completed a certificate program in food retailing
management.\
Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
        'ReportsTo': 2,
        'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
    },
    {
        'EmployeeID': 4,
        'Name': {

```

```

        'LastName': 'Peacock',
        'FirstName': 'Margaret'
    },
    'Names': [{
        'LastName': 'Peacock',
        'FirstName': 'Margaret'
    }],
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mrs.',
    'BirthDate': new Date(-1018814400000),
    'HireDate': new Date(736401600000),
    'Address': '4110 Old Redmond Rd.',
    'City': 'Redmond',
    'Region': 'WA',
    'PostalCode': '98052',
    'Country': 'USA',
    'HomePhone': '(206) 555-8122',
    'Extension': '5176',
    'Photo': { 'Length': 21626 },
    'Notes': 'Margaret holds a BA in English literature from Concordia College (1958) and an MA from the American \
        Institute of Culinary Arts (1966). She was assigned to the London office temporarily from July through November 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
},
{
    'EmployeeID': 5,
    'Name': {
        'LastName': 'Buchanan',
        'FirstName': 'Steven'
    },
    'Names': [{
        'LastName': 'Buchanan',
        'FirstName': 'Steven'
    }],
    'Title': 'Sales Manager',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-468010800000),
    'HireDate': new Date(750830400000),
    'Address': '14 Garrett Hill',
    'City': 'London',
    'Region': null,
    'PostalCode': 'SW1 8JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-4848',
    'Extension': '3453',
    'Photo': { 'Length': 21626 },
    'Notes': 'Steven Buchanan graduated from St. Andrews University, Scotland, with a BSC degree in 1976. Upon joining the company as \
        a sales representative in 1992, he spent 6 months in an orientation program at the Seattle office and then returned to his permanent \
        post in London. He was promoted to sales manager in March 1993. Mr. Buchanan has completed the courses \'Successful \
        Telemarketing\' and \'International Sales Management.\' He is fluent in French.',
    'ReportsTo': 2,

```

```

    'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
  },
  {
    'EmployeeID': 6,
    'Name': {
      'LastName': 'Suyama',
      'FirstName': 'Michael'
    },
    'Names': [{
      'LastName': 'Leverling',
      'FirstName': 'Janet'
    }],
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-205185600000),
    'HireDate': new Date(750830400000),
    'Address': 'Coventry House\r\nMiner Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'EC2 7JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-7773',
    'Extension': '428',
    'Photo': { 'Length': 21626 },
    'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese, and
Spanish.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 7,
    'Name': {
      'LastName': 'King',
      'FirstName': 'Robert'
    },
    'Names': [{
      'LastName': 'Peacock',
      'FirstName': 'Margaret'
    }],
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-302731200000),
    'HireDate': new Date(757486800000),
    'Address': 'Edgeham Hollow\r\nWinchester Way',
    'City': 'London',
    'Region': null,
    'PostalCode': 'RG1 9SP',
    'Country': 'UK',
    'HomePhone': '(71) 555-5598',
    'Extension': '465',
    'Photo': { 'Length': 21626 },
    'Notes': 'Robert King served in the Peace Corps and traveled extensively
before completing his degree in English at the \

```

```

University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
'ReportsTo': 5,
'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
  'EmployeeID': 8,
  'Name': {
    'LastName': 'Callahan',
    'FirstName': 'Laura'
  },
  'Names': [{
    'LastName': 'Fuller',
    'FirstName': 'Andrew'
  }],
  'Title': 'Inside Sales Coordinator',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-377982000000),
  'HireDate': new Date(762843600000),
  'Address': '4726 - 11th Ave. N.E.',
  'City': 'Seattle',
  'Region': 'WA',
  'PostalCode': '98105',
  'Country': 'USA',
  'HomePhone': '(206) 555-1189',
  'Extension': '2344',
  'Photo': { 'Length': 21626 },
  'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
  'EmployeeID': 9,
  'Name': {
    'LastName': 'Dodsworth',
    'FirstName': 'Anne'
  },
  'Names': [{
    'LastName': 'Fuller',
    'FirstName': 'Andrew'
  }],
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-123966000000),
  'HireDate': new Date(784875600000),
  'Address': '7 Houndstooth Rd.',
  'City': 'London',
  'Region': null,
  'PostalCode': 'WG2 7LT',
  'Country': 'UK',
  'HomePhone': '(71) 555-4444',
  'Extension': '452',
  'Photo': { 'Length': 21626 },

```

```
'Notes': 'Anne has a BA degree in English from St. Lawrence College. She
is fluent in French and German.',
'ReportsTo': 5,
'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
}];
```

DATASOURCE.TSX

```
export let complexData: Object[] = [{
  'EmployeeID': 1,
  'Name': {
    'LastName': 'Davolio',
    'FirstName': 'Nancy'
  },
  'Names': [{
    'LastName': 'Davolio',
    'FirstName': 'Nancy'
  }],
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-664743600000),
  'HireDate': new Date(704692800000),
  'Address': '507 - 20th Ave. E.\r\nApt. 2A',
  'City': 'Seattle',
  'Region': 'WA',
  'PostalCode': '98122',
  'Country': 'USA',
  'HomePhone': '(206) 555-9857',
  'Extension': '5467',
  'Photo': { 'Length': 21626 },
  'Notes': 'Education includes a BA in psychology from Colorado State
University in 1970. She also completed\
\'The Art of the Cold Call.\' Nancy is a member of Toastmasters
International.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
  'EmployeeID': 2,
  'Name': {
    'LastName': 'Fuller',
    'FirstName': 'Andrew'
  },
  'Names': [{
    'LastName': 'Fuller',
    'FirstName': 'Andrew'
  }],
  'Title': 'Vice President, Sales',
  'TitleOfCourtesy': 'Dr.',
  'BirthDate': new Date(-563828400000),
  'HireDate': new Date(713764800000),
  'Address': '908 W. Capital Way',
  'City': 'Tacoma',
  'Region': 'WA',
  'PostalCode': '98401',
  'Country': 'USA',
```

```

    'HomePhone': '(206) 555-9482',
    'Extension': '3457',
    'Photo': { 'Length': 21626 },
    'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
    Dallas in 1981. He is fluent in French and Italian and reads German. He
joined the company as a sales representative, \
    was promoted to sales manager in January 1992 and to vice president of
sales in March 1993. Andrew is a member of the \
    Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.',
    'ReportsTo': 0,
    'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
},
{
    'EmployeeID': 3,
    'Name': {
        'LastName': 'Leverling',
        'FirstName': 'Janet'
    },
    'Names': [{
        'LastName': 'Leverling',
        'FirstName': 'Janet'
    }],
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-200088000000),
    'HireDate': new Date(702104400000),
    'Address': '722 Moss Bay Blvd.',
    'City': 'Kirkland',
    'Region': 'WA',
    'PostalCode': '98033',
    'Country': 'USA',
    'HomePhone': '(206) 555-3412',
    'Extension': '3355',
    'Photo': { 'Length': 21722 },
    'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
\
    She has also completed a certificate program in food retailing
management.\
    Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
},
{
    'EmployeeID': 4,
    'Name': {
        'LastName': 'Peacock',
        'FirstName': 'Margaret'
    },
    'Names': [{
        'LastName': 'Peacock',
        'FirstName': 'Margaret'
    }],
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mrs.',

```

```

    'BirthDate': new Date(-1018814400000),
    'HireDate': new Date(736401600000),
    'Address': '4110 Old Redmond Rd.',
    'City': 'Redmond',
    'Region': 'WA',
    'PostalCode': '98052',
    'Country': 'USA',
    'HomePhone': '(206) 555-8122',
    'Extension': '5176',
    'Photo': { 'Length': 21626 },
    'Notes': 'Margaret holds a BA in English literature from Concordia
College (1958) and an MA from the American \
Institute of Culinary Arts (1966). She was assigned to the London office
temporarily from July through November 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
},
{
    'EmployeeID': 5,
    'Name': {
        'LastName': 'Buchanan',
        'FirstName': 'Steven'
    },
    'Names': [{
        'LastName': 'Buchanan',
        'FirstName': 'Steven'
    }],
    'Title': 'Sales Manager',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-468010800000),
    'HireDate': new Date(750830400000),
    'Address': '14 Garrett Hill',
    'City': 'London',
    'Region': null,
    'PostalCode': 'SW1 8JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-4848',
    'Extension': '3453',
    'Photo': { 'Length': 21626 },
    'Notes': 'Steven Buchanan graduated from St. Andrews University,
Scotland, with a BSC degree in 1976. Upon joining the company as \
a sales representative in 1992, he spent 6 months in an orientation
program at the Seattle office and then returned to his permanent \
post in London. He was promoted to sales manager in March 1993. Mr.
Buchanan has completed the courses \'Successful \
Telemarketing\' and \'International Sales Management.\' He is fluent in
French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
},
{
    'EmployeeID': 6,
    'Name': {
        'LastName': 'Suyama',
        'FirstName': 'Michael'
    },
    'Names': [{

```

```

        'LastName': 'Leverling',
        'FirstName': 'Janet'
    }],
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-205185600000),
    'HireDate': new Date(750830400000),
    'Address': 'Coventry House\r\nMiner Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'EC2 7JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-7773',
    'Extension': '428',
    'Photo': { 'Length': 21626 },
    'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese, and
Spanish.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
    'EmployeeID': 7,
    'Name': {
        'LastName': 'King',
        'FirstName': 'Robert'
    },
    'Names': [{
        'LastName': 'Peacock',
        'FirstName': 'Margaret'
    }],
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-302731200000),
    'HireDate': new Date(757486800000),
    'Address': 'Edgeham Hollow\r\nWinchester Way',
    'City': 'London',
    'Region': null,
    'PostalCode': 'RG1 9SP',
    'Country': 'UK',
    'HomePhone': '(71) 555-5598',
    'Extension': '465',
    'Photo': { 'Length': 21626 },
    'Notes': 'Robert King served in the Peace Corps and traveled extensively
before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
    'EmployeeID': 8,
    'Name': {

```



```

        'LastName': 'Callahan',
        'FirstName': 'Laura'
    },
    'Names': [{
        'LastName': 'Fuller',
        'FirstName': 'Andrew'
    }],
    'Title': 'Inside Sales Coordinator',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-377982000000),
    'HireDate': new Date(762843600000),
    'Address': '4726 - 11th Ave. N.E.',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98105',
    'Country': 'USA',
    'HomePhone': '(206) 555-1189',
    'Extension': '2344',
    'Photo': { 'Length': 21626 },
    'Notes': 'Laura received a BA in psychology from the University of Washington. She has also completed a course in business \ French. She reads and writes French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
    'EmployeeID': 9,
    'Name': {
        'LastName': 'Dodsworth',
        'FirstName': 'Anne'
    },
    'Names': [{
        'LastName': 'Fuller',
        'FirstName': 'Andrew'
    }],
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-123966000000),
    'HireDate': new Date(784875600000),
    'Address': '7 Houndstooth Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'WG2 7LT',
    'Country': 'UK',
    'HomePhone': '(71) 555-4444',
    'Extension': '452',
    'Photo': { 'Length': 21626 },
    'Notes': 'Anne has a BA degree in English from St. Lawrence College. She is fluent in French and German.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
}];

```

Add params for filtering in React Grid component

You can customize the default settings of the components which are used in Menu filter by using params of filter property in column definition.

In the below sample, OrderID and Freight Columns are numeric columns, while open the filter dialog then you can see that NumericTextBox with spin button is displayed to change/set the filter value. Now using the params option we hide the spin button in NumericTextBox for OrderID Column.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Filter, Inject } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  let grid;
  const FilterOptions = {
    type: 'Menu'
  };
  const ifilter = { params: { showSpinButton: false } };
  return <GridComponent ref={g => grid = g} dataSource={data}
allowFiltering={true} filterSettings={FilterOptions} height='315'>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' width='100' filter={ifilter}
textAlign="Right"/>
      <ColumnDirective field='CustomerID' width='100' />
      <ColumnDirective field='EmployeeID' width='100' textAlign="Right"/>
      <ColumnDirective field='Freight' width='100' format="C2"
textAlign="Right"/>
      <ColumnDirective field='ShipCountry' width='100' />
    </ColumnsDirective>
    <Inject services={[Filter]} />
  </GridComponent>;
}
;
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { Filter, FilterSettingsModel, Grid, IFilter, Inject } from
 '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  let grid: Grid | null;
  const FilterOptions: FilterSettingsModel = {
    type: 'Menu'
  };
  const ifilter: IFilter = { params: { showSpinButton: false } };
  return <GridComponent ref={g => grid = g} dataSource={data}
allowFiltering={true}
  filterSettings={FilterOptions} height='315'>
    <ColumnsDirective>
```

```

    <ColumnDirective field='OrderID' width='100' filter={ifilter}
    textAlign="Right" />
    <ColumnDirective field='CustomerID' width='100' />
    <ColumnDirective field='EmployeeID' width='100' textAlign="Right" />
    <ColumnDirective field='Freight' width='100' format="C2"
    textAlign="Right" />
    <ColumnDirective field='ShipCountry' width='100' />
  </ColumnsDirective>
  <Inject services={[Filter]} />
</GridComponent>
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },

```

```

{
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
},
{
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
},
{
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
},
{
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
},
{
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
},
{
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
},
{
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
},
{

```

```

    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
}
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    }
];

```

```

        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),

```

```

        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]
};

```

Select grid rows based on certain condition in React Grid component

You can select the specific row in the grid based on a certain condition by using the [selectRows](#) method in the [dataBound](#) event of Grid.

In the below demo, we have selected the grid rows only when *EmployeeID* column value greater than 3.

APP.JSX

```

import { getValue } from '@syncfusion/ej2-base';
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Page }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
    let selIndex = [];
    let grid;
    const settings = { type: 'Multiple' };
    const rowDataBound = (args) => {

```

```

        if (getValue('EmployeeID', args.data) > 3) {
            selIndex.push(parseInt(args.row
                .getAttribute('aria-rowindex'), 0));
        }
    };
    const dataBound = () => {
        if (grid && selIndex.length) {
            grid.selectRows(selIndex);
            selIndex = [];
        }
    };
    return (<div>
        <GridComponent dataSource={data} allowPaging={true}
        rowDataBound={rowDataBound} dataBound={dataBound}
        selectionSettings={settings} height={280} ref={g => grid = g}>
            <ColumnsDirective>
                <ColumnDirective field='OrderID' headerText='Order ID' width='120'
                textAlign='Right' />
                <ColumnDirective field='CustomerID' headerText='Customer ID'
                width='150' />
                <ColumnDirective field='EmployeeID' headerText='Employee ID'
                width='150' textAlign='Right' />
                <ColumnDirective field='ShipCity' headerText='Ship City'
                width='150' />
                <ColumnDirective field='ShipName' headerText='Ship Name'
                width='150' />
            </ColumnsDirective>
            <Inject services={[Page]} />
        </GridComponent>
    </div>);
}
;
export default App;

```

APP.TSX

```

import { getValue } from '@syncfusion/ej2-base';
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Page }
from '@syncfusion/ej2-react-grids';
import { Grid, RowDataBoundEventArgs, SelectionSettingsModel } from
'@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    let selIndex: number[] = [];
    let grid: Grid | null;
    const settings: SelectionSettingsModel = { type: 'Multiple' };
    const rowDataBound = (args: RowDataBoundEventArgs): void => {
        if (getValue('EmployeeID', args.data as object) > 3) {
            selIndex.push(parseInt((args.row as HTMLTableRowElement)
                .getAttribute('aria-rowindex') as string, 0));
        }
    }
    const dataBound = (): void => {
        if (grid && selIndex.length) {
            grid.selectRows(selIndex);
        }
    }
}

```



```

        selIndex = [];
    }
}
return (<div>
    <GridComponent dataSource={data} allowPaging={true}
    rowDataBound={rowDataBound} dataBound={dataBound}
    selectionSettings={settings} height={280} ref={g => grid = g}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID' width='120'
            textAlign='Right' />
            <ColumnDirective field='CustomerID' headerText='Customer ID'
            width='150' />
            <ColumnDirective field='EmployeeID' headerText='Employee ID'
            width='150' textAlign='Right' />
            <ColumnDirective field='ShipCity' headerText='Ship City' width='150'
            />
            <ColumnDirective field='ShipName' headerText='Ship Name' width='150'
            />
        </ColumnsDirective>
        <Inject services={[Page]} />
    </GridComponent>
</div>)
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
        Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
    }
]

```

```

        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),

```

```

        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',

```

```

        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ];

```

Collapse grouped rows at initial render in React Grid component

You can collapse all the grouped rows at initial rendering by using [dataBound](#) event with [collapseAll](#) method of the grid.

In the below demo, all the grouped rows are collapsed at initial rendering.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Inject } from
 '@syncfusion/ej2-react-grids';
import { Group } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  let initial = true;
  const groupOptions = { columns: ['ShipCity'] };
  let gridObj;
  const dataBound = () => {
    if (gridObj && initial === true) {
      gridObj.groupModule.collapseAll();
      initial = false;
    }
  };
  return <GridComponent dataSource={data} ref={grid => gridObj = grid}
    dataBound={dataBound} allowGrouping={true} groupSettings={groupOptions}
    height={267}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='120'
        textAlign="Right"/>
      <ColumnDirective field='CustomerID' headerText='Customer ID'
        width='150' />
      <ColumnDirective field='ShipCity' headerText='Ship City' width='150' />
      <ColumnDirective field='ShipName' headerText='Ship Name' width='150' />
    </ColumnsDirective>
    <Inject services={[Group]} />
  </GridComponent>;
}
;
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Inject } from
 '@syncfusion/ej2-react-grids';
import { Grid, Group, GroupSettingsModel } from '@syncfusion/ej2-react-
grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  let initial = true;
  const groupOptions: GroupSettingsModel = { columns: ['ShipCity'] };
  let gridObj: Grid | null;
  const dataBound = (): void => {
    if (gridObj && initial === true) {
      gridObj.groupModule.collapseAll();
      initial = false;
    }
  };
  return <GridComponent dataSource={data} ref={grid => gridObj = grid}
    dataBound={dataBound}
    allowGrouping={true} groupSettings={groupOptions} height={267}>
```

```

    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
      <ColumnDirective field='ShipCity' headerText='Ship City' width='150' />
      <ColumnDirective field='ShipName' headerText='Ship Name' width='150' />
    </ColumnsDirective>
    <Inject services=[[Group]] />
  </GridComponent >
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },

```

```

{
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
},
{
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
},
{
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
},
{
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
},
{
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
},
{
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
},
{
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
},
{

```



```

    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
}
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    }
];

```

```

        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),

```

```

        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]];

```

Grouped row page size in React Grid component

By default, we have displayed the no of records based on the [pageSize](#). If you want to show grouped column rows based on the [pageSize](#) then we suggest you to use the below way.

In the below sample, we have overridden the default *generateQuery* to display the grouped rows instead of grid rows based on the [pageSize](#).

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject } from
'@syncfusion/ej2-react-grids';
import { Data, Group, Page } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
const oldGenerateQuery = Data.prototype.generateQuery;
Data.prototype.generateQuery = function() {
    const query = oldGenerateQuery.call(this, true);
    // Check if 'pageQuery' is available in the prototype chain

```

```

    if (Data.prototype.hasOwnProperty('pageQuery')) {
        const pageQueryFn = Data.prototype['pageQuery'];
        pageQueryFn.call(this, query);
    }
    return query;
};

function App() {
    let grid;
    const groupOptions = { showGroupedColumn: false, columns: ['ShipCountry']
};
    const pageSettings = { pageSize: 5 };
    return <GridComponent ref={g => grid = g} allowGrouping={true}
        groupSettings={groupOptions} allowPaging={true}
        pageSettings={pageSettings}
        dataSource={data}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
            <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='100' />
            <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
            <ColumnDirective field='ShipName' headerText='Ship Name' width='100' />
            <ColumnDirective field='Freight' headerText='Freight' width='100'
format="C2" />
        </ColumnsDirective>
        <Inject services={[Group, Page]} />
    </GridComponent>
};
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject,
GroupSettingsModel, PageSettingsModel } from '@syncfusion/ej2-react-grids';
import { Data, Group, Page } from '@syncfusion/ej2-react-grids';
import { Query } from '@syncfusion/ej2-data';
import * as React from 'react';
import { data } from './datasource';
const oldGenerateQuery = Data.prototype.generateQuery;
Data.prototype.generateQuery = function() {
    const query = oldGenerateQuery.call(this, true);
    // Check if 'pageQuery' is available in the prototype chain
    if (Data.prototype.hasOwnProperty('pageQuery')) {
        const pageQueryFn = Data.prototype['pageQuery'] as (query: Query) =>
void;
        pageQueryFn.call(this, query);
    }
    return query;
};

function App() {
    let grid: GridComponent | null;
    const groupOptions: GroupSettingsModel = { showGroupedColumn: false,
columns: ['ShipCountry'] };
    const pageSettings: PageSettingsModel = { pageSize: 5 };
    return <GridComponent ref={g => grid = g} allowGrouping={true}

```

```

    groupSettings={groupOptions} allowPaging={true}
  pageSettings={pageSettings}
  dataSource={data}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
      <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='100' />
      <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
      <ColumnDirective field='ShipName' headerText='Ship Name' width='100' />
      <ColumnDirective field='Freight' headerText='Freight' width='100'
format="C2" />
    </ColumnsDirective>
    <Inject services={[Group, Page]} />
  </GridComponent>
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {

```

```

    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
},
{
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
},
{
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
},
{
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
},
{
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
},
{
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
},
{
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
},
{

```

```

    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),

```

```

        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),

```



```

        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]];

```

Get row cell index in React Grid component

You can get the specific row and cell index of the grid by using [rowSelected](#) event of the grid. Here, we can get the row and cell index by using *aria-rowindex* (get row Index from *tr* element) and *aria-colindex* (column index from *td* element) attribute.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent } from
'@syncfusion/ej2-react-grids';
import * as React from 'react';

```

```
import { data } from './datasource';
function App() {
  const rowSelected = (args) => {
    alert("row index: " + args.row.getAttribute('aria-rowindex'));
    alert("column index: " + args.target.getAttribute('aria-colindex'));
  };
  return <GridComponent dataSource={data} rowSelected={rowSelected}
height={267}>
  <ColumnsDirective>
    <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right"/>
    <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
    <ColumnDirective field='ShipCity' headerText='Ship City' width='150' />
    <ColumnDirective field='ShipName' headerText='Ship Name' width='150' />
  </ColumnsDirective>
</GridComponent>;
}
;
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, RowSelectEventArgs
} from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  const rowSelected = (args: RowSelectEventArgs): void => {
    alert("row index: " + (args.row as
HTMLTableRowElement).getAttribute('aria-rowindex'));
    alert("column index: " + (args.target as HTMLElement).getAttribute('aria-
colindex'));
  }
  return <GridComponent dataSource={data} rowSelected={rowSelected}
height={267}>
  <ColumnsDirective>
    <ColumnDirective field='OrderID' headerText='Order ID' width='120'
textAlign="Right" />
    <ColumnDirective field='CustomerID' headerText='Customer ID'
width='150' />
    <ColumnDirective field='ShipCity' headerText='Ship City' width='150' />
    <ColumnDirective field='ShipName' headerText='Ship Name' width='150' />
  </ColumnsDirective>
</GridComponent >
};
export default App;
```

DATASOURCE.JSX

```
export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
```

```

        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',

```

```

        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
        Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
];

```

```

{
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
},
{
    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
},
{
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
},
{
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
},
{
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
},
{
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
},
{
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
},
{

```

```

    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
    ]];

```

Display null values at bottom in React Grid component

By default, when sorting in ascending order, null values are displayed at the bottom of the Grid row, and in descending order, they appear at the top. However, you have the flexibility to customize this default behavior to consistently display null values at the bottom of the Grid row using the [sortComparer](#) method.

In the following example demonstrates how to ensure that null date values are consistently displayed at the bottom of the Grid row when sorting the **OrderDate** column in both ascending and descending orders.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Sort }
from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    // The custom function
    let sortAsc;
    const sortComparer = (reference, comparer) => {
        if (sortAsc && reference === null) {
            return 1;
        }
        else if (sortAsc && comparer === null) {
            return -1;
        }
        else if (!sortAsc && reference === null) {
            return -1;
        }
        else if (!sortAsc && comparer === null) {
            return 1;
        }
        else {
            return reference - comparer;
        }
    };
    const actionBegin = (args) => {
        if (args.requestType === 'sorting') {
            sortAsc = args.direction === 'Ascending' ? true : false;

```

```

    }
    };
    return <GridComponent id='grid' dataSource={data} allowSorting={true}
actionBegin={actionBegin}>
    <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right"/>
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='120' />
        <ColumnDirective field='OrderDate' headerText='Order Date' format='yMd'
sortComparer={sortComparer} width='120' />
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' />
    </ColumnsDirective>
    <Inject services={[Sort]} />
    </GridComponent>;
}
;
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Sort,
SortEventArgs } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    // The custom function
    let sortAsc: Boolean;
    const sortComparer = (reference: any, comparer: any) => {
        if (sortAsc && reference === null) {
            return 1;
        } else if (sortAsc && comparer === null) {
            return -1;
        } else if (!sortAsc && reference === null) {
            return -1;
        } else if (!sortAsc && comparer === null) {
            return 1;
        } else {
            return reference - comparer;
        }
    };
    const actionBegin = (args: SortEventArgs): void => {
        if (args.requestType === 'sorting') {
            sortAsc = args.direction === 'Ascending' ? true : false;
        }
    };
    return <GridComponent id='grid' dataSource={data} allowSorting={true}
actionBegin={actionBegin}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right" />
            <ColumnDirective field='CustomerID' headerText='Customer ID'
width='120' />
            <ColumnDirective field='OrderDate' headerText='Order Date' format='yMd'
sortComparer={sortComparer} width='120' />

```



```

    <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150' />
  </ColumnsDirective>
  <Inject services={[Sort]} />
</GridComponent>
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: null,
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: null,
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
  }
]

```

```

    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {

```

```

    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: null,
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: null,
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),

```

```

        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    }
    ]];

```

Enable editing in single click in React Grid component

Normal Editing

You can make a row editable on a single click with **Normal** mode of editing in Grid, by using the [startEdit](#) and [endEdit](#) methods.

Bind the **mouseup** event for Grid and in the event handler call the [startEdit](#) and [endEdit](#), based on the clicked target element.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Edit,
Page, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    const editSettings = { allowEditing: true, allowAdding: true,
allowDeleting: true, mode: 'Normal' };
    const toolbarOptions = ['Add', 'Edit', 'Delete', 'Update', 'Cancel'];

```

```

const load = () => {
  let instance = document.getElementById('Grid').ej2_instances[0];
  if (instance) {
    instance.element.addEventListener('mouseup', function (e) {
      if (e.target.classList.contains("e-rowcell")) {
        if (instance.isEdit)
          instance.endEdit();
        let index = parseInt(e.target.getAttribute("Index"));
        instance.selectRow(index);
        instance.startEdit();
      }
    });
  }
};

return <GridComponent dataSource={data} id="Grid"
toolbar={toolbarOptions} allowPaging={true} editSettings={editSettings}
load={load}>
  <ColumnsDirective>
    <ColumnDirective field='OrderID' headerText='Order ID'
textAlign='Right' width='100' isPrimaryKey={true}></ColumnDirective>
    <ColumnDirective field='CustomerID' headerText='Customer ID'
width='120'></ColumnDirective>
    <ColumnDirective field='Freight' headerText='Freight' textAlign='Right'
width='120' format='C2'></ColumnDirective>
    <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150'></ColumnDirective>
  </ColumnsDirective>
  <Inject services={[Page, Toolbar, Edit]}>/>
</GridComponent>;
}
;
export default App;

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Edit,
Page, Toolbar, ToolbarItems, EditSettingsModel } from '@syncfusion/ej2-react-
grids';
import { MouseEventArgs } from '@syncfusion/ej2-base';
import * as React from 'react';
import { data } from '../datasource';
function App() {
  const editSettings: EditSettingsModel = { allowEditing: true, allowAdding:
true, allowDeleting: true, mode: 'Normal' };
  const toolbarOptions: ToolbarItems[] = ['Add', 'Edit', 'Delete', 'Update',
'Cancel'];
  const load = (): void => {
    let instance = (document.getElementById('Grid') as
HTMLElement).ej2_instances[0];
    if (instance) {
      instance.element.addEventListener('mouseup', function (e) {
        if ((e.target as HTMLElement).classList.contains("e-rowcell")) {
          if (instance.isEdit)
            instance.endEdit();
        }
      });
    }
  };
}

```

```

        let index: number = parseInt((e.target as
HTMLInputElement).getAttribute("Index"));
        instance.selectRow(index);
        instance.startEdit();
    };
    });
}
}
return <GridComponent dataSource={data} id="Grid" toolbar={toolbarOptions}
allowPaging={true} editSettings={editSettings} load={load}>
    <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID'
textAlign='Right' width='100' isPrimaryKey={true}></ColumnDirective>
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='120'></ColumnDirective>
        <ColumnDirective field='Freight' headerText='Freight' textAlign='Right'
width='120' format='C2' ></ColumnDirective>
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150'></ColumnDirective>
    </ColumnsDirective>
    <Inject services={[Page, Toolbar, Edit]} />
</GridComponent>
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', Role: 'Admin', EmployeeID: 5,
        OrderDate: new Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', Mask: '1111', ShipPostalCode: '51100', ShipCountry:
        'France', Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', Role: 'Employee', EmployeeID: 6,
        OrderDate: new Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', Mask: '2222', ShipPostalCode: '44087', ShipCountry:
        'Germany', Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 4,
        OrderDate: new Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', Mask: '3333', ShipPostalCode: '05454-876',
        ShipCountry: 'Brazil', Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', Role: 'Manager', EmployeeID: 3,
        OrderDate: new Date(8367642e5),
    }
]

```

```

        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
        ShipRegion: 'CJ', Mask: '4444', ShipPostalCode: '69004', ShipCountry:
'France', Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', Role: 'Manager', EmployeeID: 4,
OrderDate: new Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', Mask: '5555', ShipPostalCode: 'B-6000',
ShipCountry: 'Belgium', Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 3,
OrderDate: new Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', Mask: '6666', ShipPostalCode: '05454-876',
ShipCountry: 'Brazil', Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', Role: 'Employee', EmployeeID: 5,
OrderDate: new Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', Mask: '7777', ShipPostalCode: '3012', ShipCountry:
'Switzerland', Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', Role: 'Admin', EmployeeID: 9,
OrderDate: new Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', Mask: '8888', ShipPostalCode: '1204', ShipCountry:
'Switzerland', Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', Role: 'Employee', EmployeeID: 3,
OrderDate: new Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', Mask: '9999', ShipPostalCode: '08737-363',
ShipCountry: 'Brazil', Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', Role: 'Admin', EmployeeID: 4,
OrderDate: new Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', Mask: '1234', ShipPostalCode: '5022',
ShipCountry: 'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', Role: 'Manager', EmployeeID: 1,
OrderDate: new Date(8375418e5),

```

```

        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', Mask: '2345', ShipPostalCode: '8010', ShipCountry:
'Austria', Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', Role: 'Admin', EmployeeID: 4,
OrderDate: new Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', Mask: '3456', ShipPostalCode: '05022', ShipCountry:
'Mexico', Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', Role: 'Admin', EmployeeID: 4,
OrderDate: new Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', Mask: '4567', ShipPostalCode: '50739', ShipCountry:
'Germany', Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', Role: 'Manager', EmployeeID: 4,
OrderDate: new Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', Mask: '5678', ShipPostalCode: '02389-673',
ShipCountry: 'Brazil', Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', Role: 'Employee', EmployeeID: 8,
OrderDate: new Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', Mask: '6789', ShipPostalCode: '87110', ShipCountry:
'USA', Freight: 48.29, Verified: !0
    }
}
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', Role: 'Admin', EmployeeID: 5,
OrderDate: new Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', Mask: '1111', ShipPostalCode: '51100', ShipCountry:
'France', Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', Role: 'Employee', EmployeeID: 6,
OrderDate: new Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',

```



```

        ShipRegion: 'CJ', Mask: '2222', ShipPostalCode: '44087', ShipCountry:
        'Germany', Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 4,
        OrderDate: new Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', Mask: '3333', ShipPostalCode: '05454-876',
        ShipCountry: 'Brazil', Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', Role: 'Manager', EmployeeID: 3,
        OrderDate: new Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', Mask: '4444', ShipPostalCode: '69004', ShipCountry:
        'France', Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', Role: 'Manager', EmployeeID: 4,
        OrderDate: new Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', Mask: '5555', ShipPostalCode: 'B-6000',
        ShipCountry: 'Belgium', Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 3,
        OrderDate: new Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', Mask: '6666', ShipPostalCode: '05454-876',
        ShipCountry: 'Brazil', Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', Role: 'Employee', EmployeeID: 5,
        OrderDate: new Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', Mask: '7777', ShipPostalCode: '3012', ShipCountry:
        'Switzerland', Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', Role: 'Admin', EmployeeID: 9,
        OrderDate: new Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', Mask: '8888', ShipPostalCode: '1204', ShipCountry:
        'Switzerland', Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', Role: 'Employee', EmployeeID: 3,
        OrderDate: new Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',

```

```

        ShipRegion: 'SP', Mask: '9999', ShipPostalCode: '08737-363',
        ShipCountry: 'Brazil', Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', Role: 'Admin', EmployeeID: 4,
        OrderDate: new Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', Mask: '1234', ShipPostalCode: '5022',
        ShipCountry: 'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', Role: 'Manager', EmployeeID: 1,
        OrderDate: new Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', Mask: '2345', ShipPostalCode: '8010', ShipCountry:
        'Austria', Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', Role: 'Admin', EmployeeID: 4,
        OrderDate: new Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', Mask: '3456', ShipPostalCode: '05022', ShipCountry:
        'Mexico', Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', Role: 'Admin', EmployeeID: 4,
        OrderDate: new Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', Mask: '4567', ShipPostalCode: '50739', ShipCountry:
        'Germany', Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', Role: 'Manager', EmployeeID: 4,
        OrderDate: new Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', Mask: '5678', ShipPostalCode: '02389-673',
        ShipCountry: 'Brazil', Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', Role: 'Employee', EmployeeID: 8,
        OrderDate: new Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', Mask: '6789', ShipPostalCode: '87110', ShipCountry:
        'USA', Freight: 48.29, Verified: !0
    }
    ];

```

[Open dropdown edit popup on single click](#)

You can open the default dropdown edit popup with single click edit by focusing the dropdown element and calling the EJ2 dropdown list's [showPopup](#) method in the Grid's [actionComplete](#) event. In this demo

we have used a global flag variable in the **mouseup** event to ensure if the dropdown column is the clicked edit target.

APP.JSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Edit,
Page, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    const editSettings = { allowEditing: true, allowAdding: true,
allowDeleting: true, mode: 'Normal' };
    const toolbarOptions = ['Add', 'Edit', 'Delete', 'Update', 'Cancel'];
    let isDropdown = false;
    const load = () => {
        let gridInstance = document.getElementById('Grid').ej2_instances[0];
        if (gridInstance) {
            gridInstance.element.addEventListener('mouseup', function (e) {
                if (e.target.classList.contains("e-rowcell")) {
                    if (gridInstance.isEdit)
                        gridInstance.endEdit();
                    let rowInfo = gridInstance.getRowInfo(e.target);
                    if (rowInfo.column.field === "ShipCountry")
                        isDropdown = true;
                    gridInstance.selectRow(rowInfo.rowIndex);
                    gridInstance.startEdit();
                }
            });
        }
    };
    const onActionComplete = (args) => {
        if (args.requestType === "beginEdit" && isDropdown) {
            isDropdown = false;
            let dropdownObj = args.form.querySelector('.e-
dropdownlist').ej2_instances[0];
            dropdownObj.element.focus();
            dropdownObj.showPopup();
        }
    };
    return <GridComponent dataSource={data} id="Grid"
toolbar={toolbarOptions} allowPaging={true} editSettings={editSettings}
load={load} actionComplete={onActionComplete}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID'
textAlign='Right' width='100' isPrimaryKey={true}></ColumnDirective>
            <ColumnDirective field='CustomerID' headerText='Customer ID'
width='120'></ColumnDirective>
            <ColumnDirective field='Freight' headerText='Freight' textAlign='Right'
width='120' format='C2'></ColumnDirective>
            <ColumnDirective field='ShipCountry' headerText='Ship Country'
editType='dropdownedit' width='150'></ColumnDirective>
        </ColumnsDirective>
        <Inject services={[Page, Toolbar, Edit]}/>
    </GridComponent>;
}
```

```
export default App;
```

APP.TSX

```
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Edit,
Page, Toolbar, ToolbarItems, EditSettingsModel } from '@syncfusion/ej2-react-
grids';
import { MouseEventArgs } from '@syncfusion/ej2-base';
import * as React from 'react';
import { data } from './datasource';
function App() {
    const editSettings: EditSettingsModel = { allowEditing: true, allowAdding:
true, allowDeleting: true, mode: 'Normal' };
    const toolbarOptions: ToolbarItems[] = ['Add', 'Edit', 'Delete', 'Update',
'Cancel'];
    let isDropdown = false;
    const load = (): void => {
        let gridInstance = (document.getElementById('Grid') as
HTMLElement).ej2_instances[0];
        if (gridInstance) {
            gridInstance.element.addEventListener('mouseup', function (e) {
                if ((e.target as HTMLElement).classList.contains("e-rowcell")) {
                    if (gridInstance.isEdit)
                        gridInstance.endEdit();
                    let rowInfo = gridInstance.getRowInfo(e.target);
                    if (rowInfo.column.field === "ShipCountry")
                        isDropdown = true;
                    gridInstance.selectRow(rowInfo.rowIndex);
                    gridInstance.startEdit();
                }
            });
        }
    }
    const onActionComplete = (args) => {
        if (args.requestType === "beginEdit" && isDropdown) {
            isDropdown = false;
            let dropdownObj = args.form.querySelector('.e-
dropdownlist').ej2_instances[0];
            dropdownObj.element.focus();
            dropdownObj.showPopup();
        }
    }
    return <GridComponent dataSource={data} id="Grid" toolbar={toolbarOptions}
allowPaging={true} editSettings={editSettings} load={load}
actionComplete={onActionComplete}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID'
textAlign='Right' width='100' isPrimaryKey={true}></ColumnDirective>
            <ColumnDirective field='CustomerID' headerText='Customer ID'
width='120'></ColumnDirective>
            <ColumnDirective field='Freight' headerText='Freight' textAlign='Right'
width='120' format='C2' ></ColumnDirective>
            <ColumnDirective field='ShipCountry' headerText='Ship Country'
editType='dropdownedit' width='150'></ColumnDirective>
        </ColumnsDirective>
        <Inject services={[Page, Toolbar, Edit]} />
    </GridComponent>
```

```

</GridComponent>
};
export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', Role: 'Admin', EmployeeID: 5,
    OrderDate: new Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', Mask: '1111', ShipPostalCode: '51100', ShipCountry:
    'France', Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', Role: 'Employee', EmployeeID: 6,
    OrderDate: new Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', Mask: '2222', ShipPostalCode: '44087', ShipCountry:
    'Germany', Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 4,
    OrderDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', Mask: '3333', ShipPostalCode: '05454-876',
    ShipCountry: 'Brazil', Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', Role: 'Manager', EmployeeID: 3,
    OrderDate: new Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', Mask: '4444', ShipPostalCode: '69004', ShipCountry:
    'France', Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', Role: 'Manager', EmployeeID: 4,
    OrderDate: new Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', Mask: '5555', ShipPostalCode: 'B-6000',
    ShipCountry: 'Belgium', Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 3,
    OrderDate: new Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', Mask: '6666', ShipPostalCode: '05454-876',
    ShipCountry: 'Brazil', Freight: 58.17, Verified: !0
  },
  {

```

```

    OrderID: 10254, CustomerID: 'CHOPS', Role: 'Employee', EmployeeID: 5,
OrderDate: new Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
    ShipRegion: 'CJ', Mask: '7777', ShipPostalCode: '3012', ShipCountry:
'Switzerland', Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', Role: 'Admin', EmployeeID: 9,
OrderDate: new Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', Mask: '8888', ShipPostalCode: '1204', ShipCountry:
'Switzerland', Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', Role: 'Employee', EmployeeID: 3,
OrderDate: new Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', Mask: '9999', ShipPostalCode: '08737-363',
ShipCountry: 'Brazil', Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', Role: 'Admin', EmployeeID: 4,
OrderDate: new Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', Mask: '1234', ShipPostalCode: '5022',
ShipCountry: 'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', Role: 'Manager', EmployeeID: 1,
OrderDate: new Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', Mask: '2345', ShipPostalCode: '8010', ShipCountry:
'Austria', Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', Role: 'Admin', EmployeeID: 4,
OrderDate: new Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', Mask: '3456', ShipPostalCode: '05022', ShipCountry:
'Mexico', Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', Role: 'Admin', EmployeeID: 4,
OrderDate: new Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', Mask: '4567', ShipPostalCode: '50739', ShipCountry:
'Germany', Freight: 55.09, Verified: !0
    },
    {

```

```

    OrderID: 10261, CustomerID: 'QUEDE', Role: 'Manager', EmployeeID: 4,
    OrderDate: new Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua da Panificadora, 12',
    ShipRegion: 'RJ', Mask: '5678', ShipPostalCode: '02389-673',
    ShipCountry: 'Brazil', Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', Role: 'Employee', EmployeeID: 8,
    OrderDate: new Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
    ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', Mask: '6789', ShipPostalCode: '87110', ShipCountry:
    'USA', Freight: 48.29, Verified: !0
  }
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', Role: 'Admin', EmployeeID: 5,
    OrderDate: new Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', Mask: '1111', ShipPostalCode: '51100', ShipCountry:
    'France', Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', Role: 'Employee', EmployeeID: 6,
    OrderDate: new Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', Mask: '2222', ShipPostalCode: '44087', ShipCountry:
    'Germany', Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 4,
    OrderDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', Mask: '3333', ShipPostalCode: '05454-876',
    ShipCountry: 'Brazil', Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', Role: 'Manager', EmployeeID: 3,
    OrderDate: new Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', Mask: '4444', ShipPostalCode: '69004', ShipCountry:
    'France', Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', Role: 'Manager', EmployeeID: 4,
    OrderDate: new Date(8368506e5),

```

```

        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', Mask: '5555', ShipPostalCode: 'B-6000',
        ShipCountry: 'Belgium', Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 3,
        OrderDate: new Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', Mask: '6666', ShipPostalCode: '05454-876',
        ShipCountry: 'Brazil', Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', Role: 'Employee', EmployeeID: 5,
        OrderDate: new Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', Mask: '7777', ShipPostalCode: '3012', ShipCountry:
        'Switzerland', Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', Role: 'Admin', EmployeeID: 9,
        OrderDate: new Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', Mask: '8888', ShipPostalCode: '1204', ShipCountry:
        'Switzerland', Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', Role: 'Employee', EmployeeID: 3,
        OrderDate: new Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', Mask: '9999', ShipPostalCode: '08737-363',
        ShipCountry: 'Brazil', Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', Role: 'Admin', EmployeeID: 4,
        OrderDate: new Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', Mask: '1234', ShipPostalCode: '5022',
        ShipCountry: 'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', Role: 'Manager', EmployeeID: 1,
        OrderDate: new Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', Mask: '2345', ShipPostalCode: '8010', ShipCountry:
        'Austria', Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', Role: 'Admin', EmployeeID: 4,
        OrderDate: new Date(8376282e5),

```



```

        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', Mask: '3456', ShipPostalCode: '05022', ShipCountry:
        'Mexico', Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', Role: 'Admin', EmployeeID: 4,
        OrderDate: new Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', Mask: '4567', ShipPostalCode: '50739', ShipCountry:
        'Germany', Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', Role: 'Manager', EmployeeID: 4,
        OrderDate: new Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', Mask: '5678', ShipPostalCode: '02389-673',
        ShipCountry: 'Brazil', Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', Role: 'Employee', EmployeeID: 8,
        OrderDate: new Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', Mask: '6789', ShipPostalCode: '87110', ShipCountry:
        'USA', Freight: 48.29, Verified: !0
    }
    ]];

```

Batch Editing

You can make a cell editable on a single click with **Batch** mode of editing in Grid, by using the [editCell](#) method.

Bind the **mouseup** event for Grid and in the event handler call the [editCell](#) method, based on the clicked target element.

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Edit,
Page, Toolbar } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    const editSettings = { allowEditing: true, allowAdding: true,
allowDeleting: true, mode: 'Batch' };
    const toolbarOptions = ['Add', 'Edit', 'Delete', 'Update', 'Cancel'];
    const load = () => {
        let instance = document.getElementById('Grid').ej2_instances[0];
        if (instance) {
            instance.element.addEventListener('mouseup', (e) => {
                if (e.target.classList.contains("e-rowcell")) {
                    let index =
parseInt(e.target.parentElement.getAttribute("data-rowindex"));
                    let colindex = parseInt(e.target.getAttribute("data-
colindex"));

```

```

        let field = instance.getColumns()[colindex].field;
        instance.editModule.editCell(index, field);
    }
    };
    });
}
};
return <GridComponent dataSource={data} id="Grid"
toolbar={toolbarOptions} allowPaging={true} editSettings={editSettings}
load={load.bind(this)}>
    <ColumnsDirective>
        <ColumnDirective field='OrderID' headerText='Order ID'
textAlign='Right' width='100' isPrimaryKey={true}></ColumnDirective>
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='120'></ColumnDirective>
        <ColumnDirective field='Freight' headerText='Freight' textAlign='Right'
width='120' format='C2'></ColumnDirective>
        <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='150'></ColumnDirective>
    </ColumnsDirective>
    <Inject services={[Page, Toolbar, Edit]}/>
</GridComponent>;
}
export default App

```

APP.TSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Edit,
Page, Toolbar, ToolbarItems, EditSettingsModel } from '@syncfusion/ej2-react-
grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
    const editSettings: EditSettingsModel = { allowEditing: true, allowAdding:
true, allowDeleting: true, mode: 'Batch' };
    const toolbarOptions: ToolbarItems[] = ['Add', 'Edit', 'Delete', 'Update',
'Cancel'];
    const load = (): void => {
        let instance = (document.getElementById('Grid') as
HTMLElement).ej2_instances[0];
        if (instance) {
            instance.element.addEventListener('mouseup', (e: MouseEventArgs) => {
                if ((e.target as HTMLElement).classList.contains("e-rowcell")) {
                    let index: number = parseInt((e.target as
HTMLElement).parentElement.getAttribute("data-rowindex"));
                    let colindex: number = parseInt((e.target as
HTMLElement).getAttribute("data-colindex"));
                    let field: string = instance.getColumns()[colindex].field;
                    instance.editModule.editCell(index, field);
                }
            });
        }
    }
    return <GridComponent dataSource={data} id="Grid" toolbar={toolbarOptions}
allowPaging={true} editSettings={editSettings} load={load.bind(this)}>
        <ColumnsDirective>

```

```

    <ColumnDirective field='OrderID' headerText='Order ID'
    textAlign='Right' width='100' isPrimaryKey={true}></ColumnDirective>
    <ColumnDirective field='CustomerID' headerText='Customer ID'
    width='120'></ColumnDirective>
    <ColumnDirective field='Freight' headerText='Freight' textAlign='Right'
    width='120' format='C2' ></ColumnDirective>
    <ColumnDirective field='ShipCountry' headerText='Ship Country'
    width='150'></ColumnDirective>
  </ColumnsDirective>
  <Inject services={[Page, Toolbar, Edit]} />
</GridComponent>
}
export default App

```

DATASOURCE.JSX

```

export let employeeData = [{
  'EmployeeID': 1,
  'LastName': 'Davolio',
  'FirstName': 'Nancy',
  'Title': 'Sales Representative',
  'TitleOfCourtesy': 'Ms.',
  'BirthDate': new Date(-664743600000),
  'HireDate': new Date(704692800000),
  'Address': '507 - 20th Ave. E.\r\nApt. 2A',
  'City': 'Seattle',
  'Region': 'WA',
  'PostalCode': '98122',
  'Country': 'USA',
  'HomePhone': '(206) 555-9857',
  'Extension': '5467',
  'Photo': { 'Length': 21626 },
  'Notes': 'Education includes a BA in psychology from Colorado State University in 1970. She also completed\'
    \'The Art of the Cold Call.\' Nancy is a member of Toastmasters International.',
  'ReportsTo': 2,
  'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
  'EmployeeID': 2,
  'LastName': 'Fuller',
  'FirstName': 'Andrew',
  'Title': 'Vice President, Sales',
  'TitleOfCourtesy': 'Dr.',
  'BirthDate': new Date(-563828400000),
  'HireDate': new Date(713764800000),
  'Address': '908 W. Capital Way',
  'City': 'Tacoma',
  'Region': 'WA',
  'PostalCode': '98401',
  'Country': 'USA',
  'HomePhone': '(206) 555-9482',
  'Extension': '3457',
  'Photo': { 'Length': 21626 },

```

```

'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in
international marketing from the University of \
Dallas in 1981. He is fluent in French and Italian and reads German. He
joined the company as a sales representative, \
was promoted to sales manager in January 1992 and to vice president of
sales in March 1993. Andrew is a member of the \
Sales Management Roundtable, the Seattle Chamber of Commerce, and the
Pacific Rim Importers Association.',
'ReportsTo': 0,
'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
},
{
'EmployeeID': 3,
'LastName': 'Leverling',
'FirstName': 'Janet',
'Title': 'Sales Representative',
'TitleOfCourtesy': 'Ms.',
'BirthDate': new Date(-200088000000),
'HireDate': new Date(702104400000),
'Address': '722 Moss Bay Blvd.',
'City': 'Kirkland',
'Region': 'WA',
'PostalCode': '98033',
'Country': 'USA',
'HomePhone': '(206) 555-3412',
'Extension': '3355',
'Photo': { 'Length': 21722 },
'Notes': 'Janet has a BS degree in chemistry from Boston College
(1984). \
She has also completed a certificate program in food retailing
management.\
Janet was hired as a sales associate in 1991 and promoted to sales
representative in February 1992.',
'ReportsTo': 2,
'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
},
{
'EmployeeID': 4,
'LastName': 'Peacock',
'FirstName': 'Margaret',
'Title': 'Sales Representative',
'TitleOfCourtesy': 'Mrs.',
'BirthDate': new Date(-1018814400000),
'HireDate': new Date(736401600000),
'Address': '4110 Old Redmond Rd.',
'City': 'Redmond',
'Region': 'WA',
'PostalCode': '98052',
'Country': 'USA',
'HomePhone': '(206) 555-8122',
'Extension': '5176',
'Photo': { 'Length': 21626 },
'Notes': 'Margaret holds a BA in English literature from Concordia
College (1958) and an MA from the American \
Institute of Culinary Arts (1966). She was assigned to the London office
temporarily from July through November 1992.',
'ReportsTo': 2,

```

```

    'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
  },
  {
    'EmployeeID': 5,
    'LastName': 'Buchanan',
    'FirstName': 'Steven',
    'Title': 'Sales Manager',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-468010800000),
    'HireDate': new Date(750830400000),
    'Address': '14 Garrett Hill',
    'City': 'London',
    'Region': null,
    'PostalCode': 'SW1 8JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-4848',
    'Extension': '3453',
    'Photo': { 'Length': 21626 },
    'Notes': 'Steven Buchanan graduated from St. Andrews University,
Scotland, with a BSC degree in 1976. Upon joining the company as \
a sales representative in 1992, he spent 6 months in an orientation
program at the Seattle office and then returned to his permanent \
post in London. He was promoted to sales manager in March 1993. Mr.
Buchanan has completed the courses \'Successful \
Telemarketing\' and \'International Sales Management.\' He is fluent in
French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/buchanan.bmp'
  },
  {
    'EmployeeID': 6,
    'LastName': 'Suyama',
    'FirstName': 'Michael',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mr.',
    'BirthDate': new Date(-205185600000),
    'HireDate': new Date(750830400000),
    'Address': 'Coventry House\r\nMiner Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'EC2 7JR',
    'Country': 'UK',
    'HomePhone': '(71) 555-7773',
    'Extension': '428',
    'Photo': { 'Length': 21626 },
    'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese, and
Spanish.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  },
  {
    'EmployeeID': 7,
    'LastName': 'King',

```

```

      'FirstName': 'Robert',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Mr.',
      'BirthDate': new Date(-302731200000),
      'HireDate': new Date(757486800000),
      'Address': 'Edgeham Hollow\r\nWinchester Way',
      'City': 'London',
      'Region': null,
      'PostalCode': 'RG1 9SP',
      'Country': 'UK',
      'HomePhone': '(71) 555-5598',
      'Extension': '465',
      'Photo': { 'Length': 21626 },
      'Notes': 'Robert King served in the Peace Corps and traveled
extensively before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
      'ReportsTo': 5,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 8,
      'LastName': 'Callahan',
      'FirstName': 'Laura',
      'Title': 'Inside Sales Coordinator',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-377982000000),
      'HireDate': new Date(762843600000),
      'Address': '4726 - 11th Ave. N.E.',
      'City': 'Seattle',
      'Region': 'WA',
      'PostalCode': '98105',
      'Country': 'USA',
      'HomePhone': '(206) 555-1189',
      'Extension': '2344',
      'Photo': { 'Length': 21626 },
      'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
      'ReportsTo': 2,
      'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    },
    {
      'EmployeeID': 9,
      'LastName': 'Dodsworth',
      'FirstName': 'Anne',
      'Title': 'Sales Representative',
      'TitleOfCourtesy': 'Ms.',
      'BirthDate': new Date(-123966000000),
      'HireDate': new Date(784875600000),
      'Address': '7 Houndstooth Rd.',
      'City': 'London',
      'Region': null,
      'PostalCode': 'WG2 7LT',
      'Country': 'UK',
      'HomePhone': '(71) 555-4444',

```

```

        'Extension': '452',
        'Photo': { 'Length': 21626 },
        'Notes': 'Anne has a BA degree in English from St. Lawrence College.
She is fluent in French and German.',
        'ReportsTo': 5,
        'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
    }];
export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', Role: 'Admin', EmployeeID: 5,
        OrderDate: new Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', Mask: '1111', ShipPostalCode: '51100', ShipCountry:
        'France', Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', Role: 'Employee', EmployeeID: 6,
        OrderDate: new Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', Mask: '2222', ShipPostalCode: '44087', ShipCountry:
        'Germany', Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 4,
        OrderDate: new Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', Mask: '3333', ShipPostalCode: '05454-876',
        ShipCountry: 'Brazil', Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', Role: 'Manager', EmployeeID: 3,
        OrderDate: new Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', Mask: '4444', ShipPostalCode: '69004', ShipCountry:
        'France', Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', Role: 'Manager', EmployeeID: 4,
        OrderDate: new Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', Mask: '5555', ShipPostalCode: 'B-6000',
        ShipCountry: 'Belgium', Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 3,
        OrderDate: new Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', Mask: '6666', ShipPostalCode: '05454-876',
        ShipCountry: 'Brazil', Freight: 58.17, Verified: !0
    },
    {

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    OrderID: 10254, CustomerID: 'CHOPS', Role: 'Employee', EmployeeID: 5,
OrderDate: new Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
    ShipRegion: 'CJ', Mask: '7777', ShipPostalCode: '3012', ShipCountry:
'Switzerland', Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', Role: 'Admin', EmployeeID: 9,
OrderDate: new Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', Mask: '8888', ShipPostalCode: '1204', ShipCountry:
'Switzerland', Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', Role: 'Employee', EmployeeID: 3,
OrderDate: new Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', Mask: '9999', ShipPostalCode: '08737-363',
ShipCountry: 'Brazil', Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', Role: 'Admin', EmployeeID: 4,
OrderDate: new Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', Mask: '1234', ShipPostalCode: '5022',
ShipCountry: 'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', Role: 'Manager', EmployeeID: 1,
OrderDate: new Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', Mask: '2345', ShipPostalCode: '8010', ShipCountry:
'Austria', Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', Role: 'Admin', EmployeeID: 4,
OrderDate: new Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', Mask: '3456', ShipPostalCode: '05022', ShipCountry:
'Mexico', Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', Role: 'Admin', EmployeeID: 4,
OrderDate: new Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', Mask: '4567', ShipPostalCode: '50739', ShipCountry:
'Germany', Freight: 55.09, Verified: !0
    },
    {

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    OrderID: 10261, CustomerID: 'QUEDE', Role: 'Manager', EmployeeID: 4,
    OrderDate: new Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua da Panificadora, 12',
    ShipRegion: 'RJ', Mask: '5678', ShipPostalCode: '02389-673',
    ShipCountry: 'Brazil', Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', Role: 'Employee', EmployeeID: 8,
    OrderDate: new Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
    ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', Mask: '6789', ShipPostalCode: '87110', ShipCountry:
    'USA', Freight: 48.29, Verified: !0
  }
];
export let sdata = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
    Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'Brazil',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
    Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
    Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
    Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
    Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
    Freight: 51.3, Verified: !0
  },
  {

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    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Brazil',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    }
];
export let productData = [
    {
        ProductID: 1,
        ProductName: 'Chai',
        UnitPrice: 18.0,
        UnitsInStock: 39,
        TotalCost: 702
    },
    {
        ProductID: 2,
        ProductName: 'Chang',
        UnitPrice: 19.0,
        UnitsInStock: 17,
        TotalCost: 323
    },
    {
        ProductID: 3,
        ProductName: 'Aniseed Syrup',
        UnitPrice: 10.0,
        UnitsInStock: 13,
        TotalCost: 130
    },
    {
        ProductID: 4,
        ProductName: "Chef Anton's Cajun Seasoning",
        UnitPrice: 22.0,
        UnitsInStock: 53,
        TotalCost: 1166
    },
    {
        ProductID: 5,
        ProductName: "Chef Anton's Gumbo Mix",

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        UnitPrice: 21.35,  
        UnitsInStock: 0,  
        TotalCost: 0  
    }  
];  
export let employeeDetails = [  
    {  
        EmployeeID: 1, Role: 'TeamLead', Salary: 15000, Address: 'Chennai'  
    },  
    {  
        EmployeeID: 2, Role: 'Manager', Salary: 20000, Address: 'Bangalore'  
    },  
    {  
        EmployeeID: 3, Role: 'Engineer', Salary: 10000, Address: 'Cochin'  
    },  
    {  
        EmployeeID: 4, Role: 'Sales', Salary: 20000, Address: 'Trivandrum'  
    },  
    {  
        EmployeeID: 5, Role: 'Support', Salary: 10000, Address: 'Delhi'  
    }  
];  
export let purchaseData = [  
    {  
        'OrderID': 10248,  
        'CustomerID': 'VINET',  
        'OrderDate': '1996-07-04T10:10:00.000Z',  
        'ShippedDate': '1996-07-16T12:20:00.000Z',  
        'Freight': 32.38,  
        'ShipName': 'Vins et alcools Chevalier',  
        'ShipAddress': '59 rue de l\'Abbaye',  
        'ShipCity': 'Reims',  
        'ShipRegion': null,  
        'ShipCountry': 'France'  
    },  
    {  
        'OrderID': 10249,  
        'CustomerID': 'TOMSP',  
        'OrderDate': '1996-07-05T12:20:00.000Z',  
        'ShippedDate': '1996-07-10T13:20:00.000Z',  
        'Freight': 11.61,  
        'ShipName': 'Toms Spezialitäten',  
        'ShipAddress': 'Luisenstr. 48',  
        'ShipCity': 'Münster',  
        'ShipRegion': null,  
        'ShipCountry': 'Germany'  
    },  
    {  
        'OrderID': 10250,  
        'CustomerID': 'HANAR',  
        'OrderDate': '1996-07-08T08:40:00.000Z',  
        'ShippedDate': '1996-07-12T07:50:00.000Z',  
        'Freight': 65.83,  
        'ShipName': 'Hanari Carnes',  
        'ShipAddress': 'Rua do Paço, 67',  
        'ShipCity': 'Rio de Janeiro',  
        'ShipRegion': 'RJ',
```

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    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10251,
    'CustomerID': 'VICTE',
    'OrderDate': '1996-07-08T07:50:00.000Z',
    'ShippedDate': '1996-07-15T15:50:00.000Z',
    'Freight': 41.34,
    'ShipName': 'Victuailles en stock',
    'ShipAddress': '2, rue du Commerce',
    'ShipCity': 'Lyon',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10252,
    'CustomerID': 'SUPRD',
    'OrderDate': '1996-07-09T12:05:00.000Z',
    'ShippedDate': '1996-07-11T17:30:00.000Z',
    'Freight': 51.3,
    'ShipName': 'Suprêmes délices',
    'ShipAddress': 'Boulevard Tirou, 255',
    'ShipCity': 'Charleroi',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
    'OrderID': 10253,
    'CustomerID': 'HANAR',
    'OrderDate': '1996-07-10T11:20:00.000Z',
    'ShippedDate': '1996-07-16T10:10:00.000Z',
    'Freight': 58.17,
    'ShipName': 'Hanari Carnes',
    'ShipAddress': 'Rua do Paço, 67',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10254,
    'CustomerID': 'CHOPS',
    'OrderDate': '1996-07-17T18:30:00.000Z',
    'ShippedDate': '1996-07-23T20:40:00.000Z',
    'Freight': 22.98,
    'ShipName': 'Chop-suey Chinese',
    'ShipAddress': 'Hauptstr. 31',
    'ShipCity': 'Bern',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
  {
    'OrderID': 10255,
    'CustomerID': 'RICSU',
    'OrderDate': '1996-07-12T10:40:00.000Z',
    'ShippedDate': '1996-07-15T05:40:00.000Z',
    'Freight': 148.33,
    'ShipName': 'Richter Supermarkt',

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        'ShipAddress': 'Starenweg 5',
        'ShipCity': 'Genève',
        'ShipRegion': null,
        'ShipCountry': 'Switzerland'
    },
    {
        'OrderID': 10256,
        'CustomerID': 'WELLI',
        'OrderDate': '1996-07-15T20:50:00.000Z',
        'ShippedDate': '1996-07-17T21:50:00.000Z',
        'Freight': 13.97,
        'ShipName': 'Wellington Importadora',
        'ShipAddress': 'Rua do Mercado, 12',
        'ShipCity': 'Resende',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10257,
        'CustomerID': 'HILAA',
        'OrderDate': '1996-07-16T03:20:00.000Z',
        'ShippedDate': '1996-07-22T14:40:00.000Z',
        'Freight': 81.91,
        'ShipName': 'HILARION-Abastos',
        'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
        'ShipCity': 'San Cristóbal',
        'ShipRegion': 'Táchira',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 10258,
        'CustomerID': 'ERNSH',
        'OrderDate': '1996-07-17T18:30:00.000Z',
        'ShippedDate': '1996-07-23T14:50:00.000Z',
        'Freight': 140.51,
        'ShipName': 'Ernst Handel',
        'ShipAddress': 'Kirchgasse 6',
        'ShipCity': 'Graz',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
        'OrderID': 10259,
        'CustomerID': 'CENTC',
        'OrderDate': '1996-07-18T01:20:00.000Z',
        'ShippedDate': '1996-07-25T16:20:00.000Z',
        'Freight': 3.25,
        'ShipName': 'Centro comercial Moctezuma',
        'ShipAddress': 'Sierras de Granada 9993',
        'ShipCity': 'México D.F.',
        'ShipRegion': null,
        'ShipCountry': 'Mexico'
    },
    {
        'OrderID': 10260,
        'CustomerID': 'OTTIK',
        'OrderDate': '1996-07-19T11:20:00.000Z',

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    'ShippedDate': '1996-07-29T03:10:00.000Z',
    'Freight': 55.09,
    'ShipName': 'Ottilies Käseladen',
    'ShipAddress': 'Mehrheimerstr. 369',
    'ShipCity': 'Köln',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10261,
    'CustomerID': 'QUEDE',
    'OrderDate': '1996-07-19T18:30:00.000Z',
    'ShippedDate': '1996-07-30T23:10:00.000Z',
    'Freight': 3.05,
    'ShipName': 'Que Delícia',
    'ShipAddress': 'Rua da Panificadora, 12',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10262,
    'CustomerID': 'RATTC',
    'OrderDate': '1996-07-22T21:40:00.000Z',
    'ShippedDate': '1996-07-25T19:10:00.000Z',
    'Freight': 48.29,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10263,
    'CustomerID': 'ERNSH',
    'OrderDate': '1996-07-23T00:10:00.000Z',
    'ShippedDate': '1996-07-31T22:50:00.000Z',
    'Freight': 146.06,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10264,
    'CustomerID': 'FOLKO',
    'OrderDate': '1996-07-24T20:10:00.000Z',
    'ShippedDate': '1996-08-23T11:40:00.000Z',
    'Freight': 3.67,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {

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    'OrderID': 10265,
    'CustomerID': 'BLONP',
    'OrderDate': '1996-07-25T23:50:00.000Z',
    'ShippedDate': '1996-08-12T02:10:00.000Z',
    'Freight': 55.28,
    'ShipName': 'Blondel père et fils',
    'ShipAddress': '24, place Kléber',
    'ShipCity': 'Strasbourg',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10266,
    'CustomerID': 'WARTH',
    'OrderDate': '1996-07-26T03:10:00.000Z',
    'ShippedDate': '1996-07-31T01:50:00.000Z',
    'Freight': 25.73,
    'ShipName': 'Wartian Herkku',
    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 10267,
    'CustomerID': 'FRANK',
    'OrderDate': '1996-07-29T04:10:00.000Z',
    'ShippedDate': '1996-08-06T17:20:00.000Z',
    'Freight': 208.58,
    'ShipName': 'Frankenversand',
    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10268,
    'CustomerID': 'GROSR',
    'OrderDate': '1996-07-30T01:20:00.000Z',
    'ShippedDate': '1996-08-02T03:40:00.000Z',
    'Freight': 66.29,
    'ShipName': 'GROSELLA-Restaurante',
    'ShipAddress': '5a Ave. Los Palos Grandes',
    'ShipCity': 'Caracas',
    'ShipRegion': 'DF',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10269,
    'CustomerID': 'WHITC',
    'OrderDate': '1996-07-31T05:10:00.000Z',
    'ShippedDate': '1996-08-09T07:10:00.000Z',
    'Freight': 4.56,
    'ShipName': 'White Clover Markets',
    'ShipAddress': '1029 - 12th Ave. S.',
    'ShipCity': 'Seattle',
    'ShipRegion': 'WA',

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    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10270,
    'CustomerID': 'WARTH',
    'OrderDate': '1996-08-01T09:10:00.000Z',
    'ShippedDate': '1996-08-02T11:10:00.000Z',
    'Freight': 136.54,
    'ShipName': 'Wartian Herkku',
    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 10271,
    'CustomerID': 'SPLIR',
    'OrderDate': '1996-08-01T13:10:00.000Z',
    'ShippedDate': '1996-08-30T15:10:00.000Z',
    'Freight': 4.54,
    'ShipName': 'Split Rail Beer & Ale',
    'ShipAddress': 'P.O. Box 555',
    'ShipCity': 'Lander',
    'ShipRegion': 'WY',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10272,
    'CustomerID': 'RATTC',
    'OrderDate': '1996-08-02T17:10:00.000Z',
    'ShippedDate': '1996-08-06T19:10:00.000Z',
    'Freight': 98.03,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10273,
    'CustomerID': 'QUICK',
    'OrderDate': '1996-08-05T21:10:00.000Z',
    'ShippedDate': '1996-08-12T23:10:00.000Z',
    'Freight': 76.07,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10274,
    'CustomerID': 'VINET',
    'OrderDate': '1996-08-06T02:10:00.000Z',
    'ShippedDate': '1996-08-16T04:10:00.000Z',
    'Freight': 6.01,
    'ShipName': 'Vins et alcools Chevalier',

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        'ShipAddress': '59 rue de l\'Abbaye',
        'ShipCity': 'Reims',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10275,
        'CustomerID': 'MAGAA',
        'OrderDate': '1996-08-07T06:10:00.000Z',
        'ShippedDate': '1996-08-09T08:10:00.000Z',
        'Freight': 26.93,
        'ShipName': 'Magazzini Alimentari Riuniti',
        'ShipAddress': 'Via Ludovico il Moro 22',
        'ShipCity': 'Bergamo',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
    {
        'OrderID': 10276,
        'CustomerID': 'TORTU',
        'OrderDate': '1996-08-08T10:10:00.000Z',
        'ShippedDate': '1996-08-14T12:10:00.000Z',
        'Freight': 13.84,
        'ShipName': 'Tortuga Restaurante',
        'ShipAddress': 'Avda. Azteca 123',
        'ShipCity': 'México D.F.',
        'ShipRegion': null,
        'ShipCountry': 'Mexico'
    },
    {
        'OrderID': 10277,
        'CustomerID': 'MORGK',
        'OrderDate': '1996-08-09T14:10:00.000Z',
        'ShippedDate': '1996-08-13T16:10:00.000Z',
        'Freight': 125.77,
        'ShipName': 'Morgenstern Gesundkost',
        'ShipAddress': 'Heerstr. 22',
        'ShipCity': 'Leipzig',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10278,
        'CustomerID': 'BERGS',
        'OrderDate': '1996-08-12T18:10:00.000Z',
        'ShippedDate': '1996-08-16T20:10:00.000Z',
        'Freight': 92.69,
        'ShipName': 'Berglunds snabbköp',
        'ShipAddress': 'Berguvsvägen 8',
        'ShipCity': 'Luleå',
        'ShipRegion': null,
        'ShipCountry': 'Sweden'
    },
    {
        'OrderID': 10279,
        'CustomerID': 'LEHMS',
        'OrderDate': '1996-08-13T22:10:00.000Z',

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    'ShippedDate': '1996-08-16T02:10:00.000Z',
    'Freight': 25.83,
    'ShipName': 'Lehmanns Marktstand',
    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10280,
    'CustomerID': 'BERGS',
    'OrderDate': '1996-08-14T01:40:00.000Z',
    'ShippedDate': '1996-09-12T02:40:00.000Z',
    'Freight': 8.98,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10281,
    'CustomerID': 'ROMEY',
    'OrderDate': '1996-08-14T03:40:00.000Z',
    'ShippedDate': '1996-08-21T04:40:00.000Z',
    'Freight': 2.94,
    'ShipName': 'Romero y tomillo',
    'ShipAddress': 'Gran Vía, 1',
    'ShipCity': 'Madrid',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10282,
    'CustomerID': 'ROMEY',
    'OrderDate': '1996-08-15T05:40:00.000Z',
    'ShippedDate': '1996-08-21T06:40:00.000Z',
    'Freight': 12.69,
    'ShipName': 'Romero y tomillo',
    'ShipAddress': 'Gran Vía, 1',
    'ShipCity': 'Madrid',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10283,
    'CustomerID': 'LILAS',
    'OrderDate': '1996-08-16T07:40:00.000Z',
    'ShippedDate': '1996-08-23T08:40:00.000Z',
    'Freight': 84.81,
    'ShipName': 'LILA-Supermercado',
    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },
  {

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      'OrderID': 10284,
      'CustomerID': 'LEHMS',
      'OrderDate': '1996-08-19T09:40:00.000Z',
      'ShippedDate': '1996-08-27T10:40:00.000Z',
      'Freight': 76.56,
      'ShipName': 'Lehmanns Marktstand',
      'ShipAddress': 'Magazinweg 7',
      'ShipCity': 'Frankfurt a.M.',
      'ShipRegion': null,
      'ShipCountry': 'Germany'
    },
    {
      'OrderID': 10285,
      'CustomerID': 'QUICK',
      'OrderDate': '1996-08-20T11:40:00.000Z',
      'ShippedDate': '1996-08-26T12:40:00.000Z',
      'Freight': 76.83,
      'ShipName': 'QUICK-Stop',
      'ShipAddress': 'Taucherstraße 10',
      'ShipCity': 'Cunewalde',
      'ShipRegion': null,
      'ShipCountry': 'Germany'
    },
    {
      'OrderID': 10286,
      'CustomerID': 'QUICK',
      'OrderDate': '1996-08-21T01:50:00.000Z',
      'ShippedDate': '1996-08-30T02:50:00.000Z',
      'Freight': 229.24,
      'ShipName': 'QUICK-Stop',
      'ShipAddress': 'Taucherstraße 10',
      'ShipCity': 'Cunewalde',
      'ShipRegion': null,
      'ShipCountry': 'Germany'
    },
    {
      'OrderID': 10287,
      'CustomerID': 'RICAR',
      'OrderDate': '1996-08-22T03:50:00.000Z',
      'ShippedDate': '1996-08-28T04:50:00.000Z',
      'Freight': 12.76,
      'ShipName': 'Ricardo Adocicados',
      'ShipAddress': 'Av. Copacabana, 267',
      'ShipCity': 'Rio de Janeiro',
      'ShipRegion': 'RJ',
      'ShipCountry': 'Brazil'
    },
    {
      'OrderID': 10288,
      'CustomerID': 'REGGC',
      'OrderDate': '1996-08-23T05:50:00.000Z',
      'ShippedDate': '1996-09-03T06:50:00.000Z',
      'Freight': 7.45,
      'ShipName': 'Reggiani Caseifici',
      'ShipAddress': 'Strada Provinciale 124',
      'ShipCity': 'Reggio Emilia',
      'ShipRegion': null,

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    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 10289,
    'CustomerID': 'BSBEV',
    'OrderDate': '1996-08-26T07:50:00.000Z',
    'ShippedDate': '1996-08-28T08:50:00.000Z',
    'Freight': 22.77,
    'ShipName': 'B\'s Beverages',
    'ShipAddress': 'Fauntleroy Circus',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10290,
    'CustomerID': 'COMMI',
    'OrderDate': '1996-08-27T09:50:00.000Z',
    'ShippedDate': '1996-09-03T10:50:00.000Z',
    'Freight': 79.7,
    'ShipName': 'Comércio Mineiro',
    'ShipAddress': 'Av. dos Lusíadas, 23',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10291,
    'CustomerID': 'QUEDE',
    'OrderDate': '1996-08-27T11:50:00.000Z',
    'ShippedDate': '1996-09-04T12:50:00.000Z',
    'Freight': 6.4,
    'ShipName': 'Que Delícia',
    'ShipAddress': 'Rua da Panificadora, 12',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10292,
    'CustomerID': 'TRADH',
    'OrderDate': '1996-08-28T01:10:00.000Z',
    'ShippedDate': '1996-09-02T02:10:00.000Z',
    'Freight': 1.35,
    'ShipName': 'Tradição Hipermercados',
    'ShipAddress': 'Av. Inês de Castro, 414',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10293,
    'CustomerID': 'TORTU',
    'OrderDate': '1996-08-29T03:10:00.000Z',
    'ShippedDate': '1996-09-11T04:10:00.000Z',
    'Freight': 21.18,
    'ShipName': 'Tortuga Restaurante',

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        'ShipAddress': 'Avda. Azteca 123',
        'ShipCity': 'México D.F.',
        'ShipRegion': null,
        'ShipCountry': 'Mexico'
    },
    {
        'OrderID': 10294,
        'CustomerID': 'RATTC',
        'OrderDate': '1996-08-30T05:10:00.000Z',
        'ShippedDate': '1996-09-05T06:10:00.000Z',
        'Freight': 147.26,
        'ShipName': 'Rattlesnake Canyon Grocery',
        'ShipAddress': '2817 Milton Dr.',
        'ShipCity': 'Albuquerque',
        'ShipRegion': 'NM',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10295,
        'CustomerID': 'VINET',
        'OrderDate': '1996-09-02T07:10:00.000Z',
        'ShippedDate': '1996-09-10T08:10:00.000Z',
        'Freight': 1.15,
        'ShipName': 'Vins et alcools Chevalier',
        'ShipAddress': '59 rue de l\'Abbaye',
        'ShipCity': 'Reims',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10296,
        'CustomerID': 'LILAS',
        'OrderDate': '1996-09-03T09:10:00.000Z',
        'ShippedDate': '1996-09-11T10:10:00.000Z',
        'Freight': 0.12,
        'ShipName': 'LILA-Supermercado',
        'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
        'ShipCity': 'Barquisimeto',
        'ShipRegion': 'Lara',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 10297,
        'CustomerID': 'BLONP',
        'OrderDate': '1996-09-04T11:10:00.000Z',
        'ShippedDate': '1996-09-10T12:10:00.000Z',
        'Freight': 5.74,
        'ShipName': 'Blondel père et fils',
        'ShipAddress': '24, place Kléber',
        'ShipCity': 'Strasbourg',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10298,
        'CustomerID': 'HUNGO',
        'OrderDate': '1996-09-05T01:10:00.000Z',

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    'ShippedDate': '1996-09-11T02:20:00.000Z',
    'Freight': 168.22,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10299,
    'CustomerID': 'RICAR',
    'OrderDate': '1996-09-06T03:20:00.000Z',
    'ShippedDate': '1996-09-13T04:20:00.000Z',
    'Freight': 29.76,
    'ShipName': 'Ricardo Adocicados',
    'ShipAddress': 'Av. Copacabana, 267',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10300,
    'CustomerID': 'MAGAA',
    'OrderDate': '1996-09-09T05:20:00.000Z',
    'ShippedDate': '1996-09-18T06:20:00.000Z',
    'Freight': 17.68,
    'ShipName': 'Magazzini Alimentari Riuniti',
    'ShipAddress': 'Via Ludovico il Moro 22',
    'ShipCity': 'Bergamo',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 10301,
    'CustomerID': 'WANDK',
    'OrderDate': '1996-09-09T07:20:00.000Z',
    'ShippedDate': '1996-09-17T08:20:00.000Z',
    'Freight': 45.08,
    'ShipName': 'Die Wandernde Kuh',
    'ShipAddress': 'Adenauerallee 900',
    'ShipCity': 'Stuttgart',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10302,
    'CustomerID': 'SUPRD',
    'OrderDate': '1996-09-10T09:20:00.000Z',
    'ShippedDate': '1996-10-09T10:20:00.000Z',
    'Freight': 6.27,
    'ShipName': 'Suprêmes délices',
    'ShipAddress': 'Boulevard Tirou, 255',
    'ShipCity': 'Charleroi',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {

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    'OrderID': 10303,
    'CustomerID': 'GODOS',
    'OrderDate': '1996-09-11T11:20:00.000Z',
    'ShippedDate': '1996-09-18T12:20:00.000Z',
    'Freight': 107.83,
    'ShipName': 'Godos Cocina Típica',
    'ShipAddress': 'C/ Romero, 33',
    'ShipCity': 'Sevilla',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10304,
    'CustomerID': 'TORTU',
    'OrderDate': '1996-09-12T00:10:00.000Z',
    'ShippedDate': '1996-09-17T01:20:00.000Z',
    'Freight': 63.79,
    'ShipName': 'Tortuga Restaurante',
    'ShipAddress': 'Avda. Azteca 123',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10305,
    'CustomerID': 'OLDWO',
    'OrderDate': '1996-09-13T01:20:00.000Z',
    'ShippedDate': '1996-10-09T02:20:00.000Z',
    'Freight': 257.62,
    'ShipName': 'Old World Delicatessen',
    'ShipAddress': '2743 Bering St.',
    'ShipCity': 'Anchorage',
    'ShipRegion': 'AK',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10306,
    'CustomerID': 'ROMEY',
    'OrderDate': '1996-09-16T03:20:00.000Z',
    'ShippedDate': '1996-09-23T04:20:00.000Z',
    'Freight': 7.56,
    'ShipName': 'Romero y tomillo',
    'ShipAddress': 'Gran Vía, 1',
    'ShipCity': 'Madrid',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10307,
    'CustomerID': 'LONEP',
    'OrderDate': '1996-09-17T05:20:00.000Z',
    'ShippedDate': '1996-09-25T06:20:00.000Z',
    'Freight': 0.56,
    'ShipName': 'Lonesome Pine Restaurant',
    'ShipAddress': '89 Chiaroscuro Rd.',
    'ShipCity': 'Portland',
    'ShipRegion': 'OR',

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    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10308,
    'CustomerID': 'ANATR',
    'OrderDate': '1996-09-18T07:20:00.000Z',
    'ShippedDate': '1996-09-24T08:20:00.000Z',
    'Freight': 1.61,
    'ShipName': 'Ana Trujillo Emparedados y helados',
    'ShipAddress': 'Avda. de la Constitución 2222',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10309,
    'CustomerID': 'HUNGO',
    'OrderDate': '1996-09-19T09:20:00.000Z',
    'ShippedDate': '1996-10-23T10:20:00.000Z',
    'Freight': 47.3,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10310,
    'CustomerID': 'THEBI',
    'OrderDate': '1996-09-20T11:20:00.000Z',
    'ShippedDate': '1996-09-27T12:20:00.000Z',
    'Freight': 17.52,
    'ShipName': 'The Big Cheese',
    'ShipAddress': '89 Jefferson Way Suite 2',
    'ShipCity': 'Portland',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10311,
    'CustomerID': 'DUMON',
    'OrderDate': '1996-09-20T13:20:00.000Z',
    'ShippedDate': '1996-09-26T14:20:00.000Z',
    'Freight': 24.69,
    'ShipName': 'Du monde entier',
    'ShipAddress': '67, rue des Cinquante Otages',
    'ShipCity': 'Nantes',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10312,
    'CustomerID': 'WANDK',
    'OrderDate': '1996-09-23T15:20:00.000Z',
    'ShippedDate': '1996-10-03T16:20:00.000Z',
    'Freight': 40.26,
    'ShipName': 'Die Wandernde Kuh',

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    'ShipAddress': 'Adenauerallee 900',
    'ShipCity': 'Stuttgart',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10313,
    'CustomerID': 'QUICK',
    'OrderDate': '1996-09-24T17:20:00.000Z',
    'ShippedDate': '1996-10-04T18:20:00.000Z',
    'Freight': 1.96,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10314,
    'CustomerID': 'RATTC',
    'OrderDate': '1996-09-25T19:20:00.000Z',
    'ShippedDate': '1996-10-04T20:20:00.000Z',
    'Freight': 74.16,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10315,
    'CustomerID': 'ISLAT',
    'OrderDate': '1996-09-26T21:20:00.000Z',
    'ShippedDate': '1996-10-03T22:20:00.000Z',
    'Freight': 41.76,
    'ShipName': 'Island Trading',
    'ShipAddress': 'Garden House Crowther Way',
    'ShipCity': 'Cowes',
    'ShipRegion': 'Isle of Wight',
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10316,
    'CustomerID': 'RATTC',
    'OrderDate': '1996-09-27T23:20:00.000Z',
    'ShippedDate': '1996-10-08T00:30:00.000Z',
    'Freight': 150.15,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10317,
    'CustomerID': 'LONEP',
    'OrderDate': '1996-09-30T01:30:00.000Z',

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    'ShippedDate': '1996-10-10T02:30:00.000Z',
    'Freight': 12.69,
    'ShipName': 'Lonesome Pine Restaurant',
    'ShipAddress': '89 Chiaroscuro Rd.',
    'ShipCity': 'Portland',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10318,
    'CustomerID': 'ISLAT',
    'OrderDate': '1996-10-01T03:30:00.000Z',
    'ShippedDate': '1996-10-04T03:30:00.000Z',
    'Freight': 4.73,
    'ShipName': 'Island Trading',
    'ShipAddress': 'Garden House Crowther Way',
    'ShipCity': 'Cowes',
    'ShipRegion': 'Isle of Wight',
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10319,
    'CustomerID': 'TORTU',
    'OrderDate': '1996-10-02T04:30:00.000Z',
    'ShippedDate': '1996-10-11T05:30:00.000Z',
    'Freight': 64.5,
    'ShipName': 'Tortuga Restaurante',
    'ShipAddress': 'Avda. Azteca 123',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10320,
    'CustomerID': 'WARTH',
    'OrderDate': '1996-10-03T06:30:00.000Z',
    'ShippedDate': '1996-10-18T07:30:00.000Z',
    'Freight': 34.57,
    'ShipName': 'Wartian Herkku',
    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 10321,
    'CustomerID': 'ISLAT',
    'OrderDate': '1996-10-03T08:30:00.000Z',
    'ShippedDate': '1996-10-11T09:30:00.000Z',
    'Freight': 3.43,
    'ShipName': 'Island Trading',
    'ShipAddress': 'Garden House Crowther Way',
    'ShipCity': 'Cowes',
    'ShipRegion': 'Isle of Wight',
    'ShipCountry': 'UK'
  },
  {

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    'OrderID': 10322,
    'CustomerID': 'PERIC',
    'OrderDate': '1996-10-04T10:30:00.000Z',
    'ShippedDate': '1996-10-23T11:30:00.000Z',
    'Freight': 0.4,
    'ShipName': 'Pericles Comidas clásicas',
    'ShipAddress': 'Calle Dr. Jorge Cash 321',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10323,
    'CustomerID': 'KOENE',
    'OrderDate': '1996-10-07T12:30:00.000Z',
    'ShippedDate': '1996-10-14T13:30:00.000Z',
    'Freight': 4.88,
    'ShipName': 'Königlich Essen',
    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10324,
    'CustomerID': 'SAVEA',
    'OrderDate': '1996-10-08T14:30:00.000Z',
    'ShippedDate': '1996-10-10T15:30:00.000Z',
    'Freight': 214.27,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10325,
    'CustomerID': 'KOENE',
    'OrderDate': '1996-10-09T16:30:00.000Z',
    'ShippedDate': '1996-10-14T17:30:00.000Z',
    'Freight': 64.86,
    'ShipName': 'Königlich Essen',
    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10326,
    'CustomerID': 'BOLID',
    'OrderDate': '1996-10-10T18:30:00.000Z',
    'ShippedDate': '1996-10-14T19:30:00.000Z',
    'Freight': 77.92,
    'ShipName': 'Bólido Comidas preparadas',
    'ShipAddress': 'C/ Araquil, 67',
    'ShipCity': 'Madrid',
    'ShipRegion': null,

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    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10327,
    'CustomerID': 'FOLKO',
    'OrderDate': '1996-10-11T20:30:00.000Z',
    'ShippedDate': '1996-10-14T21:30:00.000Z',
    'Freight': 63.36,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10328,
    'CustomerID': 'FURIB',
    'OrderDate': '1996-10-14T22:30:00.000Z',
    'ShippedDate': '1996-10-17T23:30:00.000Z',
    'Freight': 87.03,
    'ShipName': 'Furia Bacalhau e Frutos do Mar',
    'ShipAddress': 'Jardim das rosas n. 32',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {
    'OrderID': 10329,
    'CustomerID': 'SPLIR',
    'OrderDate': '1996-10-15T00:40:00.000Z',
    'ShippedDate': '1996-10-23T01:40:00.000Z',
    'Freight': 191.67,
    'ShipName': 'Split Rail Beer & Ale',
    'ShipAddress': 'P.O. Box 555',
    'ShipCity': 'Lander',
    'ShipRegion': 'WY',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10330,
    'CustomerID': 'LILAS',
    'OrderDate': '1996-10-16T02:40:00.000Z',
    'ShippedDate': '1996-10-28T03:40:00.000Z',
    'Freight': 12.75,
    'ShipName': 'LILA-Supermercado',
    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10331,
    'CustomerID': 'BONAP',
    'OrderDate': '1996-10-16T02:40:00.000Z',
    'ShippedDate': '1996-10-21T03:40:00.000Z',
    'Freight': 10.19,
    'ShipName': 'Bon app',

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        'ShipAddress': '12, rue des Bouchers',
        'ShipCity': 'Marseille',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10332,
        'CustomerID': 'MEREP',
        'OrderDate': '1996-10-17T04:40:00.000Z',
        'ShippedDate': '1996-10-21T05:40:00.000Z',
        'Freight': 52.84,
        'ShipName': 'Mère Paillarde',
        'ShipAddress': '43 rue St. Laurent',
        'ShipCity': 'Montréal',
        'ShipRegion': 'Québec',
        'ShipCountry': 'Canada'
    },
    {
        'OrderID': 10333,
        'CustomerID': 'WARTH',
        'OrderDate': '1996-10-18T06:40:00.000Z',
        'ShippedDate': '1996-10-25T07:40:00.000Z',
        'Freight': 0.59,
        'ShipName': 'Wartian Herkku',
        'ShipAddress': 'Torikatu 38',
        'ShipCity': 'Oulu',
        'ShipRegion': null,
        'ShipCountry': 'Finland'
    },
    {
        'OrderID': 10334,
        'CustomerID': 'VICTE',
        'OrderDate': '1996-10-21T08:40:00.000Z',
        'ShippedDate': '1996-10-28T09:40:00.000Z',
        'Freight': 8.56,
        'ShipName': 'Victuailles en stock',
        'ShipAddress': '2, rue du Commerce',
        'ShipCity': 'Lyon',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10335,
        'CustomerID': 'HUNGO',
        'OrderDate': '1996-10-22T10:40:00.000Z',
        'ShippedDate': '1996-10-24T11:40:00.000Z',
        'Freight': 42.11,
        'ShipName': 'Hungry Owl All-Night Grocers',
        'ShipAddress': '8 Johnstown Road',
        'ShipCity': 'Cork',
        'ShipRegion': 'Co. Cork',
        'ShipCountry': 'Ireland'
    },
    {
        'OrderID': 10336,
        'CustomerID': 'PRINI',
        'OrderDate': '1996-10-23T12:40:00.000Z',

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    'ShippedDate': '1996-10-25T13:40:00.000Z',
    'Freight': 15.51,
    'ShipName': 'Princesa Isabel Vinhos',
    'ShipAddress': 'Estrada da saúde n. 58',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {
    'OrderID': 10337,
    'CustomerID': 'FRANK',
    'OrderDate': '1996-10-24T14:40:00.000Z',
    'ShippedDate': '1996-10-29T14:40:00.000Z',
    'Freight': 108.26,
    'ShipName': 'Frankenversand',
    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10338,
    'CustomerID': 'OLDWO',
    'OrderDate': '1996-10-25T15:40:00.000Z',
    'ShippedDate': '1996-10-29T16:40:00.000Z',
    'Freight': 84.21,
    'ShipName': 'Old World Delicatessen',
    'ShipAddress': '2743 Bering St.',
    'ShipCity': 'Anchorage',
    'ShipRegion': 'AK',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10339,
    'CustomerID': 'MEREP',
    'OrderDate': '1996-10-28T17:40:00.000Z',
    'ShippedDate': '1996-11-04T18:40:00.000Z',
    'Freight': 15.66,
    'ShipName': 'Mère Paillarde',
    'ShipAddress': '43 rue St. Laurent',
    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10340,
    'CustomerID': 'BONAP',
    'OrderDate': '1996-10-29T19:40:00.000Z',
    'ShippedDate': '1996-11-08T20:40:00.000Z',
    'Freight': 166.31,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {

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    'OrderID': 10341,
    'CustomerID': 'SIMOB',
    'OrderDate': '1996-10-29T21:40:00.000Z',
    'ShippedDate': '1996-11-05T22:40:00.000Z',
    'Freight': 26.78,
    'ShipName': 'Simons bistro',
    'ShipAddress': 'Vinbæltet 34',
    'ShipCity': 'Kobenhavn',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
    'OrderID': 10342,
    'CustomerID': 'FRANK',
    'OrderDate': '1996-10-30T23:40:00.000Z',
    'ShippedDate': '1996-11-04T00:50:00.000Z',
    'Freight': 54.83,
    'ShipName': 'Frankenversand',
    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10343,
    'CustomerID': 'LEHMS',
    'OrderDate': '1996-10-31T01:50:00.000Z',
    'ShippedDate': '1996-11-06T02:50:00.000Z',
    'Freight': 110.37,
    'ShipName': 'Lehmanns Marktstand',
    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10344,
    'CustomerID': 'WHITC',
    'OrderDate': '1996-11-01T03:50:00.000Z',
    'ShippedDate': '1996-11-05T04:50:00.000Z',
    'Freight': 23.29,
    'ShipName': 'White Clover Markets',
    'ShipAddress': '1029 - 12th Ave. S.',
    'ShipCity': 'Seattle',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10345,
    'CustomerID': 'QUICK',
    'OrderDate': '1996-11-04T05:50:00.000Z',
    'ShippedDate': '1996-11-11T05:50:00.000Z',
    'Freight': 249.06,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,

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    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10346,
    'CustomerID': 'RATTC',
    'OrderDate': '1996-11-05T06:50:00.000Z',
    'ShippedDate': '1996-11-08T07:50:00.000Z',
    'Freight': 142.08,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10347,
    'CustomerID': 'FAMIA',
    'OrderDate': '1996-11-06T08:50:00.000Z',
    'ShippedDate': '1996-11-08T09:50:00.000Z',
    'Freight': 3.1,
    'ShipName': 'Familia Arquibaldo',
    'ShipAddress': 'Rua Orós, 92',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10348,
    'CustomerID': 'WANDK',
    'OrderDate': '1996-11-07T10:50:00.000Z',
    'ShippedDate': '1996-11-15T11:50:00.000Z',
    'Freight': 0.78,
    'ShipName': 'Die Wandernde Kuh',
    'ShipAddress': 'Adenauerallee 900',
    'ShipCity': 'Stuttgart',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10349,
    'CustomerID': 'SPLIR',
    'OrderDate': '1996-11-08T12:50:00.000Z',
    'ShippedDate': '1996-11-15T13:50:00.000Z',
    'Freight': 8.63,
    'ShipName': 'Split Rail Beer & Ale',
    'ShipAddress': 'P.O. Box 555',
    'ShipCity': 'Lander',
    'ShipRegion': 'WY',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10350,
    'CustomerID': 'LAMAI',
    'OrderDate': '1996-11-11T14:50:00.000Z',
    'ShippedDate': '1996-12-03T15:50:00.000Z',
    'Freight': 64.19,
    'ShipName': 'La maison d\'Asie',

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        'ShipAddress': '1 rue Alsace-Lorraine',
        'ShipCity': 'Toulouse',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10351,
        'CustomerID': 'ERNSH',
        'OrderDate': '1996-11-11T16:50:00.000Z',
        'ShippedDate': '1996-11-20T17:50:00.000Z',
        'Freight': 162.33,
        'ShipName': 'Ernst Handel',
        'ShipAddress': 'Kirchgasse 6',
        'ShipCity': 'Graz',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
        'OrderID': 10352,
        'CustomerID': 'FURIB',
        'OrderDate': '1996-11-12T18:50:00.000Z',
        'ShippedDate': '1996-11-18T19:50:00.000Z',
        'Freight': 1.3,
        'ShipName': 'Furia Bacalhau e Frutos do Mar',
        'ShipAddress': 'Jardim das rosas n. 32',
        'ShipCity': 'Lisboa',
        'ShipRegion': null,
        'ShipCountry': 'Portugal'
    },
    {
        'OrderID': 10353,
        'CustomerID': 'PICCO',
        'OrderDate': '1996-11-13T20:50:00.000Z',
        'ShippedDate': '1996-11-25T21:50:00.000Z',
        'Freight': 360.63,
        'ShipName': 'Piccolo und mehr',
        'ShipAddress': 'Geislweg 14',
        'ShipCity': 'Salzburg',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
        'OrderID': 10354,
        'CustomerID': 'PERIC',
        'OrderDate': '1996-11-14T21:50:00.000Z',
        'ShippedDate': '1996-11-20T22:50:00.000Z',
        'Freight': 53.8,
        'ShipName': 'Pericles Comidas clásicas',
        'ShipAddress': 'Calle Dr. Jorge Cash 321',
        'ShipCity': 'México D.F.',
        'ShipRegion': null,
        'ShipCountry': 'Mexico'
    },
    {
        'OrderID': 10355,
        'CustomerID': 'AROUT',
        'OrderDate': '1996-11-15T23:50:00.000Z',

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        'ShippedDate': '1996-11-20T00:50:00.000Z',
        'Freight': 41.95,
        'ShipName': 'Around the Horn',
        'ShipAddress': 'Brook Farm Stratford St. Mary',
        'ShipCity': 'Colchester',
        'ShipRegion': 'Essex',
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10356,
        'CustomerID': 'WANDK',
        'OrderDate': '1996-11-18T01:05:00.000Z',
        'ShippedDate': '1996-11-27T02:05:00.000Z',
        'Freight': 36.71,
        'ShipName': 'Die Wandernde Kuh',
        'ShipAddress': 'Adenauerallee 900',
        'ShipCity': 'Stuttgart',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10357,
        'CustomerID': 'LILAS',
        'OrderDate': '1996-11-19T03:05:00.000Z',
        'ShippedDate': '1996-12-02T04:05:00.000Z',
        'Freight': 34.88,
        'ShipName': 'LILA-Supermercado',
        'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
        'ShipCity': 'Barquisimeto',
        'ShipRegion': 'Lara',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 10358,
        'CustomerID': 'LAMAI',
        'OrderDate': '1996-11-20T05:05:00.000Z',
        'ShippedDate': '1996-11-27T06:05:00.000Z',
        'Freight': 19.64,
        'ShipName': 'La maison d\'Asie',
        'ShipAddress': '1 rue Alsace-Lorraine',
        'ShipCity': 'Toulouse',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10359,
        'CustomerID': 'SEVES',
        'OrderDate': '1996-11-21T07:05:00.000Z',
        'ShippedDate': '1996-11-26T08:05:00.000Z',
        'Freight': 288.43,
        'ShipName': 'Seven Seas Imports',
        'ShipAddress': '90 Wadhurst Rd.',
        'ShipCity': 'London',
        'ShipRegion': null,
        'ShipCountry': 'UK'
    }
]

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    'OrderID': 10360,
    'CustomerID': 'BLONP',
    'OrderDate': '1996-11-22T09:05:00.000Z',
    'ShippedDate': '1996-12-02T10:05:00.000Z',
    'Freight': 131.7,
    'ShipName': 'Blondel père et fils',
    'ShipAddress': '24, place Kléber',
    'ShipCity': 'Strasbourg',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10361,
    'CustomerID': 'QUICK',
    'OrderDate': '1996-11-22T11:05:00.000Z',
    'ShippedDate': '1996-12-03T12:05:00.000Z',
    'Freight': 183.17,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10362,
    'CustomerID': 'BONAP',
    'OrderDate': '1996-11-25T13:05:00.000Z',
    'ShippedDate': '1996-11-28T14:05:00.000Z',
    'Freight': 96.04,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10363,
    'CustomerID': 'DRACD',
    'OrderDate': '1996-11-26T15:05:00.000Z',
    'ShippedDate': '1996-12-04T16:05:00.000Z',
    'Freight': 30.54,
    'ShipName': 'Drachenblut Delikatessen',
    'ShipAddress': 'Walserweg 21',
    'ShipCity': 'Aachen',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10364,
    'CustomerID': 'EASTC',
    'OrderDate': '1996-11-26T17:05:00.000Z',
    'ShippedDate': '1996-12-04T18:05:00.000Z',
    'Freight': 71.97,
    'ShipName': 'Eastern Connection',
    'ShipAddress': '35 King George',
    'ShipCity': 'London',
    'ShipRegion': null,

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    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10365,
    'CustomerID': 'ANTON',
    'OrderDate': '1996-11-27T19:05:00.000Z',
    'ShippedDate': '1996-12-02T20:05:00.000Z',
    'Freight': 22,
    'ShipName': 'Antonio Moreno Taquería',
    'ShipAddress': 'Mataderos 2312',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10366,
    'CustomerID': 'GALED',
    'OrderDate': '1996-11-28T21:05:00.000Z',
    'ShippedDate': '1996-12-30T22:05:00.000Z',
    'Freight': 10.14,
    'ShipName': 'Galería del gastronómo',
    'ShipAddress': 'Rambla de Cataluña, 23',
    'ShipCity': 'Barcelona',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10367,
    'CustomerID': 'VAFFE',
    'OrderDate': '1996-11-28T23:05:00.000Z',
    'ShippedDate': '1996-12-02T00:05:00.000Z',
    'Freight': 13.55,
    'ShipName': 'Vaffeljernet',
    'ShipAddress': 'Smagsloget 45',
    'ShipCity': 'Århus',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
    'OrderID': 10368,
    'CustomerID': 'ERNSH',
    'OrderDate': '1996-11-29T02:00.00.000Z',
    'ShippedDate': '1996-12-02T04:00.00.000Z',
    'Freight': 101.95,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10369,
    'CustomerID': 'SPLIR',
    'OrderDate': '1996-12-02T04:00.00.000Z',
    'ShippedDate': '1996-12-09T07:25:00.000Z',
    'Freight': 195.68,
    'ShipName': 'Split Rail Beer & Ale',

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        'ShipAddress': 'P.O. Box 555',
        'ShipCity': 'Lander',
        'ShipRegion': 'WY',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10370,
        'CustomerID': 'CHOPS',
        'OrderDate': '1996-12-03T06:00.00.000Z',
        'ShippedDate': '1996-12-27T07:00.00.000Z',
        'Freight': 1.17,
        'ShipName': 'Chop-suey Chinese',
        'ShipAddress': 'Hauptstr. 31',
        'ShipCity': 'Bern',
        'ShipRegion': null,
        'ShipCountry': 'Switzerland'
    },
    {
        'OrderID': 10371,
        'CustomerID': 'LAMAI',
        'OrderDate': '1996-12-03T08:00.00.000Z',
        'ShippedDate': '1996-12-24T09:00.00.000Z',
        'Freight': 0.45,
        'ShipName': 'La maison d\'Asie',
        'ShipAddress': '1 rue Alsace-Lorraine',
        'ShipCity': 'Toulouse',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10372,
        'CustomerID': 'QUEEN',
        'OrderDate': '1996-12-04T10:00.00.000Z',
        'ShippedDate': '1996-12-09T11:00.00.000Z',
        'Freight': 890.78,
        'ShipName': 'Queen Cozinha',
        'ShipAddress': 'Alameda dos Canários, 891',
        'ShipCity': 'Sao Paulo',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10373,
        'CustomerID': 'HUNGO',
        'OrderDate': '1996-12-05T12:00.00.000Z',
        'ShippedDate': '1996-12-11T13:00.00.000Z',
        'Freight': 124.12,
        'ShipName': 'Hungry Owl All-Night Grocers',
        'ShipAddress': '8 Johnstown Road',
        'ShipCity': 'Cork',
        'ShipRegion': 'Co. Cork',
        'ShipCountry': 'Ireland'
    },
    {
        'OrderID': 10374,
        'CustomerID': 'WOLZA',
        'OrderDate': '1996-12-05T14:00.00.000Z',

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    'ShippedDate': '1996-12-09T15:00.00.000Z',
    'Freight': 3.94,
    'ShipName': 'Wolski Zajazd',
    'ShipAddress': 'ul. Filtrowa 68',
    'ShipCity': 'Warszawa',
    'ShipRegion': null,
    'ShipCountry': 'Poland'
  },
  {
    'OrderID': 10375,
    'CustomerID': 'HUNGC',
    'OrderDate': '1996-12-06T16:00.00.000Z',
    'ShippedDate': '1996-12-09T17:00.00.000Z',
    'Freight': 20.12,
    'ShipName': 'Hungry Coyote Import Store',
    'ShipAddress': 'City Center Plaza 516 Main St.',
    'ShipCity': 'Elgin',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10376,
    'CustomerID': 'MEREP',
    'OrderDate': '1996-12-09T18:00.00.000Z',
    'ShippedDate': '1996-12-13T19:00.00.000Z',
    'Freight': 20.39,
    'ShipName': 'Mère Paillarde',
    'ShipAddress': '43 rue St. Laurent',
    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10377,
    'CustomerID': 'SEVES',
    'OrderDate': '1996-12-09T20:00.00.000Z',
    'ShippedDate': '1996-12-13T21:00.00.000Z',
    'Freight': 22.21,
    'ShipName': 'Seven Seas Imports',
    'ShipAddress': '90 Wadhurst Rd.',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10378,
    'CustomerID': 'FOLKO',
    'OrderDate': '1996-12-10T22:00.00.000Z',
    'ShippedDate': '1996-12-19T23:00.00.000Z',
    'Freight': 5.44,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {

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    'OrderID': 10379,
    'CustomerID': 'QUEDE',
    'OrderDate': '1996-12-11T01:25:00.000Z',
    'ShippedDate': '1996-12-13T02:25:00.000Z',
    'Freight': 45.03,
    'ShipName': 'Que Delícia',
    'ShipAddress': 'Rua da Panificadora, 12',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10380,
    'CustomerID': 'HUNGO',
    'OrderDate': '1996-12-12T03:25:00.000Z',
    'ShippedDate': '1997-01-16T04:25:00.000Z',
    'Freight': 35.03,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10381,
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    'ShippedDate': '1996-12-13T06:25:00.000Z',
    'Freight': 7.99,
    'ShipName': 'LILA-Supermercado',
    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },
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    'ShippedDate': '1996-12-16T07:25:00.000Z',
    'Freight': 94.77,
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    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
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    'CustomerID': 'AROUT',
    'OrderDate': '1996-12-16T07:25:00.000Z',
    'ShippedDate': '1996-12-18T02:25:00.000Z',
    'Freight': 34.24,
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    'ShipAddress': 'Brook Farm Stratford St. Mary',
    'ShipCity': 'Colchester',
    'ShipRegion': 'Essex',
  }

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      'ShipCountry': 'UK'
    },
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      'ShippedDate': '1996-12-20T04:25:00.000Z',
      'Freight': 168.64,
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      'ShipCity': 'Luleå',
      'ShipRegion': null,
      'ShipCountry': 'Sweden'
    },
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      'ShippedDate': '1996-12-23T04:25:00.000Z',
      'Freight': 30.96,
      'ShipName': 'Split Rail Beer & Ale',
      'ShipAddress': 'P.O. Box 555',
      'ShipCity': 'Lander',
      'ShipRegion': 'WY',
      'ShipCountry': 'USA'
    },
    {
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      'CustomerID': 'FAMIA',
      'OrderDate': '1996-12-18T05:25:00.000Z',
      'ShippedDate': '1996-12-25T06:25:00.000Z',
      'Freight': 13.99,
      'ShipName': 'Familia Arquibaldo',
      'ShipAddress': 'Rua Orós, 92',
      'ShipCity': 'Sao Paulo',
      'ShipRegion': 'SP',
      'ShipCountry': 'Brazil'
    },
    {
      'OrderID': 10387,
      'CustomerID': 'SANTG',
      'OrderDate': '1996-12-18T07:25:00.000Z',
      'ShippedDate': '1996-12-20T08:25:00.000Z',
      'Freight': 93.63,
      'ShipName': 'Santé Gourmet',
      'ShipAddress': 'Erling Skakkes gate 78',
      'ShipCity': 'Stavern',
      'ShipRegion': null,
      'ShipCountry': 'Norway'
    },
    {
      'OrderID': 10388,
      'CustomerID': 'SEVES',
      'OrderDate': '1996-12-19T09:25:00.000Z',
      'ShippedDate': '1996-12-20T10:25:00.000Z',
      'Freight': 34.86,
      'ShipName': 'Seven Seas Imports',
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        'ShipRegion': null,
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    {
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        'OrderDate': '1996-12-20T11:25:00.000Z',
        'ShippedDate': '1996-12-24T12:25:00.000Z',
        'Freight': 47.42,
        'ShipName': 'Bottom-Dollar Markets',
        'ShipAddress': '23 Tsawassen Blvd.',
        'ShipCity': 'Tsawassen',
        'ShipRegion': 'BC',
        'ShipCountry': 'Canada'
    },
    {
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        'CustomerID': 'ERNSH',
        'OrderDate': '1996-12-23T13:25:00.000Z',
        'ShippedDate': '1996-12-26T14:25:00.000Z',
        'Freight': 126.38,
        'ShipName': 'Ernst Handel',
        'ShipAddress': 'Kirchgasse 6',
        'ShipCity': 'Graz',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
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        'CustomerID': 'DRACD',
        'OrderDate': '1996-12-23T15:25:00.000Z',
        'ShippedDate': '1996-12-31T16:25:00.000Z',
        'Freight': 5.45,
        'ShipName': 'Drachenblut Delikatessen',
        'ShipAddress': 'Walserweg 21',
        'ShipCity': 'Aachen',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10392,
        'CustomerID': 'PICCO',
        'OrderDate': '1996-12-24T17:25:00.000Z',
        'ShippedDate': '1997-01-01T18:25:00.000Z',
        'Freight': 122.46,
        'ShipName': 'Piccolo und mehr',
        'ShipAddress': 'Geislweg 14',
        'ShipCity': 'Salzburg',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
        'OrderID': 10393,
        'CustomerID': 'SAVEA',
        'OrderDate': '1996-12-25T19:25:00.000Z',

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        'ShippedDate': '1997-01-03T20:25:00.000Z',
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        'ShipAddress': '187 Suffolk Ln.',
        'ShipCity': 'Boise',
        'ShipRegion': 'ID',
        'ShipCountry': 'USA'
    },
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        'CustomerID': 'HUNGC',
        'OrderDate': '1996-12-25T21:25:00.000Z',
        'ShippedDate': '1997-01-03T22:25:00.000Z',
        'Freight': 30.34,
        'ShipName': 'Hungry Coyote Import Store',
        'ShipAddress': 'City Center Plaza 516 Main St.',
        'ShipCity': 'Elgin',
        'ShipRegion': 'OR',
        'ShipCountry': 'USA'
    },
    {
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        'CustomerID': 'HILAA',
        'OrderDate': '1996-12-26T23:25:00.000Z',
        'ShippedDate': '1997-01-03T00:25:00.000Z',
        'Freight': 184.41,
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        'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
        'ShipCity': 'San Cristóbal',
        'ShipRegion': 'Táchira',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 10396,
        'CustomerID': 'FRANK',
        'OrderDate': '1996-12-27T01:45:00.000Z',
        'ShippedDate': '1997-01-06T02:45:00.000Z',
        'Freight': 135.35,
        'ShipName': 'Frankenversand',
        'ShipAddress': 'Berliner Platz 43',
        'ShipCity': 'München',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
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        'CustomerID': 'PRINI',
        'OrderDate': '1996-12-27T03:45:00.000Z',
        'ShippedDate': '1997-01-02T04:45:00.000Z',
        'Freight': 60.26,
        'ShipName': 'Princesa Isabel Vinhos',
        'ShipAddress': 'Estrada da saúde n. 58',
        'ShipCity': 'Lisboa',
        'ShipRegion': null,
        'ShipCountry': 'Portugal'
    },
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    'ShippedDate': '1997-01-09T06:45:00.000Z',
    'Freight': 89.16,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10399,
    'CustomerID': 'VAFFE',
    'OrderDate': '1996-12-31T07:45:00.000Z',
    'ShippedDate': '1997-01-08T08:45:00.000Z',
    'Freight': 27.36,
    'ShipName': 'Vaffeljernet',
    'ShipAddress': 'Smagsloget 45',
    'ShipCity': 'Århus',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
    'OrderID': 10400,
    'CustomerID': 'EASTC',
    'OrderDate': '1997-01-01T09:45:00.000Z',
    'ShippedDate': '1997-01-16T10:45:00.000Z',
    'Freight': 83.93,
    'ShipName': 'Eastern Connection',
    'ShipAddress': '35 King George',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10401,
    'CustomerID': 'RATTC',
    'OrderDate': '1997-01-01T11:45:00.000Z',
    'ShippedDate': '1997-01-10T12:45:00.000Z',
    'Freight': 12.51,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10402,
    'CustomerID': 'ERNSH',
    'OrderDate': '1997-01-02T13:45:00.000Z',
    'ShippedDate': '1997-01-10T14:45:00.000Z',
    'Freight': 67.88,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,

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    'ShipCountry': 'Austria'
  },
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    'CustomerID': 'ERNSH',
    'OrderDate': '1997-01-03T15:45:00.000Z',
    'ShippedDate': '1997-01-09T16:45:00.000Z',
    'Freight': 73.79,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
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    'CustomerID': 'MAGAA',
    'OrderDate': '1997-01-03T17:45:00.000Z',
    'ShippedDate': '1997-01-08T18:45:00.000Z',
    'Freight': 155.97,
    'ShipName': 'Magazzini Alimentari Riuniti',
    'ShipAddress': 'Via Ludovico il Moro 22',
    'ShipCity': 'Bergamo',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 10405,
    'CustomerID': 'LINOD',
    'OrderDate': '1997-01-06T19:45:00.000Z',
    'ShippedDate': '1997-01-22T20:45:00.000Z',
    'Freight': 34.82,
    'ShipName': 'LINO-Delicateses',
    'ShipAddress': 'Ave. 5 de Mayo Porlamar',
    'ShipCity': 'I. de Margarita',
    'ShipRegion': 'Nueva Esparta',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10406,
    'CustomerID': 'QUEEN',
    'OrderDate': '1997-01-07T21:45:00.000Z',
    'ShippedDate': '1997-01-13T22:45:00.000Z',
    'Freight': 108.04,
    'ShipName': 'Queen Cozinha',
    'ShipAddress': 'Alameda dos Canários, 891',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
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    'CustomerID': 'OTTIK',
    'OrderDate': '1997-01-07T23:45:00.000Z',
    'ShippedDate': '1997-01-30T01:55:00.000Z',
    'Freight': 91.48,
    'ShipName': 'Ottilies Käseladen',
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        'ShipAddress': 'Mehrheimerstr. 369',
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        'ShipRegion': null,
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    },
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        'CustomerID': 'FOLIG',
        'OrderDate': '1997-01-08T01:55:00.000Z',
        'ShippedDate': '1997-01-14T01:55:00.000Z',
        'Freight': 11.26,
        'ShipName': 'Folies gourmandes',
        'ShipAddress': '184, chaussée de Tournai',
        'ShipCity': 'Lille',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10409,
        'CustomerID': 'OCEAN',
        'OrderDate': '1997-01-09T02:55:00.000Z',
        'ShippedDate': '1997-01-14T03:55:00.000Z',
        'Freight': 29.83,
        'ShipName': 'Océano Atlántico Ltda.',
        'ShipAddress': 'Ing. Gustavo Moncada 8585 Piso 20-A',
        'ShipCity': 'Buenos Aires',
        'ShipRegion': null,
        'ShipCountry': 'Argentina'
    },
    {
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        'CustomerID': 'BOTTM',
        'OrderDate': '1997-01-10T04:55:00.000Z',
        'ShippedDate': '1997-01-15T05:55:00.000Z',
        'Freight': 2.4,
        'ShipName': 'Bottom-Dollar Markets',
        'ShipAddress': '23 Tsawassen Blvd.',
        'ShipCity': 'Tsawassen',
        'ShipRegion': 'BC',
        'ShipCountry': 'Canada'
    },
    {
        'OrderID': 10411,
        'CustomerID': 'BOTTM',
        'OrderDate': '1997-01-10T06:55:00.000Z',
        'ShippedDate': '1997-01-21T07:55:00.000Z',
        'Freight': 23.65,
        'ShipName': 'Bottom-Dollar Markets',
        'ShipAddress': '23 Tsawassen Blvd.',
        'ShipCity': 'Tsawassen',
        'ShipRegion': 'BC',
        'ShipCountry': 'Canada'
    },
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        'OrderID': 10412,
        'CustomerID': 'WARTH',
        'OrderDate': '1997-01-13T08:55:00.000Z',

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    'ShippedDate': '1997-01-15T09:55:00.000Z',
    'Freight': 3.77,
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    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 10413,
    'CustomerID': 'LAMAI',
    'OrderDate': '1997-01-14T10:55:00.000Z',
    'ShippedDate': '1997-01-16T11:55:00.000Z',
    'Freight': 95.66,
    'ShipName': 'La maison d\'Asie',
    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10414,
    'CustomerID': 'FAMIA',
    'OrderDate': '1997-01-14T12:55:00.000Z',
    'ShippedDate': '1997-01-17T13:55:00.000Z',
    'Freight': 21.48,
    'ShipName': 'Familia Arquibaldo',
    'ShipAddress': 'Rua Orós, 92',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10415,
    'CustomerID': 'HUNGC',
    'OrderDate': '1997-01-15T14:55:00.000Z',
    'ShippedDate': '1997-01-24T15:55:00.000Z',
    'Freight': 0.2,
    'ShipName': 'Hungry Coyote Import Store',
    'ShipAddress': 'City Center Plaza 516 Main St.',
    'ShipCity': 'Elgin',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10416,
    'CustomerID': 'WARTH',
    'OrderDate': '1997-01-16T16:55:00.000Z',
    'ShippedDate': '1997-01-27T17:55:00.000Z',
    'Freight': 22.72,
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    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
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    'ShippedDate': '1997-01-28T19:55:00.000Z',
    'Freight': 70.29,
    'ShipName': 'Simons bistro',
    'ShipAddress': 'Vinbæltet 34',
    'ShipCity': 'Kobenhavn',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
    'OrderID': 10418,
    'CustomerID': 'QUICK',
    'OrderDate': '1997-01-17T20:55:00.000Z',
    'ShippedDate': '1997-01-24T21:55:00.000Z',
    'Freight': 17.55,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10419,
    'CustomerID': 'RICSU',
    'OrderDate': '1997-01-20T22:55:00.000Z',
    'ShippedDate': '1997-01-30T23:55:00.000Z',
    'Freight': 137.35,
    'ShipName': 'Richter Supermarkt',
    'ShipAddress': 'Starenweg 5',
    'ShipCity': 'Genève',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
  {
    'OrderID': 10420,
    'CustomerID': 'WELLI',
    'OrderDate': '1997-01-21T01:05:00.000Z',
    'ShippedDate': '1997-01-27T012:05:00.000Z',
    'Freight': 44.12,
    'ShipName': 'Wellington Importadora',
    'ShipAddress': 'Rua do Mercado, 12',
    'ShipCity': 'Resende',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10421,
    'CustomerID': 'QUEDE',
    'OrderDate': '1997-01-21T02:05:00.000Z',
    'ShippedDate': '1997-01-27T03:05:00.000Z',
    'Freight': 99.23,
    'ShipName': 'Que Delícia',
    'ShipAddress': 'Rua da Panificadora, 12',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',

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    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10422,
    'CustomerID': 'FRANS',
    'OrderDate': '1997-01-22T04:05:00.000Z',
    'ShippedDate': '1997-01-31T05:05:00.000Z',
    'Freight': 3.02,
    'ShipName': 'Franchi S.p.A.',
    'ShipAddress': 'Via Monte Bianco 34',
    'ShipCity': 'Torino',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 10423,
    'CustomerID': 'GOURL',
    'OrderDate': '1997-01-23T06:05:00.000Z',
    'ShippedDate': '1997-02-24T07:05:00.000Z',
    'Freight': 24.5,
    'ShipName': 'Gourmet Lanchonetes',
    'ShipAddress': 'Av. Brasil, 442',
    'ShipCity': 'Campinas',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10424,
    'CustomerID': 'MEREP',
    'OrderDate': '1997-01-23T08:05:00.000Z',
    'ShippedDate': '1997-01-27T09:05:00.000Z',
    'Freight': 370.61,
    'ShipName': 'Mère Paillard',
    'ShipAddress': '43 rue St. Laurent',
    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10425,
    'CustomerID': 'LAMAI',
    'OrderDate': '1997-01-24T10:05:00.000Z',
    'ShippedDate': '1997-02-14T11:05:00.000Z',
    'Freight': 7.93,
    'ShipName': 'La maison d\'Asie',
    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
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    'CustomerID': 'GALED',
    'OrderDate': '1997-01-27T12:05:00.000Z',
    'ShippedDate': '1997-02-06T13:05:00.000Z',
    'Freight': 18.69,
    'ShipName': 'Galería del gastronómo',

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        'ShipAddress': 'Rambla de Catalunya, 23',
        'ShipCity': 'Barcelona',
        'ShipRegion': null,
        'ShipCountry': 'Spain'
    },
    {
        'OrderID': 10427,
        'CustomerID': 'PICCO',
        'OrderDate': '1997-01-27T14:05:00.000Z',
        'ShippedDate': '1997-03-03T15:05:00.000Z',
        'Freight': 31.29,
        'ShipName': 'Piccolo und mehr',
        'ShipAddress': 'Geislweg 14',
        'ShipCity': 'Salzburg',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
        'OrderID': 10428,
        'CustomerID': 'REGGC',
        'OrderDate': '1997-01-28T16:05:00.000Z',
        'ShippedDate': '1997-02-04T17:05:00.000Z',
        'Freight': 11.09,
        'ShipName': 'Reggiani Caseifici',
        'ShipAddress': 'Strada Provinciale 124',
        'ShipCity': 'Reggio Emilia',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
    {
        'OrderID': 10429,
        'CustomerID': 'HUNGO',
        'OrderDate': '1997-01-29T18:05:00.000Z',
        'ShippedDate': '1997-02-07T19:05:00.000Z',
        'Freight': 56.63,
        'ShipName': 'Hungry Owl All-Night Grocers',
        'ShipAddress': '8 Johnstown Road',
        'ShipCity': 'Cork',
        'ShipRegion': 'Co. Cork',
        'ShipCountry': 'Ireland'
    },
    {
        'OrderID': 10430,
        'CustomerID': 'ERNSH',
        'OrderDate': '1997-01-30T20:05:00.000Z',
        'ShippedDate': '1997-02-03T21:05:00.000Z',
        'Freight': 458.78,
        'ShipName': 'Ernst Handel',
        'ShipAddress': 'Kirchgasse 6',
        'ShipCity': 'Graz',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
        'OrderID': 10431,
        'CustomerID': 'BOTTM',
        'OrderDate': '1997-01-30T22:05:00.000Z',

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    'ShippedDate': '1997-02-07T23:05:00.000Z',
    'Freight': 44.17,
    'ShipName': 'Bottom-Dollar Markets',
    'ShipAddress': '23 Tsawassen Blvd.',
    'ShipCity': 'Tsawassen',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10432,
    'CustomerID': 'SPLIR',
    'OrderDate': '1997-01-31T01:15:00.000Z',
    'ShippedDate': '1997-02-07T02:15:00.000Z',
    'Freight': 4.34,
    'ShipName': 'Split Rail Beer & Ale',
    'ShipAddress': 'P.O. Box 555',
    'ShipCity': 'Lander',
    'ShipRegion': 'WY',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10433,
    'CustomerID': 'PRINI',
    'OrderDate': '1997-02-03T03:15:00.000Z',
    'ShippedDate': '1997-03-04T04:15:00.000Z',
    'Freight': 73.83,
    'ShipName': 'Princesa Isabel Vinhos',
    'ShipAddress': 'Estrada da saúde n. 58',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {
    'OrderID': 10434,
    'CustomerID': 'FOLKO',
    'OrderDate': '1997-02-03T05:15:00.000Z',
    'ShippedDate': '1997-02-13T06:15:00.000Z',
    'Freight': 17.92,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10435,
    'CustomerID': 'CONSH',
    'OrderDate': '1997-02-04T07:15:00.000Z',
    'ShippedDate': '1997-02-07T08:15:00.000Z',
    'Freight': 9.21,
    'ShipName': 'Consolidated Holdings',
    'ShipAddress': 'Berkeley Gardens 12 Brewery',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {

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    'OrderID': 10436,
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    'OrderDate': '1997-02-05T09:15:00.000Z',
    'ShippedDate': '1997-02-11T10:15:00.000Z',
    'Freight': 156.66,
    'ShipName': 'Blondel père et fils',
    'ShipAddress': '24, place Kléber',
    'ShipCity': 'Strasbourg',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10437,
    'CustomerID': 'WARTH',
    'OrderDate': '1997-02-05T11:15:00.000Z',
    'ShippedDate': '1997-02-12T12:15:00.000Z',
    'Freight': 19.97,
    'ShipName': 'Wartian Herkku',
    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 10438,
    'CustomerID': 'TOMSP',
    'OrderDate': '1997-02-06T13:15:00.000Z',
    'ShippedDate': '1997-02-14T14:15:00.000Z',
    'Freight': 8.24,
    'ShipName': 'Toms Spezialitäten',
    'ShipAddress': 'Luisenstr. 48',
    'ShipCity': 'Münster',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10439,
    'CustomerID': 'MEREP',
    'OrderDate': '1997-02-07T15:15:00.000Z',
    'ShippedDate': '1997-02-10T16:15:00.000Z',
    'Freight': 4.07,
    'ShipName': 'Mère Paillarde',
    'ShipAddress': '43 rue St. Laurent',
    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10440,
    'CustomerID': 'SAVEA',
    'OrderDate': '1997-02-10T17:15:00.000Z',
    'ShippedDate': '1997-02-28T18:15:00.000Z',
    'Freight': 86.53,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',

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    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10441,
    'CustomerID': 'OLDWO',
    'OrderDate': '1997-02-10T19:15:00.000Z',
    'ShippedDate': '1997-03-14T20:15:00.000Z',
    'Freight': 73.02,
    'ShipName': 'Old World Delicatessen',
    'ShipAddress': '2743 Bering St.',
    'ShipCity': 'Anchorage',
    'ShipRegion': 'AK',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10442,
    'CustomerID': 'ERNSH',
    'OrderDate': '1997-02-11T21:15:00.000Z',
    'ShippedDate': '1997-02-18T22:15:00.000Z',
    'Freight': 47.94,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10443,
    'CustomerID': 'REGGC',
    'OrderDate': '1997-02-12T23:15:00.000Z',
    'ShippedDate': '1997-02-14T00:25:00.000Z',
    'Freight': 13.95,
    'ShipName': 'Reggiani Caseifici',
    'ShipAddress': 'Strada Provinciale 124',
    'ShipCity': 'Reggio Emilia',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 10444,
    'CustomerID': 'BERGS',
    'OrderDate': '1997-02-12T00:25:00.000Z',
    'ShippedDate': '1997-02-21T01:25:00.000Z',
    'Freight': 3.5,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10445,
    'CustomerID': 'BERGS',
    'OrderDate': '1997-02-13T02:25:00.000Z',
    'ShippedDate': '1997-02-20T03:00.00.000Z',
    'Freight': 9.3,
    'ShipName': 'Berglunds snabbköp',
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        'ShipAddress': 'Berguvsvägen 8',
        'ShipCity': 'Luleå',
        'ShipRegion': null,
        'ShipCountry': 'Sweden'
    },
    {
        'OrderID': 10446,
        'CustomerID': 'TOMSP',
        'OrderDate': '1997-02-14T04:00.00.000Z',
        'ShippedDate': '1997-02-19T05:00.00.000Z',
        'Freight': 14.68,
        'ShipName': 'Toms Spezialitäten',
        'ShipAddress': 'Luisenstr. 48',
        'ShipCity': 'Münster',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10447,
        'CustomerID': 'RICAR',
        'OrderDate': '1997-02-14T05:00.00.000Z',
        'ShippedDate': '1997-03-07T06:25:00.000Z',
        'Freight': 68.66,
        'ShipName': 'Ricardo Adocicados',
        'ShipAddress': 'Av. Copacabana, 267',
        'ShipCity': 'Rio de Janeiro',
        'ShipRegion': 'RJ',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10448,
        'CustomerID': 'RANCH',
        'OrderDate': '1997-02-17T07:25:00.000Z',
        'ShippedDate': '1997-02-24T08:25:00.000Z',
        'Freight': 38.82,
        'ShipName': 'Rancho grande',
        'ShipAddress': 'Av. del Libertador 900',
        'ShipCity': 'Buenos Aires',
        'ShipRegion': null,
        'ShipCountry': 'Argentina'
    },
    {
        'OrderID': 10449,
        'CustomerID': 'BLONP',
        'OrderDate': '1997-02-18T09:25:00.000Z',
        'ShippedDate': '1997-02-27T10:25:00.000Z',
        'Freight': 53.3,
        'ShipName': 'Blondel père et fils',
        'ShipAddress': '24, place Kléber',
        'ShipCity': 'Strasbourg',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10450,
        'CustomerID': 'VICTE',
        'OrderDate': '1997-02-19T11:25:00.000Z',

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    'ShippedDate': '1997-03-11T12:25:00.000Z',
    'Freight': 7.23,
    'ShipName': 'Victuailles en stock',
    'ShipAddress': '2, rue du Commerce',
    'ShipCity': 'Lyon',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10451,
    'CustomerID': 'QUICK',
    'OrderDate': '1997-02-19T13:25:00.000Z',
    'ShippedDate': '1997-03-12T14:25:00.000Z',
    'Freight': 189.09,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10452,
    'CustomerID': 'SAVEA',
    'OrderDate': '1997-02-20T15:25:00.000Z',
    'ShippedDate': '1997-02-26T16:25:00.000Z',
    'Freight': 140.26,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10453,
    'CustomerID': 'AROUT',
    'OrderDate': '1997-02-21T17:25:00.000Z',
    'ShippedDate': '1997-02-26T18:25:00.000Z',
    'Freight': 25.36,
    'ShipName': 'Around the Horn',
    'ShipAddress': 'Brook Farm Stratford St. Mary',
    'ShipCity': 'Colchester',
    'ShipRegion': 'Essex',
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10454,
    'CustomerID': 'LAMAI',
    'OrderDate': '1997-02-21T19:25:00.000Z',
    'ShippedDate': '1997-02-25T20:25:00.000Z',
    'Freight': 2.74,
    'ShipName': 'La maison d\'Asie',
    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {

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    'OrderID': 10455,
    'CustomerID': 'WARTH',
    'OrderDate': '1997-02-24T21:25:00.000Z',
    'ShippedDate': '1997-03-03T22:25:00.000Z',
    'Freight': 180.45,
    'ShipName': 'Wartian Herkku',
    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 10456,
    'CustomerID': 'KOENE',
    'OrderDate': '1997-02-25T23:25:00.000Z',
    'ShippedDate': '1997-02-28T01:25:00.000Z',
    'Freight': 8.12,
    'ShipName': 'Königlich Essen',
    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10457,
    'CustomerID': 'KOENE',
    'OrderDate': '1997-02-25T01:35:00.000Z',
    'ShippedDate': '1997-03-03T02:35:00.000Z',
    'Freight': 11.57,
    'ShipName': 'Königlich Essen',
    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10458,
    'CustomerID': 'SUPRD',
    'OrderDate': '1997-02-26T03:35:00.000Z',
    'ShippedDate': '1997-03-04T04:35:00.000Z',
    'Freight': 147.06,
    'ShipName': 'Suprêmes délices',
    'ShipAddress': 'Boulevard Tirou, 255',
    'ShipCity': 'Charleroi',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
    'OrderID': 10459,
    'CustomerID': 'VICTE',
    'OrderDate': '1997-02-27T04:35:00.000Z',
    'ShippedDate': '1997-02-28T04:35:00.000Z',
    'Freight': 25.09,
    'ShipName': 'Victuailles en stock',
    'ShipAddress': '2, rue du Commerce',
    'ShipCity': 'Lyon',
    'ShipRegion': null,

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    'ShipCountry': 'France'
  },
  {
    'OrderID': 10460,
    'CustomerID': 'FOLKO',
    'OrderDate': '1997-02-28T05:35:00.000Z',
    'ShippedDate': '1997-03-03T06:35:00.000Z',
    'Freight': 16.27,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10461,
    'CustomerID': 'LILAS',
    'OrderDate': '1997-02-28T07:35:00.000Z',
    'ShippedDate': '1997-03-05T08:35:00.000Z',
    'Freight': 148.61,
    'ShipName': 'LILA-Supermercado',
    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10462,
    'CustomerID': 'CONSH',
    'OrderDate': '1997-03-03T09:00.00.000Z',
    'ShippedDate': '1997-03-18T10:00.00.000Z',
    'Freight': 6.17,
    'ShipName': 'Consolidated Holdings',
    'ShipAddress': 'Berkeley Gardens 12 Brewery',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10463,
    'CustomerID': 'SUPRD',
    'OrderDate': '1997-03-04T11:00.00.000Z',
    'ShippedDate': '1997-03-06T12:00.00.000Z',
    'Freight': 14.78,
    'ShipName': 'Suprêmes délices',
    'ShipAddress': 'Boulevard Tirou, 255',
    'ShipCity': 'Charleroi',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
    'OrderID': 10464,
    'CustomerID': 'FURIB',
    'OrderDate': '1997-03-04T13:00.00.000Z',
    'ShippedDate': '1997-03-14T14:00.00.000Z',
    'Freight': 89,
    'ShipName': 'Furia Bacalhau e Frutos do Mar',

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        'ShipAddress': 'Jardim das rosas n. 32',
        'ShipCity': 'Lisboa',
        'ShipRegion': null,
        'ShipCountry': 'Portugal'
    },
    {
        'OrderID': 10465,
        'CustomerID': 'VAFFE',
        'OrderDate': '1997-03-05T15:00.00.000Z',
        'ShippedDate': '1997-03-14T16:00.00.000Z',
        'Freight': 145.04,
        'ShipName': 'Vaffeljernet',
        'ShipAddress': 'Smagsloget 45',
        'ShipCity': 'Århus',
        'ShipRegion': null,
        'ShipCountry': 'Denmark'
    },
    {
        'OrderID': 10466,
        'CustomerID': 'COMMI',
        'OrderDate': '1997-03-06T17:00.00.000Z',
        'ShippedDate': '1997-03-13T18:00.00.000Z',
        'Freight': 11.93,
        'ShipName': 'Comércio Mineiro',
        'ShipAddress': 'Av. dos Lusíadas, 23',
        'ShipCity': 'Sao Paulo',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10467,
        'CustomerID': 'MAGAA',
        'OrderDate': '1997-03-06T19:00.00.000Z',
        'ShippedDate': '1997-03-11T20:00.00.000Z',
        'Freight': 4.93,
        'ShipName': 'Magazzini Alimentari Riuniti',
        'ShipAddress': 'Via Ludovico il Moro 22',
        'ShipCity': 'Bergamo',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
    {
        'OrderID': 10468,
        'CustomerID': 'KOENE',
        'OrderDate': '1997-03-07T21:00.00.000Z',
        'ShippedDate': '1997-03-12T22:00.00.000Z',
        'Freight': 44.12,
        'ShipName': 'Königlich Essen',
        'ShipAddress': 'Maubelstr. 90',
        'ShipCity': 'Brandenburg',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10469,
        'CustomerID': 'WHITC',
        'OrderDate': '1997-03-10T23:00.00.000Z',

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    'ShippedDate': '1997-03-14T01:00.00.000Z',
    'Freight': 60.18,
    'ShipName': 'White Clover Markets',
    'ShipAddress': '1029 - 12th Ave. S.',
    'ShipCity': 'Seattle',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10470,
    'CustomerID': 'BONAP',
    'OrderDate': '1997-03-11T02:00.00.000Z',
    'ShippedDate': '1997-03-14T03:00.00.000Z',
    'Freight': 64.56,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10471,
    'CustomerID': 'BSBEV',
    'OrderDate': '1997-03-11T04:00.00.000Z',
    'ShippedDate': '1997-03-18T05:00.00.000Z',
    'Freight': 45.59,
    'ShipName': 'B\'s Beverages',
    'ShipAddress': 'Fauntleroy Circus',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10472,
    'CustomerID': 'SEVES',
    'OrderDate': '1997-03-12T06:00.00.000Z',
    'ShippedDate': '1997-03-19T07:00.00.000Z',
    'Freight': 4.2,
    'ShipName': 'Seven Seas Imports',
    'ShipAddress': '90 Wadhurst Rd.',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10473,
    'CustomerID': 'ISLAT',
    'OrderDate': '1997-03-13T08:00.00.000Z',
    'ShippedDate': '1997-03-21T09:00.00.000Z',
    'Freight': 16.37,
    'ShipName': 'Island Trading',
    'ShipAddress': 'Garden House Crowther Way',
    'ShipCity': 'Cowes',
    'ShipRegion': 'Isle of Wight',
    'ShipCountry': 'UK'
  }
]

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    'OrderID': 10474,
    'CustomerID': 'PERIC',
    'OrderDate': '1997-03-13T10:00.00.000Z',
    'ShippedDate': '1997-03-21T11:00.00.000Z',
    'Freight': 83.49,
    'ShipName': 'Pericles Comidas clásicas',
    'ShipAddress': 'Calle Dr. Jorge Cash 321',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10475,
    'CustomerID': 'SUPRD',
    'OrderDate': '1997-03-14T12:00.00.000Z',
    'ShippedDate': '1997-04-04T13:00.00.000Z',
    'Freight': 68.52,
    'ShipName': 'Suprêmes délices',
    'ShipAddress': 'Boulevard Tirou, 255',
    'ShipCity': 'Charleroi',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
    'OrderID': 10476,
    'CustomerID': 'HILAA',
    'OrderDate': '1997-03-17T14:00.00.000Z',
    'ShippedDate': '1997-03-24T15:00.00.000Z',
    'Freight': 4.41,
    'ShipName': 'HILARION-Abastos',
    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10477,
    'CustomerID': 'PRINI',
    'OrderDate': '1997-03-17T16:00.00.000Z',
    'ShippedDate': '1997-03-25T17:00.00.000Z',
    'Freight': 13.02,
    'ShipName': 'Princesa Isabel Vinhos',
    'ShipAddress': 'Estrada da saúde n. 58',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {
    'OrderID': 10478,
    'CustomerID': 'VICTE',
    'OrderDate': '1997-03-18T18:00.00.000Z',
    'ShippedDate': '1997-03-26T19:00.00.000Z',
    'Freight': 4.81,
    'ShipName': 'Victuailles en stock',
    'ShipAddress': '2, rue du Commerce',
    'ShipCity': 'Lyon',
    'ShipRegion': null,

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    'ShipCountry': 'France'
  },
  {
    'OrderID': 10479,
    'CustomerID': 'RATTC',
    'OrderDate': '1997-03-19T20:00.00.000Z',
    'ShippedDate': '1997-03-21T21:00.00.000Z',
    'Freight': 708.95,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10480,
    'CustomerID': 'FOLIG',
    'OrderDate': '1997-03-20T22:00.00.000Z',
    'ShippedDate': '1997-03-24T23:00.00.000Z',
    'Freight': 1.35,
    'ShipName': 'Folies gourmandes',
    'ShipAddress': '184, chaussée de Tournai',
    'ShipCity': 'Lille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10481,
    'CustomerID': 'RICAR',
    'OrderDate': '1997-03-20T01:00.00.000Z',
    'ShippedDate': '1997-03-25T02:00.00.000Z',
    'Freight': 64.33,
    'ShipName': 'Ricardo Adocicados',
    'ShipAddress': 'Av. Copacabana, 267',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10482,
    'CustomerID': 'LAZYK',
    'OrderDate': '1997-03-21T03:00.00.000Z',
    'ShippedDate': '1997-04-10T04:00.00.000Z',
    'Freight': 7.48,
    'ShipName': 'Lazy K Kountry Store',
    'ShipAddress': '12 Orchestra Terrace',
    'ShipCity': 'Walla Walla',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10483,
    'CustomerID': 'WHITC',
    'OrderDate': '1997-03-24T05:00.00.000Z',
    'ShippedDate': '1997-04-25T06:00.00.000Z',
    'Freight': 15.28,
    'ShipName': 'White Clover Markets',

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        'ShipAddress': '1029 - 12th Ave. S.',
        'ShipCity': 'Seattle',
        'ShipRegion': 'WA',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10484,
        'CustomerID': 'BSBEV',
        'OrderDate': '1997-03-24T07:00.00.000Z',
        'ShippedDate': '1997-04-01T08:00.00.000Z',
        'Freight': 6.88,
        'ShipName': 'B\'s Beverages',
        'ShipAddress': 'Fauntleroy Circus',
        'ShipCity': 'London',
        'ShipRegion': null,
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10485,
        'CustomerID': 'LINOD',
        'OrderDate': '1997-03-25T09:00.00.000Z',
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        'Freight': 64.45,
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        'ShipAddress': 'Ave. 5 de Mayo Porlamar',
        'ShipCity': 'I. de Margarita',
        'ShipRegion': 'Nueva Esparta',
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    },
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        'Freight': 30.53,
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        'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
        'ShipCity': 'San Cristóbal',
        'ShipRegion': 'Táchira',
        'ShipCountry': 'Venezuela'
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        'Freight': 71.07,
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        'ShipAddress': 'Alameda dos Canários, 891',
        'ShipCity': 'Sao Paulo',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
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    'Freight': 5.29,
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    'ShipAddress': 'Geislweg 14',
    'ShipCity': 'Salzburg',
    'ShipRegion': null,
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    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
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    'Freight': 16.96,
    'ShipName': 'Furia Bacalhau e Frutos do Mar',
    'ShipAddress': 'Jardim das rosas n. 32',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
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    'ShippedDate': '1997-04-11T01:00.00.000Z',
    'Freight': 62.89,
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    'ShipAddress': '23 Tsawassen Blvd.',
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    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
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    'Freight': 10.64,
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    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
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    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
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    'CustomerID': 'LAUGB',
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    'ShippedDate': '1997-04-11T07:00.00.000Z',
    'Freight': 4.65,
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    'ShipAddress': '2319 Elm St.',
    'ShipCity': 'Vancouver',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
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    'CustomerID': 'TRADH',
    'OrderDate': '1997-04-04T08:00.00.000Z',
    'ShippedDate': '1997-04-07T09:00.00.000Z',
    'Freight': 46.77,
    'ShipName': 'Tradição Hipermercados',
    'ShipAddress': 'Av. Inês de Castro, 414',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
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    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,

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    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
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    'ShippedDate': '1997-04-16T15:00.00.000Z',
    'Freight': 102.02,
    'ShipName': 'LILA-Supermercado',
    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10500,
    'CustomerID': 'LAMAI',
    'OrderDate': '1997-04-09T16:00.00.000Z',
    'ShippedDate': '1997-04-17T17:00.00.000Z',
    'Freight': 42.68,
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    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
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    'CustomerID': 'BLAUS',
    'OrderDate': '1997-04-09T18:00.00.000Z',
    'ShippedDate': '1997-04-16T19:00.00.000Z',
    'Freight': 8.85,
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    'ShipAddress': 'Forsterstr. 57',
    'ShipCity': 'Mannheim',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
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    'CustomerID': 'PERIC',
    'OrderDate': '1997-04-10T20:00.00.000Z',
    'ShippedDate': '1997-04-29T21:00.00.000Z',
    'Freight': 69.32,
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        'ShipAddress': 'Calle Dr. Jorge Cash 321',
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        'ShipRegion': null,
        'ShipCountry': 'Mexico'
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        'CustomerID': 'HUNGO',
        'OrderDate': '1997-04-11T22:00.00.000Z',
        'ShippedDate': '1997-04-16T23:00.00.000Z',
        'Freight': 16.74,
        'ShipName': 'Hungry Owl All-Night Grocers',
        'ShipAddress': '8 Johnstown Road',
        'ShipCity': 'Cork',
        'ShipRegion': 'Co. Cork',
        'ShipCountry': 'Ireland'
    },
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        'CustomerID': 'WHITC',
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        'ShippedDate': '1997-04-18T02:00.00.000Z',
        'Freight': 59.13,
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        'ShipAddress': '1029 - 12th Ave. S.',
        'ShipCity': 'Seattle',
        'ShipRegion': 'WA',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10505,
        'CustomerID': 'MEREP',
        'OrderDate': '1997-04-14T03:00.00.000Z',
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        'ShipAddress': '43 rue St. Laurent',
        'ShipCity': 'Montréal',
        'ShipRegion': 'Québec',
        'ShipCountry': 'Canada'
    },
    {
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        'CustomerID': 'KOENE',
        'OrderDate': '1997-04-15T05:05:00.000Z',
        'ShippedDate': '1997-05-02T06:05:00.000Z',
        'Freight': 21.19,
        'ShipName': 'Königlich Essen',
        'ShipAddress': 'Maubelstr. 90',
        'ShipCity': 'Brandenburg',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
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        'CustomerID': 'ANTON',
        'OrderDate': '1997-04-15T07:05:00.000Z',

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    'ShipAddress': 'Mataderos 2312',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
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    'OrderDate': '1997-04-16T09:05:00.000Z',
    'ShippedDate': '1997-05-13T10:05:00.000Z',
    'Freight': 4.99,
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    'ShipAddress': 'Mehrheimerstr. 369',
    'ShipCity': 'Köln',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10509,
    'CustomerID': 'BLAUS',
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    'ShippedDate': '1997-04-29T12:05:00.000Z',
    'Freight': 0.15,
    'ShipName': 'Blauer See Delikatessen',
    'ShipAddress': 'Forsterstr. 57',
    'ShipCity': 'Mannheim',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
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    'CustomerID': 'SAVEA',
    'OrderDate': '1997-04-18T13:05:00.000Z',
    'ShippedDate': '1997-04-28T14:05:00.000Z',
    'Freight': 367.63,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'BONAP',
    'OrderDate': '1997-04-18T15:05:00.000Z',
    'ShippedDate': '1997-04-21T01:05:00.000Z',
    'Freight': 350.64,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {

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    'Freight': 3.53,
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    'ShipAddress': 'Rua Orós, 92',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
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    'CustomerID': 'WANDK',
    'OrderDate': '1997-04-22T04:05:00.000Z',
    'ShippedDate': '1997-04-28T05:05:00.000Z',
    'Freight': 105.65,
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    'ShipCity': 'Stuttgart',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
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    'CustomerID': 'ERNSH',
    'OrderDate': '1997-04-22T05:05:00.000Z',
    'ShippedDate': '1997-05-16T07:05:00.000Z',
    'Freight': 789.95,
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    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10515,
    'CustomerID': 'QUICK',
    'OrderDate': '1997-04-23T08:05:00.000Z',
    'ShippedDate': '1997-05-23T09:05:00.000Z',
    'Freight': 204.47,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
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    'CustomerID': 'HUNGO',
    'OrderDate': '1997-04-24T10:05:00.000Z',
    'ShippedDate': '1997-05-01T11:05:00.000Z',
    'Freight': 62.78,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
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  },
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    'Freight': 32.07,
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    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
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    'CustomerID': 'TORTU',
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    'ShippedDate': '1997-05-05T15:05:00.000Z',
    'Freight': 218.15,
    'ShipName': 'Tortuga Restaurante',
    'ShipAddress': 'Avda. Azteca 123',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10519,
    'CustomerID': 'CHOPS',
    'OrderDate': '1997-04-28T16:05:00.000Z',
    'ShippedDate': '1997-05-01T17:05:00.000Z',
    'Freight': 91.76,
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    'ShipAddress': 'Hauptstr. 31',
    'ShipCity': 'Bern',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
  {
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    'CustomerID': 'SANTG',
    'OrderDate': '1997-04-29T18:05:00.000Z',
    'ShippedDate': '1997-05-01T19:05:00.000Z',
    'Freight': 13.37,
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    'ShipAddress': 'Erling Skakkes gate 78',
    'ShipCity': 'Stavern',
    'ShipRegion': null,
    'ShipCountry': 'Norway'
  },
  {
    'OrderID': 10521,
    'CustomerID': 'CACTU',
    'OrderDate': '1997-04-29T20:05:00.000Z',
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    'Freight': 17.22,
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        'ShipRegion': null,
        'ShipCountry': 'Argentina'
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        'OrderDate': '1997-04-30T22:05:00.000Z',
        'ShippedDate': '1997-05-06T23:05:00.000Z',
        'Freight': 45.33,
        'ShipName': 'Lehmanns Marktstand',
        'ShipAddress': 'Magazinweg 7',
        'ShipCity': 'Frankfurt a.M.',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
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        'CustomerID': 'SEVES',
        'OrderDate': '1997-05-01T01:10:00.000Z',
        'ShippedDate': '1997-05-30T02:10:00.000Z',
        'Freight': 77.63,
        'ShipName': 'Seven Seas Imports',
        'ShipAddress': '90 Wadhurst Rd.',
        'ShipCity': 'London',
        'ShipRegion': null,
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10524,
        'CustomerID': 'BERGS',
        'OrderDate': '1997-05-01T03:10:00.000Z',
        'ShippedDate': '1997-05-07T04:10:00.000Z',
        'Freight': 244.79,
        'ShipName': 'Berglunds snabbköp',
        'ShipAddress': 'Berguvsvägen 8',
        'ShipCity': 'Luleå',
        'ShipRegion': null,
        'ShipCountry': 'Sweden'
    },
    {
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        'CustomerID': 'BONAP',
        'OrderDate': '1997-05-02T05:10:00.000Z',
        'ShippedDate': '1997-05-23T06:10:00.000Z',
        'Freight': 11.06,
        'ShipName': 'Bon app',
        'ShipAddress': '12, rue des Bouchers',
        'ShipCity': 'Marseille',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
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        'CustomerID': 'WARTH',
        'OrderDate': '1997-05-05T07:10:00.000Z',

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    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 10527,
    'CustomerID': 'QUICK',
    'OrderDate': '1997-05-05T09:10:00.000Z',
    'ShippedDate': '1997-05-07T10:10:00.000Z',
    'Freight': 41.9,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10528,
    'CustomerID': 'GREAL',
    'OrderDate': '1997-05-06T11:10:00.000Z',
    'ShippedDate': '1997-05-09T12:10:00.000Z',
    'Freight': 3.35,
    'ShipName': 'Great Lakes Food Market',
    'ShipAddress': '2732 Baker Blvd.',
    'ShipCity': 'Eugene',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10529,
    'CustomerID': 'MAISD',
    'OrderDate': '1997-05-07T13:10:00.000Z',
    'ShippedDate': '1997-05-09T14:10:00.000Z',
    'Freight': 66.69,
    'ShipName': 'Maison Dewey',
    'ShipAddress': 'Rue Joseph-Bens 532',
    'ShipCity': 'Bruxelles',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
    'OrderID': 10530,
    'CustomerID': 'PICCO',
    'OrderDate': '1997-05-08T15:10:00.000Z',
    'ShippedDate': '1997-05-12T16:10:00.000Z',
    'Freight': 339.22,
    'ShipName': 'Piccolo und mehr',
    'ShipAddress': 'Geislweg 14',
    'ShipCity': 'Salzburg',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
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    'OrderDate': '1997-05-08T17:10:00.000Z',
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    'Freight': 8.12,
    'ShipName': 'Océano Atlántico Ltda.',
    'ShipAddress': 'Ing. Gustavo Moncada 8585 Piso 20-A',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },
  {
    'OrderID': 10532,
    'CustomerID': 'EASTC',
    'OrderDate': '1997-05-09T19:10:00.000Z',
    'ShippedDate': '1997-05-12T20:10:00.000Z',
    'Freight': 74.46,
    'ShipName': 'Eastern Connection',
    'ShipAddress': '35 King George',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10533,
    'CustomerID': 'FOLKO',
    'OrderDate': '1997-05-12T21:10:00.000Z',
    'ShippedDate': '1997-05-22T22:10:00.000Z',
    'Freight': 188.04,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10534,
    'CustomerID': 'LEHMS',
    'OrderDate': '1997-05-12T23:10:00.000Z',
    'ShippedDate': '1997-05-14T01:15:00.000Z',
    'Freight': 27.94,
    'ShipName': 'Lehmanns Marktstand',
    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10535,
    'CustomerID': 'ANTON',
    'OrderDate': '1997-05-13T02:15:00.000Z',
    'ShippedDate': '1997-05-21T03:15:00.000Z',
    'Freight': 15.64,
    'ShipName': 'Antonio Moreno Taquería',
    'ShipAddress': 'Mataderos 2312',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,

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  },
  {
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    'CustomerID': 'LEHMS',
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    'ShippedDate': '1997-06-06T05:15:00.000Z',
    'Freight': 58.88,
    'ShipName': 'Lehmanns Marktstand',
    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10537,
    'CustomerID': 'RICSU',
    'OrderDate': '1997-05-14T06:15:00.000Z',
    'ShippedDate': '1997-05-19T07:15:00.000Z',
    'Freight': 78.85,
    'ShipName': 'Richter Supermarkt',
    'ShipAddress': 'Starenweg 5',
    'ShipCity': 'Genève',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
  {
    'OrderID': 10538,
    'CustomerID': 'BSBEV',
    'OrderDate': '1997-05-15T08:15:00.000Z',
    'ShippedDate': '1997-05-16T09:15:00.000Z',
    'Freight': 4.87,
    'ShipName': 'B\'s Beverages',
    'ShipAddress': 'Fauntleroy Circus',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10539,
    'CustomerID': 'BSBEV',
    'OrderDate': '1997-05-16T10:15:00.000Z',
    'ShippedDate': '1997-05-23T11:15:00.000Z',
    'Freight': 12.36,
    'ShipName': 'B\'s Beverages',
    'ShipAddress': 'Fauntleroy Circus',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10540,
    'CustomerID': 'QUICK',
    'OrderDate': '1997-05-19T12:15:00.000Z',
    'ShippedDate': '1997-06-13T13:15:00.000Z',
    'Freight': 1007.64,
    'ShipName': 'QUICK-Stop',
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        'ShipAddress': 'Taucherstraße 10',
        'ShipCity': 'Cunewalde',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10541,
        'CustomerID': 'HANAR',
        'OrderDate': '1997-05-19T14:15:00.000Z',
        'ShippedDate': '1997-05-29T15:15:00.000Z',
        'Freight': 68.65,
        'ShipName': 'Hanari Carnes',
        'ShipAddress': 'Rua do Paço, 67',
        'ShipCity': 'Rio de Janeiro',
        'ShipRegion': 'RJ',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10542,
        'CustomerID': 'KOENE',
        'OrderDate': '1997-05-20T16:15:00.000Z',
        'ShippedDate': '1997-05-26T17:15:00.000Z',
        'Freight': 10.95,
        'ShipName': 'Königlich Essen',
        'ShipAddress': 'Maubelstr. 90',
        'ShipCity': 'Brandenburg',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10543,
        'CustomerID': 'LILAS',
        'OrderDate': '1997-05-21T18:15:00.000Z',
        'ShippedDate': '1997-05-23T19:15:00.000Z',
        'Freight': 48.17,
        'ShipName': 'LILA-Supermercado',
        'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
        'ShipCity': 'Barquisimeto',
        'ShipRegion': 'Lara',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 10544,
        'CustomerID': 'LONEP',
        'OrderDate': '1997-05-21T20:15:00.000Z',
        'ShippedDate': '1997-05-30T21:15:00.000Z',
        'Freight': 24.91,
        'ShipName': 'Lonesome Pine Restaurant',
        'ShipAddress': '89 Chiaroscuro Rd.',
        'ShipCity': 'Portland',
        'ShipRegion': 'OR',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10545,
        'CustomerID': 'LAZYK',
        'OrderDate': '1997-05-22T23:15:00.000Z',

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    'ShippedDate': '1997-06-26T01:20:00.000Z',
    'Freight': 11.92,
    'ShipName': 'Lazy K Kountry Store',
    'ShipAddress': '12 Orchestra Terrace',
    'ShipCity': 'Walla Walla',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10546,
    'CustomerID': 'VICTE',
    'OrderDate': '1997-05-23T02:20:00.000Z',
    'ShippedDate': '1997-05-27T03:20:00.000Z',
    'Freight': 194.72,
    'ShipName': 'Victuailles en stock',
    'ShipAddress': '2, rue du Commerce',
    'ShipCity': 'Lyon',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10547,
    'CustomerID': 'SEVES',
    'OrderDate': '1997-05-23T04:20:00.000Z',
    'ShippedDate': '1997-06-02T05:20:00.000Z',
    'Freight': 178.43,
    'ShipName': 'Seven Seas Imports',
    'ShipAddress': '90 Wadhurst Rd.',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10548,
    'CustomerID': 'TOMSP',
    'OrderDate': '1997-05-26T06:20:00.000Z',
    'ShippedDate': '1997-06-02T07:20:00.000Z',
    'Freight': 1.43,
    'ShipName': 'Toms Spezialitäten',
    'ShipAddress': 'Luisenstr. 48',
    'ShipCity': 'Münster',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10549,
    'CustomerID': 'QUICK',
    'OrderDate': '1997-05-27T08:20:00.000Z',
    'ShippedDate': '1997-05-30T09:20:00.000Z',
    'Freight': 171.24,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {

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    'OrderID': 10550,
    'CustomerID': 'GODOS',
    'OrderDate': '1997-05-28T10:20:00.000Z',
    'ShippedDate': '1997-06-06T11:20:00.000Z',
    'Freight': 4.32,
    'ShipName': 'Godos Cocina Típica',
    'ShipAddress': 'C/ Romero, 33',
    'ShipCity': 'Sevilla',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10551,
    'CustomerID': 'FURIB',
    'OrderDate': '1997-05-28T12:20:00.000Z',
    'ShippedDate': '1997-06-06T13:20:00.000Z',
    'Freight': 72.95,
    'ShipName': 'Furia Bacalhau e Frutos do Mar',
    'ShipAddress': 'Jardim das rosas n. 32',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {
    'OrderID': 10552,
    'CustomerID': 'HILAA',
    'OrderDate': '1997-05-29T14:20:00.000Z',
    'ShippedDate': '1997-06-05T15:20:00.000Z',
    'Freight': 83.22,
    'ShipName': 'HILARION-Abastos',
    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10553,
    'CustomerID': 'WARTH',
    'OrderDate': '1997-05-30T16:20:00.000Z',
    'ShippedDate': '1997-06-03T17:20:00.000Z',
    'Freight': 149.49,
    'ShipName': 'Wartian Herkku',
    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 10554,
    'CustomerID': 'OTTIK',
    'OrderDate': '1997-05-30T18:20:00.000Z',
    'ShippedDate': '1997-06-05T19:20:00.000Z',
    'Freight': 120.97,
    'ShipName': 'Ottilies Käseladen',
    'ShipAddress': 'Mehrheimerstr. 369',
    'ShipCity': 'Köln',
    'ShipRegion': null,

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    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10555,
    'CustomerID': 'SAVEA',
    'OrderDate': '1997-06-02T20:20:00.000Z',
    'ShippedDate': '1997-06-04T21:20:00.000Z',
    'Freight': 252.49,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10556,
    'CustomerID': 'SIMOB',
    'OrderDate': '1997-06-03T22:20:00.000Z',
    'ShippedDate': '1997-06-13T23:20:00.000Z',
    'Freight': 9.8,
    'ShipName': 'Simons bistro',
    'ShipAddress': 'Vinbæltet 34',
    'ShipCity': 'Kobenhavn',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
    'OrderID': 10557,
    'CustomerID': 'LEHMS',
    'OrderDate': '1997-06-03T01:25:00.000Z',
    'ShippedDate': '1997-06-06T02:25:00.000Z',
    'Freight': 96.72,
    'ShipName': 'Lehmanns Marktstand',
    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10558,
    'CustomerID': 'AROUT',
    'OrderDate': '1997-06-04T03:25:00.000Z',
    'ShippedDate': '1997-06-10T04:25:00.000Z',
    'Freight': 72.97,
    'ShipName': 'Around the Horn',
    'ShipAddress': 'Brook Farm Stratford St. Mary',
    'ShipCity': 'Colchester',
    'ShipRegion': 'Essex',
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10559,
    'CustomerID': 'BLONP',
    'OrderDate': '1997-06-05T05:25:00.000Z',
    'ShippedDate': '1997-06-13T06:25:00.000Z',
    'Freight': 8.05,
    'ShipName': 'Blondel père et fils',

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        'ShipAddress': '24, place Kléber',
        'ShipCity': 'Strasbourg',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10560,
        'CustomerID': 'FRANK',
        'OrderDate': '1997-06-06T07:25:00.000Z',
        'ShippedDate': '1997-06-09T08:25:00.000Z',
        'Freight': 36.65,
        'ShipName': 'Frankenversand',
        'ShipAddress': 'Berliner Platz 43',
        'ShipCity': 'München',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10561,
        'CustomerID': 'FOLKO',
        'OrderDate': '1997-06-06T09:25:00.000Z',
        'ShippedDate': '1997-06-09T10:25:00.000Z',
        'Freight': 242.21,
        'ShipName': 'Folk och fä HB',
        'ShipAddress': 'Åkergatan 24',
        'ShipCity': 'Bräcke',
        'ShipRegion': null,
        'ShipCountry': 'Sweden'
    },
    {
        'OrderID': 10562,
        'CustomerID': 'REGGC',
        'OrderDate': '1997-06-09T11:25:00.000Z',
        'ShippedDate': '1997-06-12T12:25:00.000Z',
        'Freight': 22.95,
        'ShipName': 'Reggiani Caseifici',
        'ShipAddress': 'Strada Provinciale 124',
        'ShipCity': 'Reggio Emilia',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
    {
        'OrderID': 10563,
        'CustomerID': 'RICAR',
        'OrderDate': '1997-06-10T13:25:00.000Z',
        'ShippedDate': '1997-06-24T14:25:00.000Z',
        'Freight': 60.43,
        'ShipName': 'Ricardo Adocicados',
        'ShipAddress': 'Av. Copacabana, 267',
        'ShipCity': 'Rio de Janeiro',
        'ShipRegion': 'RJ',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10564,
        'CustomerID': 'RATTC',
        'OrderDate': '1997-06-10T15:25:00.000Z',

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    'ShippedDate': '1997-06-16T16:25:00.000Z',
    'Freight': 13.75,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10565,
    'CustomerID': 'MEREP',
    'OrderDate': '1997-06-11T17:25:00.000Z',
    'ShippedDate': '1997-06-18T18:25:00.000Z',
    'Freight': 7.15,
    'ShipName': 'Mère Paillarde',
    'ShipAddress': '43 rue St. Laurent',
    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10566,
    'CustomerID': 'BLONP',
    'OrderDate': '1997-06-12T01:10:00.000Z',
    'ShippedDate': '1997-06-18T02:10:00.000Z',
    'Freight': 88.4,
    'ShipName': 'Blondel père et fils',
    'ShipAddress': '24, place Kléber',
    'ShipCity': 'Strasbourg',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10567,
    'CustomerID': 'HUNGO',
    'OrderDate': '1997-06-12T03:10:00.000Z',
    'ShippedDate': '1997-06-17T03:10:00.000Z',
    'Freight': 33.97,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10568,
    'CustomerID': 'GALED',
    'OrderDate': '1997-06-13T04:10:00.000Z',
    'ShippedDate': '1997-07-09T05:10:00.000Z',
    'Freight': 6.54,
    'ShipName': 'Galería del gastronómo',
    'ShipAddress': 'Rambla de Catalunya, 23',
    'ShipCity': 'Barcelona',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {

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    'OrderID': 10569,
    'CustomerID': 'RATTC',
    'OrderDate': '1997-06-16T06:10:00.000Z',
    'ShippedDate': '1997-07-11T07:10:00.000Z',
    'Freight': 58.98,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10570,
    'CustomerID': 'MEREP',
    'OrderDate': '1997-06-17T08:10:00.000Z',
    'ShippedDate': '1997-06-19T09:10:00.000Z',
    'Freight': 188.99,
    'ShipName': 'Mère Paillarde',
    'ShipAddress': '43 rue St. Laurent',
    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10571,
    'CustomerID': 'ERNSH',
    'OrderDate': '1997-06-17T10:10:00.000Z',
    'ShippedDate': '1997-07-04T11:10:00.000Z',
    'Freight': 26.06,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10572,
    'CustomerID': 'BERGS',
    'OrderDate': '1997-06-18T12:10:00.000Z',
    'ShippedDate': '1997-06-25T13:10:00.000Z',
    'Freight': 116.43,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10573,
    'CustomerID': 'ANTON',
    'OrderDate': '1997-06-19T14:10:00.000Z',
    'ShippedDate': '1997-06-20T15:10:00.000Z',
    'Freight': 84.84,
    'ShipName': 'Antonio Moreno Taquería',
    'ShipAddress': 'Mataderos 2312',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,

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    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10574,
    'CustomerID': 'TRAIH',
    'OrderDate': '1997-06-19T16:10:00.000Z',
    'ShippedDate': '1997-06-30T17:10:00.000Z',
    'Freight': 37.6,
    'ShipName': 'Trail\'s Head Gourmet Provisioners',
    'ShipAddress': '722 DaVinci Blvd.',
    'ShipCity': 'Kirkland',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10575,
    'CustomerID': 'MORGK',
    'OrderDate': '1997-06-20T18:10:00.000Z',
    'ShippedDate': '1997-06-30T19:10:00.000Z',
    'Freight': 127.34,
    'ShipName': 'Morgenstern Gesundkost',
    'ShipAddress': 'Heerstr. 22',
    'ShipCity': 'Leipzig',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10576,
    'CustomerID': 'TORTU',
    'OrderDate': '1997-06-23T20:10:00.000Z',
    'ShippedDate': '1997-06-30T21:10:00.000Z',
    'Freight': 18.56,
    'ShipName': 'Tortuga Restaurante',
    'ShipAddress': 'Avda. Azteca 123',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10577,
    'CustomerID': 'TRAIH',
    'OrderDate': '1997-06-23T22:10:00.000Z',
    'ShippedDate': '1997-06-30T23:10:00.000Z',
    'Freight': 25.41,
    'ShipName': 'Trail\'s Head Gourmet Provisioners',
    'ShipAddress': '722 DaVinci Blvd.',
    'ShipCity': 'Kirkland',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10578,
    'CustomerID': 'BSBEV',
    'OrderDate': '1997-06-24T23:10:00.000Z',
    'ShippedDate': '1997-07-25T01:15:00.000Z',
    'Freight': 29.6,
    'ShipName': 'B\'s Beverages',

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        'ShipAddress': 'Fauntleroy Circus',
        'ShipCity': 'London',
        'ShipRegion': null,
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10579,
        'CustomerID': 'LETSS',
        'OrderDate': '1997-06-25T01:30:00.000Z',
        'ShippedDate': '1997-07-04T02:30:00.000Z',
        'Freight': 13.73,
        'ShipName': 'Let\'s Stop N Shop',
        'ShipAddress': '87 Polk St. Suite 5',
        'ShipCity': 'San Francisco',
        'ShipRegion': 'CA',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10580,
        'CustomerID': 'OTTIK',
        'OrderDate': '1997-06-26T03:30:00.000Z',
        'ShippedDate': '1997-07-01T04:30:00.000Z',
        'Freight': 75.89,
        'ShipName': 'Ottilies Käseladen',
        'ShipAddress': 'Mehrheimerstr. 369',
        'ShipCity': 'Köln',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10581,
        'CustomerID': 'FAMIA',
        'OrderDate': '1997-06-26T05:30:00.000Z',
        'ShippedDate': '1997-07-02T06:30:00.000Z',
        'Freight': 3.01,
        'ShipName': 'Familia Arquibaldo',
        'ShipAddress': 'Rua Orós, 92',
        'ShipCity': 'Sao Paulo',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10582,
        'CustomerID': 'BLAUS',
        'OrderDate': '1997-06-27T07:30:00.000Z',
        'ShippedDate': '1997-07-14T08:30:00.000Z',
        'Freight': 27.71,
        'ShipName': 'Blauer See Delikatessen',
        'ShipAddress': 'Forsterstr. 57',
        'ShipCity': 'Mannheim',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10583,
        'CustomerID': 'WARTH',
        'OrderDate': '1997-06-30T08:30:00.000Z',

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    'ShippedDate': '1997-07-04T09:30:00.000Z',
    'Freight': 7.28,
    'ShipName': 'Wartian Herkku',
    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 10584,
    'CustomerID': 'BLONP',
    'OrderDate': '1997-06-30T10:30:00.000Z',
    'ShippedDate': '1997-07-04T11:30:00.000Z',
    'Freight': 59.14,
    'ShipName': 'Blondel père et fils',
    'ShipAddress': '24, place Kléber',
    'ShipCity': 'Strasbourg',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10585,
    'CustomerID': 'WELLI',
    'OrderDate': '1997-07-01T12:30:00.000Z',
    'ShippedDate': '1997-07-10T13:30:00.000Z',
    'Freight': 13.41,
    'ShipName': 'Wellington Importadora',
    'ShipAddress': 'Rua do Mercado, 12',
    'ShipCity': 'Resende',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10586,
    'CustomerID': 'REGGC',
    'OrderDate': '1997-07-02T14:30:00.000Z',
    'ShippedDate': '1997-07-09T15:30:00.000Z',
    'Freight': 0.48,
    'ShipName': 'Reggiani Caseifici',
    'ShipAddress': 'Strada Provinciale 124',
    'ShipCity': 'Reggio Emilia',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 10587,
    'CustomerID': 'QUEDE',
    'OrderDate': '1997-07-02T16:30:00.000Z',
    'ShippedDate': '1997-07-09T17:30:00.000Z',
    'Freight': 62.52,
    'ShipName': 'Que Delícia',
    'ShipAddress': 'Rua da Panificadora, 12',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  }
]

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      'OrderID': 10588,
      'CustomerID': 'QUICK',
      'OrderDate': '1997-07-03T18:30:00.000Z',
      'ShippedDate': '1997-07-10T19:30:00.000Z',
      'Freight': 194.67,
      'ShipName': 'QUICK-Stop',
      'ShipAddress': 'Taucherstraße 10',
      'ShipCity': 'Cunewalde',
      'ShipRegion': null,
      'ShipCountry': 'Germany'
    },
    {
      'OrderID': 10589,
      'CustomerID': 'GREAL',
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      'Freight': 4.42,
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      'ShipAddress': '2732 Baker Blvd.',
      'ShipCity': 'Eugene',
      'ShipRegion': 'OR',
      'ShipCountry': 'USA'
    },
    {
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      'Freight': 44.77,
      'ShipName': 'Mère Paillarde',
      'ShipAddress': '43 rue St. Laurent',
      'ShipCity': 'Montréal',
      'ShipRegion': 'Québec',
      'ShipCountry': 'Canada'
    },
    {
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      'Freight': 55.92,
      'ShipName': 'Vaffeljernet',
      'ShipAddress': 'Smagsloget 45',
      'ShipCity': 'Århus',
      'ShipRegion': null,
      'ShipCountry': 'Denmark'
    },
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      'CustomerID': 'LEHMS',
      'OrderDate': '1997-07-08T02:40:00.000Z',
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      'ShipAddress': 'Magazinweg 7',
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      'ShipRegion': null,

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    'ShippedDate': '1997-07-16T07:40:00.000Z',
    'Freight': 5.24,
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    'ShipAddress': '2743 Bering St.',
    'ShipCity': 'Anchorage',
    'ShipRegion': 'AK',
    'ShipCountry': 'USA'
  },
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    'CustomerID': 'ERNSH',
    'OrderDate': '1997-07-10T08:40:00.000Z',
    'ShippedDate': '1997-07-14T09:40:00.000Z',
    'Freight': 96.78,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
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    'CustomerID': 'WHITC',
    'OrderDate': '1997-07-11T10:40:00.000Z',
    'ShippedDate': '1997-08-12T11:40:00.000Z',
    'Freight': 16.34,
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    'ShipAddress': '1029 - 12th Ave. S.',
    'ShipCity': 'Seattle',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
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    'CustomerID': 'PICCO',
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        'ShipAddress': '2817 Milton Dr.',
        'ShipCity': 'Albuquerque',
        'ShipRegion': 'NM',
        'ShipCountry': 'USA'
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        'ShipAddress': 'Fauntleroy Circus',
        'ShipCity': 'London',
        'ShipRegion': null,
        'ShipCountry': 'UK'
    },
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        'CustomerID': 'HUNGC',
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        'ShippedDate': '1997-07-21T19:40:00.000Z',
        'Freight': 45.13,
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        'ShipAddress': 'City Center Plaza 516 Main St.',
        'ShipCity': 'Elgin',
        'ShipRegion': 'OR',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10601,
        'CustomerID': 'HILAA',
        'OrderDate': '1997-07-16T20:40:00.000Z',
        'ShippedDate': '1997-07-22T21:40:00.000Z',
        'Freight': 58.3,
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        'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
        'ShipCity': 'San Cristóbal',
        'ShipRegion': 'Táchira',
        'ShipCountry': 'Venezuela'
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        'CustomerID': 'VAFFE',
        'OrderDate': '1997-07-17T22:40:00.000Z',

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    'ShipRegion': null,
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    'ShippedDate': '1997-08-08T02:25:00.000Z',
    'Freight': 48.77,
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    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'FURIB',
    'OrderDate': '1997-07-18T03:25:00.000Z',
    'ShippedDate': '1997-07-29T03:25:00.000Z',
    'Freight': 7.46,
    'ShipName': 'Furia Bacalhau e Frutos do Mar',
    'ShipAddress': 'Jardim das rosas n. 32',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {
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    'CustomerID': 'MEREP',
    'OrderDate': '1997-07-21T04:25:00.000Z',
    'ShippedDate': '1997-07-29T05:25:00.000Z',
    'Freight': 379.13,
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    'ShipAddress': '43 rue St. Laurent',
    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
  },
  {
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    'CustomerID': 'TRADH',
    'OrderDate': '1997-07-22T06:25:00.000Z',
    'ShippedDate': '1997-07-31T07:25:00.000Z',
    'Freight': 79.4,
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    'ShipAddress': 'Av. Inês de Castro, 414',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  }
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    'Freight': 200.24,
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    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
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    'ShipCity': 'Münster',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
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    'CustomerID': 'DUMON',
    'OrderDate': '1997-07-24T12:25:00.000Z',
    'ShippedDate': '1997-07-30T13:25:00.000Z',
    'Freight': 1.85,
    'ShipName': 'Du monde entier',
    'ShipAddress': '67, rue des Cinquante Otages',
    'ShipCity': 'Nantes',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
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    'CustomerID': 'LAMAI',
    'OrderDate': '1997-07-25T14:25:00.000Z',
    'ShippedDate': '1997-08-06T15:25:00.000Z',
    'Freight': 26.78,
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    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
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    'CustomerID': 'WOLZA',
    'OrderDate': '1997-07-25T16:25:00.000Z',
    'ShippedDate': '1997-08-01T17:25:00.000Z',
    'Freight': 80.65,
    'ShipName': 'Wolski Zajazd',
    'ShipAddress': 'ul. Filtrowa 68',
    'ShipCity': 'Warszawa',
    'ShipRegion': null,

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  },
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    'OrderDate': '1997-07-28T18:25:00.000Z',
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    'Freight': 544.08,
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    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'HILAA',
    'OrderDate': '1997-07-29T20:25:00.000Z',
    'ShippedDate': '1997-08-01T21:25:00.000Z',
    'Freight': 8.11,
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    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
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    'CustomerID': 'BLAUS',
    'OrderDate': '1997-07-29T22:25:00.000Z',
    'ShippedDate': '1997-08-01T23:25:00.000Z',
    'Freight': 1.93,
    'ShipName': 'Blauer See Delikatessen',
    'ShipAddress': 'Forsterstr. 57',
    'ShipCity': 'Mannheim',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10615,
    'CustomerID': 'WILMK',
    'OrderDate': '1997-07-30T01:35:00.000Z',
    'ShippedDate': '1997-08-06T02:35:00.000Z',
    'Freight': 0.75,
    'ShipName': 'Wilman Kala',
    'ShipAddress': 'Keskuskatu 45',
    'ShipCity': 'Helsinki',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 10616,
    'CustomerID': 'GREAL',
    'OrderDate': '1997-07-31T03:35:00.000Z',
    'ShippedDate': '1997-08-05T04:35:00.000Z',
    'Freight': 116.53,
    'ShipName': 'Great Lakes Food Market',

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    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
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    'ShippedDate': '1997-08-04T06:35:00.000Z',
    'Freight': 18.53,
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    'ShipAddress': '2732 Baker Blvd.',
    'ShipCity': 'Eugene',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'MEREP',
    'OrderDate': '1997-08-01T07:35:00.000Z',
    'ShippedDate': '1997-08-08T08:35:00.000Z',
    'Freight': 154.68,
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    'ShipAddress': '43 rue St. Laurent',
    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
  },
  {
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    'CustomerID': 'MEREP',
    'OrderDate': '1997-08-04T09:35:00.000Z',
    'ShippedDate': '1997-08-07T10:35:00.000Z',
    'Freight': 91.05,
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    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
  },
  {
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    'CustomerID': 'LAUGB',
    'OrderDate': '1997-08-05T11:35:00.000Z',
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    'Freight': 0.94,
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    'ShipAddress': '2319 Elm St.',
    'ShipCity': 'Vancouver',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
  {
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    'CustomerID': 'ISLAT',
    'OrderDate': '1997-08-05T13:35:00.000Z',

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    'ShipCity': 'Cowes',
    'ShipRegion': 'Isle of Wight',
    'ShipCountry': 'UK'
  },
  {
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    'CustomerID': 'RICAR',
    'OrderDate': '1997-08-06T15:35:00.000Z',
    'ShippedDate': '1997-08-11T16:35:00.000Z',
    'Freight': 50.97,
    'ShipName': 'Ricardo Adocicados',
    'ShipAddress': 'Av. Copacabana, 267',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10623,
    'CustomerID': 'FRANK',
    'OrderDate': '1997-08-07T17:35:00.000Z',
    'ShippedDate': '1997-08-12T18:35:00.000Z',
    'Freight': 97.18,
    'ShipName': 'Frankenversand',
    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
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    'CustomerID': 'THECR',
    'OrderDate': '1997-08-07T19:35:00.000Z',
    'ShippedDate': '1997-08-19T20:35:00.000Z',
    'Freight': 94.8,
    'ShipName': 'The Cracker Box',
    'ShipAddress': '55 Grizzly Peak Rd.',
    'ShipCity': 'Butte',
    'ShipRegion': 'MT',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10625,
    'CustomerID': 'ANATR',
    'OrderDate': '1997-08-08T21:35:00.000Z',
    'ShippedDate': '1997-08-14T22:35:00.000Z',
    'Freight': 43.9,
    'ShipName': 'Ana Trujillo Emparedados y helados',
    'ShipAddress': 'Avda. de la Constitución 2222',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {

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    'Freight': 138.69,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10627,
    'CustomerID': 'SAVEA',
    'OrderDate': '1997-08-11T02:50:00.000Z',
    'ShippedDate': '1997-08-21T03:50:00.000Z',
    'Freight': 107.46,
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    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'BLONP',
    'OrderDate': '1997-08-12T04:50:00.000Z',
    'ShippedDate': '1997-08-20T05:50:00.000Z',
    'Freight': 30.36,
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    'ShipAddress': '24, place Kléber',
    'ShipCity': 'Strasbourg',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10629,
    'CustomerID': 'GODOS',
    'OrderDate': '1997-08-12T06:50:00.000Z',
    'ShippedDate': '1997-08-20T07:50:00.000Z',
    'Freight': 85.46,
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    'ShipAddress': 'C/ Romero, 33',
    'ShipCity': 'Sevilla',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10630,
    'CustomerID': 'KOENE',
    'OrderDate': '1997-08-13T08:50:00.000Z',
    'ShippedDate': '1997-08-19T09:50:00.000Z',
    'Freight': 32.35,
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    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,

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    'ShippedDate': '1997-08-15T11:50:00.000Z',
    'Freight': 0.87,
    'ShipName': 'La maison d\'Asie',
    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
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    'CustomerID': 'WANDK',
    'OrderDate': '1997-08-14T12:50:00.000Z',
    'ShippedDate': '1997-08-19T13:50:00.000Z',
    'Freight': 41.38,
    'ShipName': 'Die Wandernde Kuh',
    'ShipAddress': 'Adenauerallee 900',
    'ShipCity': 'Stuttgart',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10633,
    'CustomerID': 'ERNSH',
    'OrderDate': '1997-08-15T14:50:00.000Z',
    'ShippedDate': '1997-08-18T15:50:00.000Z',
    'Freight': 477.9,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10634,
    'CustomerID': 'FOLIG',
    'OrderDate': '1997-08-15T16:50:00.000Z',
    'ShippedDate': '1997-08-21T17:50:00.000Z',
    'Freight': 487.38,
    'ShipName': 'Folies gourmandes',
    'ShipAddress': '184, chaussée de Tournai',
    'ShipCity': 'Lille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10635,
    'CustomerID': 'MAGAA',
    'OrderDate': '1997-08-18T18:50:00.000Z',
    'ShippedDate': '1997-08-21T19:50:00.000Z',
    'Freight': 47.46,
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        'ShipAddress': 'Via Ludovico il Moro 22',
        'ShipCity': 'Bergamo',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
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    {
        'OrderID': 10636,
        'CustomerID': 'WARTH',
        'OrderDate': '1997-08-19T20:50:00.000Z',
        'ShippedDate': '1997-08-26T21:50:00.000Z',
        'Freight': 1.15,
        'ShipName': 'Wartian Herkku',
        'ShipAddress': 'Torikatu 38',
        'ShipCity': 'Oulu',
        'ShipRegion': null,
        'ShipCountry': 'Finland'
    },
    {
        'OrderID': 10637,
        'CustomerID': 'QUEEN',
        'OrderDate': '1997-08-19T22:50:00.000Z',
        'ShippedDate': '1997-08-26T23:50:00.000Z',
        'Freight': 201.29,
        'ShipName': 'Queen Cozinha',
        'ShipAddress': 'Alameda dos Canários, 891',
        'ShipCity': 'Sao Paulo',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10638,
        'CustomerID': 'LINOD',
        'OrderDate': '1997-08-20T14:50:00.000Z',
        'ShippedDate': '1997-09-01T15:50:00.000Z',
        'Freight': 158.44,
        'ShipName': 'LINO-Delicateses',
        'ShipAddress': 'Ave. 5 de Mayo Porlamar',
        'ShipCity': 'I. de Margarita',
        'ShipRegion': 'Nueva Esparta',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 10639,
        'CustomerID': 'SANTG',
        'OrderDate': '1997-08-20T16:50:00.000Z',
        'ShippedDate': '1997-08-27T17:50:00.000Z',
        'Freight': 38.64,
        'ShipName': 'Santé Gourmet',
        'ShipAddress': 'Erling Skakkes gate 78',
        'ShipCity': 'Stavern',
        'ShipRegion': null,
        'ShipCountry': 'Norway'
    },
    {
        'OrderID': 10640,
        'CustomerID': 'WANDK',
        'OrderDate': '1997-08-21T18:50:00.000Z',

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    'ShippedDate': '1997-08-28T19:50:00.000Z',
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    'ShipAddress': 'Adenauerallee 900',
    'ShipCity': 'Stuttgart',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10641,
    'CustomerID': 'HILAA',
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    'Freight': 179.61,
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    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10642,
    'CustomerID': 'SIMOB',
    'OrderDate': '1997-08-22T03:55:00.000Z',
    'ShippedDate': '1997-09-05T04:55:00.000Z',
    'Freight': 41.89,
    'ShipName': 'Simons bistro',
    'ShipAddress': 'Vinbæltet 34',
    'ShipCity': 'Kobenhavn',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
    'OrderID': 10643,
    'CustomerID': 'ALFKI',
    'OrderDate': '1997-08-25T05:55:00.000Z',
    'ShippedDate': '1997-09-02T06:55:00.000Z',
    'Freight': 29.46,
    'ShipName': 'Alfreds Futterkiste',
    'ShipAddress': 'Obere Str. 57',
    'ShipCity': 'Berlin',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10644,
    'CustomerID': 'WELLI',
    'OrderDate': '1997-08-25T07:55:00.000Z',
    'ShippedDate': '1997-09-01T08:55:00.000Z',
    'Freight': 0.14,
    'ShipName': 'Wellington Importadora',
    'ShipAddress': 'Rua do Mercado, 12',
    'ShipCity': 'Resende',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {

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    'ShippedDate': '1997-09-02T10:55:00.000Z',
    'Freight': 12.41,
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    'ShipAddress': 'Rua do Paço, 67',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
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    'CustomerID': 'HUNGO',
    'OrderDate': '1997-08-27T11:55:00.000Z',
    'ShippedDate': '1997-09-03T12:55:00.000Z',
    'Freight': 142.33,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
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    'CustomerID': 'QUEDE',
    'OrderDate': '1997-08-27T13:55:00.000Z',
    'ShippedDate': '1997-09-03T14:55:00.000Z',
    'Freight': 45.54,
    'ShipName': 'Que Delícia',
    'ShipAddress': 'Rua da Panificadora, 12',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10648,
    'CustomerID': 'RICAR',
    'OrderDate': '1997-08-28T15:55:00.000Z',
    'ShippedDate': '1997-09-09T16:55:00.000Z',
    'Freight': 14.25,
    'ShipName': 'Ricardo Adocicados',
    'ShipAddress': 'Av. Copacabana, 267',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10649,
    'CustomerID': 'MAISD',
    'OrderDate': '1997-08-28T17:55:00.000Z',
    'ShippedDate': '1997-08-29T18:55:00.000Z',
    'Freight': 6.2,
    'ShipName': 'Maison Dewey',
    'ShipAddress': 'Rue Joseph-Bens 532',
    'ShipCity': 'Bruxelles',
    'ShipRegion': null,
  }

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  },
  {
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    'CustomerID': 'FAMIA',
    'OrderDate': '1997-08-29T19:55:00.000Z',
    'ShippedDate': '1997-09-03T20:55:00.000Z',
    'Freight': 176.81,
    'ShipName': 'Familia Arquibaldo',
    'ShipAddress': 'Rua Orós, 92',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10651,
    'CustomerID': 'WANDK',
    'OrderDate': '1997-09-01T21:55:00.000Z',
    'ShippedDate': '1997-09-11T22:55:00.000Z',
    'Freight': 20.6,
    'ShipName': 'Die Wandernde Kuh',
    'ShipAddress': 'Adenauerallee 900',
    'ShipCity': 'Stuttgart',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10652,
    'CustomerID': 'GOURL',
    'OrderDate': '1997-09-01T23:55:00.000Z',
    'ShippedDate': '1997-09-08T01:15:00.000Z',
    'Freight': 7.14,
    'ShipName': 'Gourmet Lanchonetes',
    'ShipAddress': 'Av. Brasil, 442',
    'ShipCity': 'Campinas',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10653,
    'CustomerID': 'FRANK',
    'OrderDate': '1997-09-02T02:15:00.000Z',
    'ShippedDate': '1997-09-19T03:15:00.000Z',
    'Freight': 93.25,
    'ShipName': 'Frankenversand',
    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10654,
    'CustomerID': 'BERGS',
    'OrderDate': '1997-09-02T04:15:00.000Z',
    'ShippedDate': '1997-09-11T05:15:00.000Z',
    'Freight': 55.26,
    'ShipName': 'Berglunds snabbköp',
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        'ShipAddress': 'Berguvsvägen 8',
        'ShipCity': 'Luleå',
        'ShipRegion': null,
        'ShipCountry': 'Sweden'
    },
    {
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        'CustomerID': 'REGGC',
        'OrderDate': '1997-09-03T06:15:00.000Z',
        'ShippedDate': '1997-09-11T07:15:00.000Z',
        'Freight': 4.41,
        'ShipName': 'Reggiani Caseifici',
        'ShipAddress': 'Strada Provinciale 124',
        'ShipCity': 'Reggio Emilia',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
    {
        'OrderID': 10656,
        'CustomerID': 'GREAL',
        'OrderDate': '1997-09-04T08:15:00.000Z',
        'ShippedDate': '1997-09-10T09:15:00.000Z',
        'Freight': 57.15,
        'ShipName': 'Great Lakes Food Market',
        'ShipAddress': '2732 Baker Blvd.',
        'ShipCity': 'Eugene',
        'ShipRegion': 'OR',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10657,
        'CustomerID': 'SAVEA',
        'OrderDate': '1997-09-04T10:15:00.000Z',
        'ShippedDate': '1997-09-15T11:15:00.000Z',
        'Freight': 352.69,
        'ShipName': 'Save-a-lot Markets',
        'ShipAddress': '187 Suffolk Ln.',
        'ShipCity': 'Boise',
        'ShipRegion': 'ID',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10658,
        'CustomerID': 'QUICK',
        'OrderDate': '1997-09-05T12:15:00.000Z',
        'ShippedDate': '1997-09-08T13:15:00.000Z',
        'Freight': 364.15,
        'ShipName': 'QUICK-Stop',
        'ShipAddress': 'Taucherstraße 10',
        'ShipCity': 'Cunewalde',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10659,
        'CustomerID': 'QUEEN',
        'OrderDate': '1997-09-05T14:15:00.000Z',

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    'ShippedDate': '1997-09-10T15:15:00.000Z',
    'Freight': 105.81,
    'ShipName': 'Queen Cozinha',
    'ShipAddress': 'Alameda dos Canários, 891',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10660,
    'CustomerID': 'HUNGC',
    'OrderDate': '1997-09-08T16:15:00.000Z',
    'ShippedDate': '1997-10-15T17:15:00.000Z',
    'Freight': 111.29,
    'ShipName': 'Hungry Coyote Import Store',
    'ShipAddress': 'City Center Plaza 516 Main St.',
    'ShipCity': 'Elgin',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10661,
    'CustomerID': 'HUNGO',
    'OrderDate': '1997-09-09T18:15:00.000Z',
    'ShippedDate': '1997-09-15T19:15:00.000Z',
    'Freight': 17.55,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10662,
    'CustomerID': 'LONEP',
    'OrderDate': '1997-09-09T20:15:00.000Z',
    'ShippedDate': '1997-09-18T21:15:00.000Z',
    'Freight': 1.28,
    'ShipName': 'Lonesome Pine Restaurant',
    'ShipAddress': '89 Chiaroscuro Rd.',
    'ShipCity': 'Portland',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10663,
    'CustomerID': 'BONAP',
    'OrderDate': '1997-09-10T22:15:00.000Z',
    'ShippedDate': '1997-10-03T23:15:00.000Z',
    'Freight': 113.15,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {

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    'OrderID': 10664,
    'CustomerID': 'FURIB',
    'OrderDate': '1997-09-10T01:45:00.000Z',
    'ShippedDate': '1997-09-19T02:45:00.000Z',
    'Freight': 1.27,
    'ShipName': 'Furia Bacalhau e Frutos do Mar',
    'ShipAddress': 'Jardim das rosas n. 32',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {
    'OrderID': 10665,
    'CustomerID': 'LONEP',
    'OrderDate': '1997-09-11T03:45:00.000Z',
    'ShippedDate': '1997-09-17T04:45:00.000Z',
    'Freight': 26.31,
    'ShipName': 'Lonesome Pine Restaurant',
    'ShipAddress': '89 Chiaroscuro Rd.',
    'ShipCity': 'Portland',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10666,
    'CustomerID': 'RICSU',
    'OrderDate': '1997-09-12T05:45:00.000Z',
    'ShippedDate': '1997-09-22T06:45:00.000Z',
    'Freight': 232.42,
    'ShipName': 'Richter Supermarkt',
    'ShipAddress': 'Starenweg 5',
    'ShipCity': 'Genève',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
  {
    'OrderID': 10667,
    'CustomerID': 'ERNSH',
    'OrderDate': '1997-09-12T07:45:00.000Z',
    'ShippedDate': '1997-09-19T08:45:00.000Z',
    'Freight': 78.09,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10668,
    'CustomerID': 'WANDK',
    'OrderDate': '1997-09-15T09:45:00.000Z',
    'ShippedDate': '1997-09-23T10:45:00.000Z',
    'Freight': 47.22,
    'ShipName': 'Die Wandernde Kuh',
    'ShipAddress': 'Adenauerallee 900',
    'ShipCity': 'Stuttgart',
    'ShipRegion': null,

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    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10669,
    'CustomerID': 'SIMOB',
    'OrderDate': '1997-09-15T11:45:00.000Z',
    'ShippedDate': '1997-09-22T12:45:00.000Z',
    'Freight': 24.39,
    'ShipName': 'Simons bistro',
    'ShipAddress': 'Vinbæltet 34',
    'ShipCity': 'Kobenhavn',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
    'OrderID': 10670,
    'CustomerID': 'FRANK',
    'OrderDate': '1997-09-16T13:45:00.000Z',
    'ShippedDate': '1997-09-18T14:45:00.000Z',
    'Freight': 203.48,
    'ShipName': 'Frankenversand',
    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10671,
    'CustomerID': 'FRANR',
    'OrderDate': '1997-09-17T15:45:00.000Z',
    'ShippedDate': '1997-09-24T16:45:00.000Z',
    'Freight': 30.34,
    'ShipName': 'France restauration',
    'ShipAddress': '54, rue Royale',
    'ShipCity': 'Nantes',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10672,
    'CustomerID': 'BERGS',
    'OrderDate': '1997-09-17T17:45:00.000Z',
    'ShippedDate': '1997-09-26T18:45:00.000Z',
    'Freight': 95.75,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10673,
    'CustomerID': 'WILMK',
    'OrderDate': '1997-09-18T19:45:00.000Z',
    'ShippedDate': '1997-09-19T20:45:00.000Z',
    'Freight': 22.76,
    'ShipName': 'Wilman Kala',
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        'ShipAddress': 'Keskuskatu 45',
        'ShipCity': 'Helsinki',
        'ShipRegion': null,
        'ShipCountry': 'Finland'
    },
    {
        'OrderID': 10674,
        'CustomerID': 'ISLAT',
        'OrderDate': '1997-09-18T21:45:00.000Z',
        'ShippedDate': '1997-09-30T22:45:00.000Z',
        'Freight': 0.9,
        'ShipName': 'Island Trading',
        'ShipAddress': 'Garden House Crowther Way',
        'ShipCity': 'Cowes',
        'ShipRegion': 'Isle of Wight',
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10675,
        'CustomerID': 'FRANK',
        'OrderDate': '1997-09-19T23:45:00.000Z',
        'ShippedDate': '1997-09-23T01:50:00.000Z',
        'Freight': 31.85,
        'ShipName': 'Frankenversand',
        'ShipAddress': 'Berliner Platz 43',
        'ShipCity': 'München',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10676,
        'CustomerID': 'TORTU',
        'OrderDate': '1997-09-22T02:50:00.000Z',
        'ShippedDate': '1997-09-29T03:50:00.000Z',
        'Freight': 2.01,
        'ShipName': 'Tortuga Restaurante',
        'ShipAddress': 'Avda. Azteca 123',
        'ShipCity': 'México D.F.',
        'ShipRegion': null,
        'ShipCountry': 'Mexico'
    },
    {
        'OrderID': 10677,
        'CustomerID': 'ANTON',
        'OrderDate': '1997-09-22T04:50:00.000Z',
        'ShippedDate': '1997-09-26T05:50:00.000Z',
        'Freight': 4.03,
        'ShipName': 'Antonio Moreno Taquería',
        'ShipAddress': 'Mataderos 2312',
        'ShipCity': 'México D.F.',
        'ShipRegion': null,
        'ShipCountry': 'Mexico'
    },
    {
        'OrderID': 10678,
        'CustomerID': 'SAVEA',
        'OrderDate': '1997-09-23T06:50:00.000Z',

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    'ShippedDate': '1997-10-16T07:50:00.000Z',
    'Freight': 388.98,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10679,
    'CustomerID': 'BLONP',
    'OrderDate': '1997-09-23T08:50:00.000Z',
    'ShippedDate': '1997-09-30T09:50:00.000Z',
    'Freight': 27.94,
    'ShipName': 'Blondel père et fils',
    'ShipAddress': '24, place Kléber',
    'ShipCity': 'Strasbourg',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10680,
    'CustomerID': 'OLDWO',
    'OrderDate': '1997-09-24T10:50:00.000Z',
    'ShippedDate': '1997-09-26T11:50:00.000Z',
    'Freight': 26.61,
    'ShipName': 'Old World Delicatessen',
    'ShipAddress': '2743 Bering St.',
    'ShipCity': 'Anchorage',
    'ShipRegion': 'AK',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10681,
    'CustomerID': 'GREAL',
    'OrderDate': '1997-09-25T12:50:00.000Z',
    'ShippedDate': '1997-09-30T13:50:00.000Z',
    'Freight': 76.13,
    'ShipName': 'Great Lakes Food Market',
    'ShipAddress': '2732 Baker Blvd.',
    'ShipCity': 'Eugene',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10682,
    'CustomerID': 'ANTON',
    'OrderDate': '1997-09-25T14:50:00.000Z',
    'ShippedDate': '1997-10-01T15:50:00.000Z',
    'Freight': 36.13,
    'ShipName': 'Antonio Moreno Taquería',
    'ShipAddress': 'Mataderos 2312',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
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    'OrderID': 10683,
    'CustomerID': 'DUMON',
    'OrderDate': '1997-09-26T16:50:00.000Z',
    'ShippedDate': '1997-10-01T17:50:00.000Z',
    'Freight': 4.4,
    'ShipName': 'Du monde entier',
    'ShipAddress': '67, rue des Cinquante Otages',
    'ShipCity': 'Nantes',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10684,
    'CustomerID': 'OTTIK',
    'OrderDate': '1997-09-26T18:50:00.000Z',
    'ShippedDate': '1997-09-30T19:50:00.000Z',
    'Freight': 145.63,
    'ShipName': 'Ottilies Käseladen',
    'ShipAddress': 'Mehrheimerstr. 369',
    'ShipCity': 'Köln',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10685,
    'CustomerID': 'GOURL',
    'OrderDate': '1997-09-29T20:50:00.000Z',
    'ShippedDate': '1997-10-03T21:50:00.000Z',
    'Freight': 33.75,
    'ShipName': 'Gourmet Lanchonetes',
    'ShipAddress': 'Av. Brasil, 442',
    'ShipCity': 'Campinas',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10686,
    'CustomerID': 'PICCO',
    'OrderDate': '1997-09-30T22:50:00.000Z',
    'ShippedDate': '1997-10-08T23:50:00.000Z',
    'Freight': 96.5,
    'ShipName': 'Piccolo und mehr',
    'ShipAddress': 'Geislweg 14',
    'ShipCity': 'Salzburg',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10687,
    'CustomerID': 'HUNGO',
    'OrderDate': '1997-09-30T01:15:00.000Z',
    'ShippedDate': '1997-10-30T02:15:00.000Z',
    'Freight': 296.43,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
  }

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    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10688,
    'CustomerID': 'VAFFE',
    'OrderDate': '1997-10-01T03:15:00.000Z',
    'ShippedDate': '1997-10-07T04:15:00.000Z',
    'Freight': 299.09,
    'ShipName': 'Vaffeljernet',
    'ShipAddress': 'Smagsloget 45',
    'ShipCity': 'Århus',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
    'OrderID': 10689,
    'CustomerID': 'BERGS',
    'OrderDate': '1997-10-01T05:15:00.000Z',
    'ShippedDate': '1997-10-07T06:15:00.000Z',
    'Freight': 13.42,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10690,
    'CustomerID': 'HANAR',
    'OrderDate': '1997-10-02T07:15:00.000Z',
    'ShippedDate': '1997-10-03T08:15:00.000Z',
    'Freight': 15.8,
    'ShipName': 'Hanari Carnes',
    'ShipAddress': 'Rua do Paço, 67',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10691,
    'CustomerID': 'QUICK',
    'OrderDate': '1997-10-03T09:15:00.000Z',
    'ShippedDate': '1997-10-22T10:15:00.000Z',
    'Freight': 810.05,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10692,
    'CustomerID': 'ALFKI',
    'OrderDate': '1997-10-03T11:15:00.000Z',
    'ShippedDate': '1997-10-13T12:15:00.000Z',
    'Freight': 61.02,
    'ShipName': 'Alfred\'s Futterkiste',

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        'ShipAddress': 'Obere Str. 57',
        'ShipCity': 'Berlin',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10693,
        'CustomerID': 'WHITC',
        'OrderDate': '1997-10-06T13:15:00.000Z',
        'ShippedDate': '1997-10-10T14:15:00.000Z',
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        'ShipCity': 'Seattle',
        'ShipRegion': 'WA',
        'ShipCountry': 'USA'
    },
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        'CustomerID': 'QUICK',
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        'ShippedDate': '1997-10-09T16:15:00.000Z',
        'Freight': 398.36,
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        'ShipCity': 'Cunewalde',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
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        'CustomerID': 'WILMK',
        'OrderDate': '1997-10-07T17:15:00.000Z',
        'ShippedDate': '1997-10-14T18:15:00.000Z',
        'Freight': 16.72,
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        'ShipAddress': 'Keskuskatu 45',
        'ShipCity': 'Helsinki',
        'ShipRegion': null,
        'ShipCountry': 'Finland'
    },
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        'ShippedDate': '1997-10-14T20:15:00.000Z',
        'Freight': 102.55,
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        'ShipAddress': '1029 - 12th Ave. S.',
        'ShipCity': 'Seattle',
        'ShipRegion': 'WA',
        'ShipCountry': 'USA'
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        'CustomerID': 'LINOD',
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    'ShipAddress': 'Ave. 5 de Mayo Porlamar',
    'ShipCity': 'I. de Margarita',
    'ShipRegion': 'Nueva Esparta',
    'ShipCountry': 'Venezuela'
  },
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    'OrderDate': '1997-10-09T23:15:00.000Z',
    'ShippedDate': '1997-10-17T10:15:00.000Z',
    'Freight': 272.47,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
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    'CustomerID': 'MORGK',
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    'ShippedDate': '1997-10-13T03:40:00.000Z',
    'Freight': 0.58,
    'ShipName': 'Morgenstern Gesundkost',
    'ShipAddress': 'Heerstr. 22',
    'ShipCity': 'Leipzig',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10700,
    'CustomerID': 'SAVEA',
    'OrderDate': '1997-10-10T03:40:00.000Z',
    'ShippedDate': '1997-10-16T04:40:00.000Z',
    'Freight': 65.1,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10701,
    'CustomerID': 'HUNGO',
    'OrderDate': '1997-10-13T05:40:00.000Z',
    'ShippedDate': '1997-10-15T06:40:00.000Z',
    'Freight': 220.31,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
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    'Freight': 23.94,
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    'ShipRegion': null,
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    'Freight': 152.3,
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    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
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    'CustomerID': 'QUEEN',
    'OrderDate': '1997-10-14T11:40:00.000Z',
    'ShippedDate': '1997-11-07T12:40:00.000Z',
    'Freight': 4.78,
    'ShipName': 'Queen Cozinha',
    'ShipAddress': 'Alameda dos Canários, 891',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10705,
    'CustomerID': 'HILAA',
    'OrderDate': '1997-10-15T13:40:00.000Z',
    'ShippedDate': '1997-11-18T14:40:00.000Z',
    'Freight': 3.52,
    'ShipName': 'HILARION-Abastos',
    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
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    'OrderDate': '1997-10-16T15:40:00.000Z',
    'ShippedDate': '1997-10-21T16:40:00.000Z',
    'Freight': 135.63,
    'ShipName': 'Old World Delicatessen',
    'ShipAddress': '2743 Bering St.',
    'ShipCity': 'Anchorage',
    'ShipRegion': 'AK',
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    'CustomerID': 'AROUT',
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    'ShippedDate': '1997-10-23T18:40:00.000Z',
    'Freight': 21.74,
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    'ShipCity': 'Colchester',
    'ShipRegion': 'Essex',
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10708,
    'CustomerID': 'THEBI',
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    'ShippedDate': '1997-11-05T20:40:00.000Z',
    'Freight': 2.96,
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    'ShipAddress': '89 Jefferson Way Suite 2',
    'ShipCity': 'Portland',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'GOURL',
    'OrderDate': '1997-10-17T21:40:00.000Z',
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    'Freight': 210.8,
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    'ShipAddress': 'Av. Brasil, 442',
    'ShipCity': 'Campinas',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
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    'CustomerID': 'FRANS',
    'OrderDate': '1997-10-20T23:40:00.000Z',
    'ShippedDate': '1997-10-23T15:40:00.000Z',
    'Freight': 4.98,
    'ShipName': 'Franchi S.p.A.',
    'ShipAddress': 'Via Monte Bianco 34',
    'ShipCity': 'Torino',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
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    'CustomerID': 'SAVEA',
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    'Freight': 52.41,
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        'ShipRegion': 'ID',
        'ShipCountry': 'USA'
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        'ShipAddress': '8 Johnstown Road',
        'ShipCity': 'Cork',
        'ShipRegion': 'Co. Cork',
        'ShipCountry': 'Ireland'
    },
    {
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        'Freight': 167.05,
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        'ShipAddress': '187 Suffolk Ln.',
        'ShipCity': 'Boise',
        'ShipRegion': 'ID',
        'ShipCountry': 'USA'
    },
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        'CustomerID': 'SAVEA',
        'OrderDate': '1997-10-22T07:30:00.000Z',
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        'Freight': 24.49,
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        'ShipCity': 'Boise',
        'ShipRegion': 'ID',
        'ShipCountry': 'USA'
    },
    {
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        'CustomerID': 'BONAP',
        'OrderDate': '1997-10-23T09:30:00.000Z',
        'ShippedDate': '1997-10-29T10:30:00.000Z',
        'Freight': 63.2,
        'ShipName': 'Bon app',
        'ShipAddress': '12, rue des Bouchers',
        'ShipCity': 'Marseille',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
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        'CustomerID': 'RANCH',
        'OrderDate': '1997-10-24T11:30:00.000Z',

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    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },
  {
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    'CustomerID': 'FRANK',
    'OrderDate': '1997-10-24T13:30:00.000Z',
    'ShippedDate': '1997-10-29T14:30:00.000Z',
    'Freight': 59.25,
    'ShipName': 'Frankenversand',
    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
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    'CustomerID': 'KOENE',
    'OrderDate': '1997-10-27T17:30:00.000Z',
    'ShippedDate': '1997-10-29T18:30:00.000Z',
    'Freight': 170.88,
    'ShipName': 'Königlich Essen',
    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10719,
    'CustomerID': 'LETSS',
    'OrderDate': '1997-10-27T19:30:00.000Z',
    'ShippedDate': '1997-11-05T20:30:00.000Z',
    'Freight': 51.44,
    'ShipName': 'Let\'s Stop N Shop',
    'ShipAddress': '87 Polk St. Suite 5',
    'ShipCity': 'San Francisco',
    'ShipRegion': 'CA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10720,
    'CustomerID': 'QUEDE',
    'OrderDate': '1997-10-28T21:30:00.000Z',
    'ShippedDate': '1997-11-05T22:30:00.000Z',
    'Freight': 9.53,
    'ShipName': 'Que Delícia',
    'ShipAddress': 'Rua da Panificadora, 12',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {

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    'ShippedDate': '1997-10-31T01:10:00.000Z',
    'Freight': 48.92,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10722,
    'CustomerID': 'SAVEA',
    'OrderDate': '1997-10-29T02:10:00.000Z',
    'ShippedDate': '1997-11-04T03:10:00.000Z',
    'Freight': 74.58,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10723,
    'CustomerID': 'WHITC',
    'OrderDate': '1997-10-30T04:10:00.000Z',
    'ShippedDate': '1997-11-25T05:10:00.000Z',
    'Freight': 21.72,
    'ShipName': 'White Clover Markets',
    'ShipAddress': '1029-12th Ave. S.',
    'ShipCity': 'Seattle',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10724,
    'CustomerID': 'MEREP',
    'OrderDate': '1997-10-30T06:10:00.000Z',
    'ShippedDate': '1997-11-05T07:10:00.000Z',
    'Freight': 57.75,
    'ShipName': 'Mère Paillarde',
    'ShipAddress': '43 rue St. Laurent',
    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
  },
  {
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    'CustomerID': 'FAMIA',
    'OrderDate': '1997-10-31T08:10:00.000Z',
    'ShippedDate': '1997-11-05T01:10:00.000Z',
    'Freight': 10.83,
    'ShipName': 'Familia Arquibaldo',
    'ShipAddress': 'Rua Orós, 92',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
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    'ShippedDate': '1997-12-05T03:10:00.000Z',
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    'ShipAddress': '35 King George',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
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    'CustomerID': 'REGGC',
    'OrderDate': '1997-11-03T04:10:00.000Z',
    'ShippedDate': '1997-12-05T05:10:00.000Z',
    'Freight': 89.9,
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    'ShipAddress': 'Strada Provinciale 124',
    'ShipCity': 'Reggio Emilia',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
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    'CustomerID': 'QUEEN',
    'OrderDate': '1997-11-04T06:10:00.000Z',
    'ShippedDate': '1997-11-11T07:10:00.000Z',
    'Freight': 58.33,
    'ShipName': 'Queen Cozinha',
    'ShipAddress': 'Alameda dos Canários, 891',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10729,
    'CustomerID': 'LINOD',
    'OrderDate': '1997-11-04T08:10:00.000Z',
    'ShippedDate': '1997-11-14T09:10:00.000Z',
    'Freight': 141.06,
    'ShipName': 'LINO-Delicateses',
    'ShipAddress': 'Ave. 5 de Mayo Porlamar',
    'ShipCity': 'I. de Margarita',
    'ShipRegion': 'Nueva Esparta',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10730,
    'CustomerID': 'BONAP',
    'OrderDate': '1997-11-05T10:10:00.000Z',
    'ShippedDate': '1997-11-14T11:10:00.000Z',
    'Freight': 20.12,
    'ShipName': 'Bon app',

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    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
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    'CustomerID': 'CHOPS',
    'OrderDate': '1997-11-06T12:10:00.000Z',
    'ShippedDate': '1997-11-14T13:10:00.000Z',
    'Freight': 96.65,
    'ShipName': 'Chop-suey Chinese',
    'ShipAddress': 'Hauptstr. 31',
    'ShipCity': 'Bern',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
  {
    'OrderID': 10732,
    'CustomerID': 'BONAP',
    'OrderDate': '1997-11-06T14:10:00.000Z',
    'ShippedDate': '1997-11-07T15:10:00.000Z',
    'Freight': 16.97,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10733,
    'CustomerID': 'BERGS',
    'OrderDate': '1997-11-07T16:10:00.000Z',
    'ShippedDate': '1997-11-10T17:10:00.000Z',
    'Freight': 110.11,
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    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10734,
    'CustomerID': 'GOURL',
    'OrderDate': '1997-11-07T18:10:00.000Z',
    'ShippedDate': '1997-11-12T19:10:00.000Z',
    'Freight': 1.63,
    'ShipName': 'Gourmet Lanchonetes',
    'ShipAddress': 'Av. Brasil, 442',
    'ShipCity': 'Campinas',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
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    'CustomerID': 'LETSS',
    'OrderDate': '1997-11-10T20:10:00.000Z',

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    'ShippedDate': '1997-11-21T21:10:00.000Z',
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    'ShipAddress': '87 Polk St. Suite 5',
    'ShipCity': 'San Francisco',
    'ShipRegion': 'CA',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'HUNGO',
    'OrderDate': '1997-11-11T22:10:00.000Z',
    'ShippedDate': '1997-11-21T23:10:00.000Z',
    'Freight': 44.1,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10737,
    'CustomerID': 'VINET',
    'OrderDate': '1997-11-11T01:10:00.000Z',
    'ShippedDate': '1997-11-18T02:10:00.000Z',
    'Freight': 7.79,
    'ShipName': 'Vins et alcools Chevalier',
    'ShipAddress': '59 rue de l\'Abbaye',
    'ShipCity': 'Reims',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10738,
    'CustomerID': 'SPECB',
    'OrderDate': '1997-11-12T03:10:00.000Z',
    'ShippedDate': '1997-11-18T04:10:00.000Z',
    'Freight': 2.91,
    'ShipName': 'Spécialités du monde',
    'ShipAddress': '25, rue Lauriston',
    'ShipCity': 'Paris',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
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    'CustomerID': 'VINET',
    'OrderDate': '1997-11-12T05:10:00.000Z',
    'ShippedDate': '1997-11-17T06:10:00.000Z',
    'Freight': 11.08,
    'ShipName': 'Vins et alcools Chevalier',
    'ShipAddress': '59 rue de l\'Abbaye',
    'ShipCity': 'Reims',
    'ShipRegion': null,
    'ShipCountry': 'France'
  }
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    'ShippedDate': '1997-11-25T08:10:00.000Z',
    'Freight': 81.88,
    'ShipName': 'White Clover Markets',
    'ShipAddress': '1029 - 12th Ave. S.',
    'ShipCity': 'Seattle',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10741,
    'CustomerID': 'AROUT',
    'OrderDate': '1997-11-14T09:10:00.000Z',
    'ShippedDate': '1997-11-18T10:10:00.000Z',
    'Freight': 10.96,
    'ShipName': 'Around the Horn',
    'ShipAddress': 'Brook Farm Stratford St. Mary',
    'ShipCity': 'Colchester',
    'ShipRegion': 'Essex',
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10742,
    'CustomerID': 'BOTTM',
    'OrderDate': '1997-11-14T11:10:00.000Z',
    'ShippedDate': '1997-11-18T12:10:00.000Z',
    'Freight': 243.73,
    'ShipName': 'Bottom-Dollar Markets',
    'ShipAddress': '23 Tsawassen Blvd.',
    'ShipCity': 'Tsawassen',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10743,
    'CustomerID': 'AROUT',
    'OrderDate': '1997-11-17T13:10:00.000Z',
    'ShippedDate': '1997-11-21T14:10:00.000Z',
    'Freight': 23.72,
    'ShipName': 'Around the Horn',
    'ShipAddress': 'Brook Farm Stratford St. Mary',
    'ShipCity': 'Colchester',
    'ShipRegion': 'Essex',
    'ShipCountry': 'UK'
  },
  {
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    'CustomerID': 'VAFFE',
    'OrderDate': '1997-11-17T15:10:00.000Z',
    'ShippedDate': '1997-11-24T16:10:00.000Z',
    'Freight': 69.19,
    'ShipName': 'Vaffeljernet',
    'ShipAddress': 'Smagsloget 45',
    'ShipCity': 'Århus',
    'ShipRegion': null,

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    'ShipCountry': 'Denmark'
  },
  {
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    'CustomerID': 'QUICK',
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    'ShippedDate': '1997-11-27T18:10:00.000Z',
    'Freight': 3.52,
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    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
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    'CustomerID': 'CHOPS',
    'OrderDate': '1997-11-19T19:10:00.000Z',
    'ShippedDate': '1997-11-21T20:10:00.000Z',
    'Freight': 31.43,
    'ShipName': 'Chop-suey Chinese',
    'ShipAddress': 'Hauptstr. 31',
    'ShipCity': 'Bern',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
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    'OrderID': 10747,
    'CustomerID': 'PICCO',
    'OrderDate': '1997-11-19T21:10:00.000Z',
    'ShippedDate': '1997-11-26T22:10:00.000Z',
    'Freight': 117.33,
    'ShipName': 'Piccolo und mehr',
    'ShipAddress': 'Geislweg 14',
    'ShipCity': 'Salzburg',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10748,
    'CustomerID': 'SAVEA',
    'OrderDate': '1997-11-20T23:10:00.000Z',
    'ShippedDate': '1997-11-28T13:10:00.000Z',
    'Freight': 232.55,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'ISLAT',
    'OrderDate': '1997-11-20T02:25:00.000Z',
    'ShippedDate': '1997-12-19T03:25:00.000Z',
    'Freight': 61.53,
    'ShipName': 'Island Trading',

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        'ShipAddress': 'Garden House Crowther Way',
        'ShipCity': 'Cowes',
        'ShipRegion': 'Isle of Wight',
        'ShipCountry': 'UK'
    },
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        'CustomerID': 'WARTH',
        'OrderDate': '1997-11-21T04:25:00.000Z',
        'ShippedDate': '1997-11-24T05:25:00.000Z',
        'Freight': 79.3,
        'ShipName': 'Wartian Herkku',
        'ShipAddress': 'Torikatu 38',
        'ShipCity': 'Oulu',
        'ShipRegion': null,
        'ShipCountry': 'Finland'
    },
    {
        'OrderID': 10751,
        'CustomerID': 'RICSU',
        'OrderDate': '1997-11-24T06:25:00.000Z',
        'ShippedDate': '1997-12-03T07:25:00.000Z',
        'Freight': 130.79,
        'ShipName': 'Richter Supermarkt',
        'ShipAddress': 'Starenweg 5',
        'ShipCity': 'Genève',
        'ShipRegion': null,
        'ShipCountry': 'Switzerland'
    },
    {
        'OrderID': 10752,
        'CustomerID': 'NORTS',
        'OrderDate': '1997-11-24T08:25:00.000Z',
        'ShippedDate': '1997-11-28T09:25:00.000Z',
        'Freight': 1.39,
        'ShipName': 'North/South',
        'ShipAddress': 'South House 300 Queensbridge',
        'ShipCity': 'London',
        'ShipRegion': null,
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10753,
        'CustomerID': 'FRANS',
        'OrderDate': '1997-11-25T10:25:00.000Z',
        'ShippedDate': '1997-11-27T11:25:00.000Z',
        'Freight': 7.7,
        'ShipName': 'Franchi S.p.A.',
        'ShipAddress': 'Via Monte Bianco 34',
        'ShipCity': 'Torino',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
    {
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        'CustomerID': 'MAGAA',
        'OrderDate': '1997-11-25T12:25:00.000Z',

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    'ShippedDate': '1997-11-27T13:25:00.000Z',
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    'ShipAddress': 'Via Ludovico il Moro 22',
    'ShipCity': 'Bergamo',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
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    'CustomerID': 'BONAP',
    'OrderDate': '1997-11-26T14:25:00.000Z',
    'ShippedDate': '1997-11-28T15:25:00.000Z',
    'Freight': 16.71,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10756,
    'CustomerID': 'SPLIR',
    'OrderDate': '1997-11-27T16:25:00.000Z',
    'ShippedDate': '1997-12-02T17:25:00.000Z',
    'Freight': 73.21,
    'ShipName': 'Split Rail Beer & Ale',
    'ShipAddress': 'P.O. Box 555',
    'ShipCity': 'Lander',
    'ShipRegion': 'WY',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10757,
    'CustomerID': 'SAVEA',
    'OrderDate': '1997-11-27T18:25:00.000Z',
    'ShippedDate': '1997-12-15T19:25:00.000Z',
    'Freight': 8.19,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10758,
    'CustomerID': 'RICSU',
    'OrderDate': '1997-11-28T20:25:00.000Z',
    'ShippedDate': '1997-12-04T21:25:00.000Z',
    'Freight': 138.17,
    'ShipName': 'Richter Supermarkt',
    'ShipAddress': 'Starenweg 5',
    'ShipCity': 'Genève',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
  {

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    'OrderID': 10759,
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    'ShippedDate': '1997-12-12T23:25:00.000Z',
    'Freight': 11.99,
    'ShipName': 'Ana Trujillo Emparedados y helados',
    'ShipAddress': 'Avda. de la Constitución 2222',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
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    'CustomerID': 'MAISD',
    'OrderDate': '1997-12-01T01:40:00.000Z',
    'ShippedDate': '1997-12-10T02:40:00.000Z',
    'Freight': 155.64,
    'ShipName': 'Maison Dewey',
    'ShipAddress': 'Rue Joseph-Bens 532',
    'ShipCity': 'Bruxelles',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
    'OrderID': 10761,
    'CustomerID': 'RATTC',
    'OrderDate': '1997-12-02T03:40:00.000Z',
    'ShippedDate': '1997-12-08T04:40:00.000Z',
    'Freight': 18.66,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10762,
    'CustomerID': 'FOLKO',
    'OrderDate': '1997-12-02T05:40:00.000Z',
    'ShippedDate': '1997-12-09T06:40:00.000Z',
    'Freight': 328.74,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10763,
    'CustomerID': 'FOLIG',
    'OrderDate': '1997-12-03T07:40:00.000Z',
    'ShippedDate': '1997-12-08T08:40:00.000Z',
    'Freight': 37.35,
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    'ShipAddress': '184, chaussée de Tournai',
    'ShipCity': 'Lille',
    'ShipRegion': null,

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    'ShipCountry': 'France'
  },
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    'CustomerID': 'ERNSH',
    'OrderDate': '1997-12-03T09:40:00.000Z',
    'ShippedDate': '1997-12-08T10:40:00.000Z',
    'Freight': 145.45,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10765,
    'CustomerID': 'QUICK',
    'OrderDate': '1997-12-04T11:40:00.000Z',
    'ShippedDate': '1997-12-09T12:40:00.000Z',
    'Freight': 42.74,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10766,
    'CustomerID': 'OTTIK',
    'OrderDate': '1997-12-05T13:40:00.000Z',
    'ShippedDate': '1997-12-09T14:40:00.000Z',
    'Freight': 157.55,
    'ShipName': 'Ottilies Käseladen',
    'ShipAddress': 'Mehrheimerstr. 369',
    'ShipCity': 'Köln',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10767,
    'CustomerID': 'SUPRD',
    'OrderDate': '1997-12-05T15:40:00.000Z',
    'ShippedDate': '1997-12-15T16:40:00.000Z',
    'Freight': 1.59,
    'ShipName': 'Suprêmes délices',
    'ShipAddress': 'Boulevard Tirou, 255',
    'ShipCity': 'Charleroi',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
    'OrderID': 10768,
    'CustomerID': 'AROUT',
    'OrderDate': '1997-12-08T17:40:00.000Z',
    'ShippedDate': '1997-12-15T18:40:00.000Z',
    'Freight': 146.32,
    'ShipName': 'Around the Horn',
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        'ShipAddress': 'Brook Farm Stratford St. Mary',
        'ShipCity': 'Colchester',
        'ShipRegion': 'Essex',
        'ShipCountry': 'UK'
    },
    {
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        'CustomerID': 'VAFFE',
        'OrderDate': '1997-12-08T19:40:00.000Z',
        'ShippedDate': '1997-12-12T20:40:00.000Z',
        'Freight': 65.06,
        'ShipName': 'Vaffeljernet',
        'ShipAddress': 'Smagsloget 45',
        'ShipCity': 'Århus',
        'ShipRegion': null,
        'ShipCountry': 'Denmark'
    },
    {
        'OrderID': 10770,
        'CustomerID': 'HANAR',
        'OrderDate': '1997-12-09T21:40:00.000Z',
        'ShippedDate': '1997-12-17T22:40:00.000Z',
        'Freight': 5.32,
        'ShipName': 'Hanari Carnes',
        'ShipAddress': 'Rua do Paço, 67',
        'ShipCity': 'Rio de Janeiro',
        'ShipRegion': 'RJ',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10771,
        'CustomerID': 'ERNSH',
        'OrderDate': '1997-12-10T23:40:00.000Z',
        'ShippedDate': '1998-01-02T01:50:00.000Z',
        'Freight': 11.19,
        'ShipName': 'Ernst Handel',
        'ShipAddress': 'Kirchgasse 6',
        'ShipCity': 'Graz',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
        'OrderID': 10772,
        'CustomerID': 'LEHMS',
        'OrderDate': '1997-12-10T02:50:00.000Z',
        'ShippedDate': '1997-12-19T03:50:00.000Z',
        'Freight': 91.28,
        'ShipName': 'Lehmanns Marktstand',
        'ShipAddress': 'Magazinweg 7',
        'ShipCity': 'Frankfurt a.M.',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10773,
        'CustomerID': 'ERNSH',
        'OrderDate': '1997-12-11T04:50:00.000Z',

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    'ShippedDate': '1997-12-16T04:50:00.000Z',
    'Freight': 96.43,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10774,
    'CustomerID': 'FOLKO',
    'OrderDate': '1997-12-11T05:50:00.000Z',
    'ShippedDate': '1997-12-12T06:50:00.000Z',
    'Freight': 48.2,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10775,
    'CustomerID': 'THECR',
    'OrderDate': '1997-12-12T07:50:00.000Z',
    'ShippedDate': '1997-12-26T08:50:00.000Z',
    'Freight': 20.25,
    'ShipName': 'The Cracker Box',
    'ShipAddress': '55 Grizzly Peak Rd.',
    'ShipCity': 'Butte',
    'ShipRegion': 'MT',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10776,
    'CustomerID': 'ERNSH',
    'OrderDate': '1997-12-15T09:50:00.000Z',
    'ShippedDate': '1997-12-18T10:50:00.000Z',
    'Freight': 351.53,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10777,
    'CustomerID': 'GOURL',
    'OrderDate': '1997-12-15T11:50:00.000Z',
    'ShippedDate': '1998-01-21T12:50:00.000Z',
    'Freight': 3.01,
    'ShipName': 'Gourmet Lanchonetes',
    'ShipAddress': 'Av. Brasil, 442',
    'ShipCity': 'Campinas',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {

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    'OrderID': 10778,
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    'OrderDate': '1997-12-16T13:50:00.000Z',
    'ShippedDate': '1997-12-24T14:50:00.000Z',
    'Freight': 6.79,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10779,
    'CustomerID': 'MORGK',
    'OrderDate': '1997-12-16T15:50:00.000Z',
    'ShippedDate': '1998-01-14T16:50:00.000Z',
    'Freight': 58.13,
    'ShipName': 'Morgenstern Gesundkost',
    'ShipAddress': 'Heerstr. 22',
    'ShipCity': 'Leipzig',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10780,
    'CustomerID': 'LILAS',
    'OrderDate': '1997-12-16T17:50:00.000Z',
    'ShippedDate': '1997-12-25T18:50:00.000Z',
    'Freight': 42.13,
    'ShipName': 'LILA-Supermercado',
    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10781,
    'CustomerID': 'WARTH',
    'OrderDate': '1997-12-17T19:50:00.000Z',
    'ShippedDate': '1997-12-19T20:50:00.000Z',
    'Freight': 73.16,
    'ShipName': 'Wartian Herkku',
    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 10782,
    'CustomerID': 'CACTU',
    'OrderDate': '1997-12-17T21:50:00.000Z',
    'ShippedDate': '1997-12-22T22:50:00.000Z',
    'Freight': 1.1,
    'ShipName': 'Cactus Comidas para llevar',
    'ShipAddress': 'Cerrito 333',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,

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    'ShipCountry': 'Argentina'
  },
  {
    'OrderID': 10783,
    'CustomerID': 'HANAR',
    'OrderDate': '1997-12-18T23:50:00.000Z',
    'ShippedDate': '1997-12-19T01:50:00.000Z',
    'Freight': 124.98,
    'ShipName': 'Hanari Carnes',
    'ShipAddress': 'Rua do Paço, 67',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10784,
    'CustomerID': 'MAGAA',
    'OrderDate': '1997-12-18T02:50:00.000Z',
    'ShippedDate': '1997-12-22T03:50:00.000Z',
    'Freight': 70.09,
    'ShipName': 'Magazzini Alimentari Riuniti',
    'ShipAddress': 'Via Ludovico il Moro 22',
    'ShipCity': 'Bergamo',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 10785,
    'CustomerID': 'GROSR',
    'OrderDate': '1997-12-18T04:50:00.000Z',
    'ShippedDate': '1997-12-24T05:50:00.000Z',
    'Freight': 1.51,
    'ShipName': 'GROSELLA-Restaurante',
    'ShipAddress': '5ª Ave. Los Palos Grandes',
    'ShipCity': 'Caracas',
    'ShipRegion': 'DF',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10786,
    'CustomerID': 'QUEEN',
    'OrderDate': '1997-12-19T06:50:00.000Z',
    'ShippedDate': '1997-12-23T07:50:00.000Z',
    'Freight': 110.87,
    'ShipName': 'Queen Cozinha',
    'ShipAddress': 'Alameda dos Canários, 891',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10787,
    'CustomerID': 'LAMAI',
    'OrderDate': '1997-12-19T08:50:00.000Z',
    'ShippedDate': '1997-12-26T09:50:00.000Z',
    'Freight': 249.93,
    'ShipName': 'La maison d\'Asie',

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    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10788,
    'CustomerID': 'QUICK',
    'OrderDate': '1997-12-22T10:50:00.000Z',
    'ShippedDate': '1998-01-19T11:50:00.000Z',
    'Freight': 42.7,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10789,
    'CustomerID': 'FOLIG',
    'OrderDate': '1997-12-22T12:50:00.000Z',
    'ShippedDate': '1997-12-31T13:50:00.000Z',
    'Freight': 100.6,
    'ShipName': 'Folies gourmandes',
    'ShipAddress': '184, chaussée de Tournai',
    'ShipCity': 'Lille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10790,
    'CustomerID': 'GOURL',
    'OrderDate': '1997-12-22T14:50:00.000Z',
    'ShippedDate': '1997-12-26T15:50:00.000Z',
    'Freight': 28.23,
    'ShipName': 'Gourmet Lanchonetes',
    'ShipAddress': 'Av. Brasil, 442',
    'ShipCity': 'Campinas',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10791,
    'CustomerID': 'FRANK',
    'OrderDate': '1997-12-23T16:50:00.000Z',
    'ShippedDate': '1998-01-01T17:50:00.000Z',
    'Freight': 16.85,
    'ShipName': 'Frankenversand',
    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10792,
    'CustomerID': 'WOLZA',
    'OrderDate': '1997-12-23T18:50:00.000Z',

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        'ShippedDate': '1997-12-31T19:50:00.000Z',
        'Freight': 23.79,
        'ShipName': 'Wolski Zajazd',
        'ShipAddress': 'ul. Filtrowa 68',
        'ShipCity': 'Warszawa',
        'ShipRegion': null,
        'ShipCountry': 'Poland'
    },
    {
        'OrderID': 10793,
        'CustomerID': 'AROUT',
        'OrderDate': '1997-12-24T20:50:00.000Z',
        'ShippedDate': '1998-01-08T21:50:00.000Z',
        'Freight': 4.52,
        'ShipName': 'Around the Horn',
        'ShipAddress': 'Brook Farm Stratford St. Mary',
        'ShipCity': 'Colchester',
        'ShipRegion': 'Essex',
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10794,
        'CustomerID': 'QUEDE',
        'OrderDate': '1997-12-24T22:50:00.000Z',
        'ShippedDate': '1998-01-02T23:50:00.000Z',
        'Freight': 21.49,
        'ShipName': 'Que Delícia',
        'ShipAddress': 'Rua da Panificadora, 12',
        'ShipCity': 'Rio de Janeiro',
        'ShipRegion': 'RJ',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10795,
        'CustomerID': 'ERNSH',
        'OrderDate': '1997-12-24T01:20:00.000Z',
        'ShippedDate': '1998-01-20T02:20:00.000Z',
        'Freight': 126.66,
        'ShipName': 'Ernst Handel',
        'ShipAddress': 'Kirchgasse 6',
        'ShipCity': 'Graz',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
        'OrderID': 10796,
        'CustomerID': 'HILAA',
        'OrderDate': '1997-12-25T03:20:00.000Z',
        'ShippedDate': '1998-01-14T04:20:00.000Z',
        'Freight': 26.52,
        'ShipName': 'HILARION-Abastos',
        'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
        'ShipCity': 'San Cristóbal',
        'ShipRegion': 'Táchira',
        'ShipCountry': 'Venezuela'
    },
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    'OrderID': 10797,
    'CustomerID': 'DRACD',
    'OrderDate': '1997-12-25T05:20:00.000Z',
    'ShippedDate': '1998-01-05T06:20:00.000Z',
    'Freight': 33.35,
    'ShipName': 'Drachenblut Delikatessen',
    'ShipAddress': 'Walserweg 21',
    'ShipCity': 'Aachen',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
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    'Freight': 2.33,
    'ShipName': 'Island Trading',
    'ShipAddress': 'Garden House Crowther Way',
    'ShipCity': 'Cowes',
    'ShipRegion': 'Isle of Wight',
    'ShipCountry': 'UK'
  },
  {
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    'CustomerID': 'KOENE',
    'OrderDate': '1997-12-26T09:20:00.000Z',
    'ShippedDate': '1998-01-05T10:20:00.000Z',
    'Freight': 30.76,
    'ShipName': 'Königlich Essen',
    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10800,
    'CustomerID': 'SEVES',
    'OrderDate': '1997-12-26T11:20:00.000Z',
    'ShippedDate': '1998-01-05T12:20:00.000Z',
    'Freight': 137.44,
    'ShipName': 'Seven Seas Imports',
    'ShipAddress': '90 Wadhurst Rd.',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10801,
    'CustomerID': 'BOLID',
    'OrderDate': '1997-12-29T13:20:00.000Z',
    'ShippedDate': '1997-12-31T14:20:00.000Z',
    'Freight': 97.09,
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    'ShipAddress': 'C/ Araquil, 67',
    'ShipCity': 'Madrid',
    'ShipRegion': null,

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    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10802,
    'CustomerID': 'SIMOB',
    'OrderDate': '1997-12-29T15:20:00.000Z',
    'ShippedDate': '1998-01-02T16:20:00.000Z',
    'Freight': 257.26,
    'ShipName': 'Simons bistro',
    'ShipAddress': 'Vinbæltet 34',
    'ShipCity': 'Kobenhavn',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
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    'CustomerID': 'WELLI',
    'OrderDate': '1997-12-30T17:20:00.000Z',
    'ShippedDate': '1998-01-06T18:20:00.000Z',
    'Freight': 55.23,
    'ShipName': 'Wellington Importadora',
    'ShipAddress': 'Rua do Mercado, 12',
    'ShipCity': 'Resende',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10804,
    'CustomerID': 'SEVES',
    'OrderDate': '1997-12-30T19:20:00.000Z',
    'ShippedDate': '1998-01-07T20:20:00.000Z',
    'Freight': 27.33,
    'ShipName': 'Seven Seas Imports',
    'ShipAddress': '90 Wadhurst Rd.',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10805,
    'CustomerID': 'THEBI',
    'OrderDate': '1997-12-30T21:20:00.000Z',
    'ShippedDate': '1998-01-09T22:20:00.000Z',
    'Freight': 237.34,
    'ShipName': 'The Big Cheese',
    'ShipAddress': '89 Jefferson Way Suite 2',
    'ShipCity': 'Portland',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10806,
    'CustomerID': 'VICTE',
    'OrderDate': '1997-12-31T23:20:00.000Z',
    'ShippedDate': '1998-01-05T00:20:00.000Z',
    'Freight': 22.11,
    'ShipName': 'Victuailles en stock',

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        'ShipAddress': '2, rue du Commerce',
        'ShipCity': 'Lyon',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
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        'CustomerID': 'FRANS',
        'OrderDate': '1997-12-31T01:40:00.000Z',
        'ShippedDate': '1998-01-30T02:40:00.000Z',
        'Freight': 1.36,
        'ShipName': 'Franchi S.p.A.',
        'ShipAddress': 'Via Monte Bianco 34',
        'ShipCity': 'Torino',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
    {
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        'CustomerID': 'OLDWO',
        'OrderDate': '1998-01-01T03:40:00.000Z',
        'ShippedDate': '1998-01-09T04:40:00.000Z',
        'Freight': 45.53,
        'ShipName': 'Old World Delicatessen',
        'ShipAddress': '2743 Bering St.',
        'ShipCity': 'Anchorage',
        'ShipRegion': 'AK',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10809,
        'CustomerID': 'WELLI',
        'OrderDate': '1998-01-01T05:40:00.000Z',
        'ShippedDate': '1998-01-07T06:40:00.000Z',
        'Freight': 4.87,
        'ShipName': 'Wellington Importadora',
        'ShipAddress': 'Rua do Mercado, 12',
        'ShipCity': 'Resende',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
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        'CustomerID': 'LAUGB',
        'OrderDate': '1998-01-01T07:40:00.000Z',
        'ShippedDate': '1998-01-07T08:40:00.000Z',
        'Freight': 4.33,
        'ShipName': 'Laughing Bacchus Wine Cellars',
        'ShipAddress': '2319 Elm St.',
        'ShipCity': 'Vancouver',
        'ShipRegion': 'BC',
        'ShipCountry': 'Canada'
    },
    {
        'OrderID': 10811,
        'CustomerID': 'LINOD',
        'OrderDate': '1998-01-02T09:40:00.000Z',

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    'ShippedDate': '1998-01-08T10:40:00.000Z',
    'Freight': 31.22,
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    'ShipAddress': 'Ave. 5 de Mayo Porlamar',
    'ShipCity': 'I. de Margarita',
    'ShipRegion': 'Nueva Esparta',
    'ShipCountry': 'Venezuela'
  },
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    'CustomerID': 'REGGC',
    'OrderDate': '1998-01-02T11:40:00.000Z',
    'ShippedDate': '1998-01-12T12:40:00.000Z',
    'Freight': 59.78,
    'ShipName': 'Reggiani Caseifici',
    'ShipAddress': 'Strada Provinciale 124',
    'ShipCity': 'Reggio Emilia',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 10813,
    'CustomerID': 'RICAR',
    'OrderDate': '1998-01-05T13:40:00.000Z',
    'ShippedDate': '1998-01-09T14:40:00.000Z',
    'Freight': 47.38,
    'ShipName': 'Ricardo Adocicados',
    'ShipAddress': 'Av. Copacabana, 267',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10814,
    'CustomerID': 'VICTE',
    'OrderDate': '1998-01-05T15:40:00.000Z',
    'ShippedDate': '1998-01-14T16:40:00.000Z',
    'Freight': 130.94,
    'ShipName': 'Victuailles en stock',
    'ShipAddress': '2, rue du Commerce',
    'ShipCity': 'Lyon',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10815,
    'CustomerID': 'SAVEA',
    'OrderDate': '1998-01-05T17:40:00.000Z',
    'ShippedDate': '1998-01-14T18:40:00.000Z',
    'Freight': 14.62,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  }
]

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    'ShippedDate': '1998-02-04T20:40:00.000Z',
    'Freight': 719.78,
    'ShipName': 'Great Lakes Food Market',
    'ShipAddress': '2732 Baker Blvd.',
    'ShipCity': 'Eugene',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10817,
    'CustomerID': 'KOENE',
    'OrderDate': '1998-01-06T21:40:00.000Z',
    'ShippedDate': '1998-01-13T22:40:00.000Z',
    'Freight': 306.07,
    'ShipName': 'Königlich Essen',
    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10818,
    'CustomerID': 'MAGAA',
    'OrderDate': '1998-01-07T23:40:00.000Z',
    'ShippedDate': '1998-01-12T01:55:00.000Z',
    'Freight': 65.48,
    'ShipName': 'Magazzini Alimentari Riuniti',
    'ShipAddress': 'Via Ludovico il Moro 22',
    'ShipCity': 'Bergamo',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 10819,
    'CustomerID': 'CACTU',
    'OrderDate': '1998-01-07T02:55:00.000Z',
    'ShippedDate': '1998-01-16T03:55:00.000Z',
    'Freight': 19.76,
    'ShipName': 'Cactus Comidas para llevar',
    'ShipAddress': 'Cerrito 333',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },
  {
    'OrderID': 10820,
    'CustomerID': 'RATTC',
    'OrderDate': '1998-01-07T04:55:00.000Z',
    'ShippedDate': '1998-01-13T05:55:00.000Z',
    'Freight': 37.52,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',

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    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'SPLIR',
    'OrderDate': '1998-01-08T06:55:00.000Z',
    'ShippedDate': '1998-01-15T07:55:00.000Z',
    'Freight': 36.68,
    'ShipName': 'Split Rail Beer & Ale',
    'ShipAddress': 'P.O. Box 555',
    'ShipCity': 'Lander',
    'ShipRegion': 'WY',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10822,
    'CustomerID': 'TRAIH',
    'OrderDate': '1998-01-08T09:55:00.000Z',
    'ShippedDate': '1998-01-16T10:55:00.000Z',
    'Freight': 7,
    'ShipName': 'Trail\'s Head Gourmet Provisioners',
    'ShipAddress': '722 DaVinci Blvd.',
    'ShipCity': 'Kirkland',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10823,
    'CustomerID': 'LILAS',
    'OrderDate': '1998-01-09T11:55:00.000Z',
    'ShippedDate': '1998-01-13T12:55:00.000Z',
    'Freight': 163.97,
    'ShipName': 'LILA-Supermercado',
    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10824,
    'CustomerID': 'FOLKO',
    'OrderDate': '1998-01-09T13:55:00.000Z',
    'ShippedDate': '1998-01-30T14:55:00.000Z',
    'Freight': 1.23,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10825,
    'CustomerID': 'DRACD',
    'OrderDate': '1998-01-09T15:55:00.000Z',
    'ShippedDate': '1998-01-14T16:55:00.000Z',
    'Freight': 79.25,
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    'ShipCity': 'Aachen',
    'ShipRegion': null,
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  },
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    'CustomerID': 'BLONP',
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    'ShippedDate': '1998-02-06T18:55:00.000Z',
    'Freight': 7.09,
    'ShipName': 'Blondel père et fils',
    'ShipAddress': '24, place Kléber',
    'ShipCity': 'Strasbourg',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10827,
    'CustomerID': 'BONAP',
    'OrderDate': '1998-01-12T19:55:00.000Z',
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    'Freight': 63.54,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10828,
    'CustomerID': 'RANCH',
    'OrderDate': '1998-01-13T21:55:00.000Z',
    'ShippedDate': '1998-02-04T22:55:00.000Z',
    'Freight': 90.85,
    'ShipName': 'Rancho grande',
    'ShipAddress': 'Av. del Libertador 900',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },
  {
    'OrderID': 10829,
    'CustomerID': 'ISLAT',
    'OrderDate': '1998-01-13T23:55:00.000Z',
    'ShippedDate': '1998-01-23T12:55:00.000Z',
    'Freight': 154.72,
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    'ShipAddress': 'Garden House Crowther Way',
    'ShipCity': 'Cowes',
    'ShipRegion': 'Isle of Wight',
    'ShipCountry': 'UK'
  },
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    'OrderID': 10830,
    'CustomerID': 'TRADH',
    'OrderDate': '1998-01-13T01:15:00.000Z',

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        'ShippedDate': '1998-01-21T02:15:00.000Z',
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        'ShipAddress': 'Av. Inês de Castro, 414',
        'ShipCity': 'Sao Paulo',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10831,
        'CustomerID': 'SANTG',
        'OrderDate': '1998-01-14T03:15:00.000Z',
        'ShippedDate': '1998-01-23T04:15:00.000Z',
        'Freight': 72.19,
        'ShipName': 'Santé Gourmet',
        'ShipAddress': 'Erling Skakkess gate 78',
        'ShipCity': 'Stavern',
        'ShipRegion': null,
        'ShipCountry': 'Norway'
    },
    {
        'OrderID': 10832,
        'CustomerID': 'LAMAI',
        'OrderDate': '1998-01-14T05:15:00.000Z',
        'ShippedDate': '1998-01-19T06:15:00.000Z',
        'Freight': 43.26,
        'ShipName': 'La maison d\'Asie',
        'ShipAddress': '1 rue Alsace-Lorraine',
        'ShipCity': 'Toulouse',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10833,
        'CustomerID': 'OTTIK',
        'OrderDate': '1998-01-15T07:15:00.000Z',
        'ShippedDate': '1998-01-23T08:15:00.000Z',
        'Freight': 71.49,
        'ShipName': 'Ottilies Käseladen',
        'ShipAddress': 'Mehrheimerstr. 369',
        'ShipCity': 'Köln',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
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        'CustomerID': 'TRADH',
        'OrderDate': '1998-01-15T09:15:00.000Z',
        'ShippedDate': '1998-01-19T10:15:00.000Z',
        'Freight': 29.78,
        'ShipName': 'Tradiçao Hipermercados',
        'ShipAddress': 'Av. Inês de Castro, 414',
        'ShipCity': 'Sao Paulo',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
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    'OrderDate': '1998-01-15T11:15:00.000Z',
    'ShippedDate': '1998-01-21T12:15:00.000Z',
    'Freight': 69.53,
    'ShipName': 'Alfred\'s Futterkiste',
    'ShipAddress': 'Obere Str. 57',
    'ShipCity': 'Berlin',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10836,
    'CustomerID': 'ERNSH',
    'OrderDate': '1998-01-16T13:15:00.000Z',
    'ShippedDate': '1998-01-21T14:15:00.000Z',
    'Freight': 411.88,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10837,
    'CustomerID': 'BERGS',
    'OrderDate': '1998-01-16T15:15:00.000Z',
    'ShippedDate': '1998-01-23T16:15:00.000Z',
    'Freight': 13.32,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10838,
    'CustomerID': 'LINOD',
    'OrderDate': '1998-01-19T17:15:00.000Z',
    'ShippedDate': '1998-01-23T18:15:00.000Z',
    'Freight': 59.28,
    'ShipName': 'LINO-Delicateses',
    'ShipAddress': 'Ave. 5 de Mayo Porlamar',
    'ShipCity': 'I. de Margarita',
    'ShipRegion': 'Nueva Esparta',
    'ShipCountry': 'Venezuela'
  },
  {
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    'CustomerID': 'TRADH',
    'OrderDate': '1998-01-19T19:15:00.000Z',
    'ShippedDate': '1998-01-22T20:15:00.000Z',
    'Freight': 35.43,
    'ShipName': 'Tradição Hipermercados',
    'ShipAddress': 'Av. Inês de Castro, 414',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
  }

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  },
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    'CustomerID': 'LINOD',
    'OrderDate': '1998-01-19T21:15:00.000Z',
    'ShippedDate': '1998-02-16T22:15:00.000Z',
    'Freight': 2.71,
    'ShipName': 'LINO-Delicateses',
    'ShipAddress': 'Ave. 5 de Mayo Porlamar',
    'ShipCity': 'I. de Margarita',
    'ShipRegion': 'Nueva Esparta',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10841,
    'CustomerID': 'SUPRD',
    'OrderDate': '1998-01-20T23:15:00.000Z',
    'ShippedDate': '1998-01-29T01:55:00.000Z',
    'Freight': 424.3,
    'ShipName': 'Suprêmes délices',
    'ShipAddress': 'Boulevard Tirou, 255',
    'ShipCity': 'Charleroi',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
    'OrderID': 10842,
    'CustomerID': 'TORTU',
    'OrderDate': '1998-01-20T02:55:00.000Z',
    'ShippedDate': '1998-01-29T03:55:00.000Z',
    'Freight': 54.42,
    'ShipName': 'Tortuga Restaurante',
    'ShipAddress': 'Avda. Azteca 123',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10843,
    'CustomerID': 'VICTE',
    'OrderDate': '1998-01-21T04:55:00.000Z',
    'ShippedDate': '1998-01-26T05:55:00.000Z',
    'Freight': 9.26,
    'ShipName': 'Victuailles en stock',
    'ShipAddress': '2, rue du Commerce',
    'ShipCity': 'Lyon',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10844,
    'CustomerID': 'PICCO',
    'OrderDate': '1998-01-21T06:55:00.000Z',
    'ShippedDate': '1998-01-26T07:55:00.000Z',
    'Freight': 25.22,
    'ShipName': 'Piccolo und mehr',

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        'ShipAddress': 'Geislweg 14',
        'ShipCity': 'Salzburg',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
        'OrderID': 10845,
        'CustomerID': 'QUICK',
        'OrderDate': '1998-01-21T08:55:00.000Z',
        'ShippedDate': '1998-01-30T09:55:00.000Z',
        'Freight': 212.98,
        'ShipName': 'QUICK-Stop',
        'ShipAddress': 'Taucherstraße 10',
        'ShipCity': 'Cunewalde',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10846,
        'CustomerID': 'SUPRD',
        'OrderDate': '1998-01-22T10:55:00.000Z',
        'ShippedDate': '1998-01-23T11:55:00.000Z',
        'Freight': 56.46,
        'ShipName': 'Suprêmes délices',
        'ShipAddress': 'Boulevard Tirou, 255',
        'ShipCity': 'Charleroi',
        'ShipRegion': null,
        'ShipCountry': 'Belgium'
    },
    {
        'OrderID': 10847,
        'CustomerID': 'SAVEA',
        'OrderDate': '1998-01-22T12:55:00.000Z',
        'ShippedDate': '1998-02-10T13:55:00.000Z',
        'Freight': 487.57,
        'ShipName': 'Save-a-lot Markets',
        'ShipAddress': '187 Suffolk Ln.',
        'ShipCity': 'Boise',
        'ShipRegion': 'ID',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10848,
        'CustomerID': 'CONSH',
        'OrderDate': '1998-01-23T14:55:00.000Z',
        'ShippedDate': '1998-01-29T15:55:00.000Z',
        'Freight': 38.24,
        'ShipName': 'Consolidated Holdings',
        'ShipAddress': 'Berkeley Gardens 12 Brewery',
        'ShipCity': 'London',
        'ShipRegion': null,
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10849,
        'CustomerID': 'KOENE',
        'OrderDate': '1998-01-23T16:55:00.000Z',

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    'ShippedDate': '1998-01-30T17:55:00.000Z',
    'Freight': 0.56,
    'ShipName': 'Königlich Essen',
    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
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    'CustomerID': 'VICTE',
    'OrderDate': '1998-01-23T19:55:00.000Z',
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    'Freight': 49.19,
    'ShipName': 'Victuailles en stock',
    'ShipAddress': '2, rue du Commerce',
    'ShipCity': 'Lyon',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
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    'CustomerID': 'RICAR',
    'OrderDate': '1998-01-26T21:55:00.000Z',
    'ShippedDate': '1998-02-02T22:55:00.000Z',
    'Freight': 160.55,
    'ShipName': 'Ricardo Adocicados',
    'ShipAddress': 'Av. Copacabana, 267',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10852,
    'CustomerID': 'RATTC',
    'OrderDate': '1998-01-26T23:55:00.000Z',
    'ShippedDate': '1998-01-30T01:00.05.000Z',
    'Freight': 174.05,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
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    'OrderID': 10853,
    'CustomerID': 'BLAUS',
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    'ShippedDate': '1998-02-03T03:00.05.000Z',
    'Freight': 53.83,
    'ShipName': 'Blauer See Delikatessen',
    'ShipAddress': 'Forsterstr. 57',
    'ShipCity': 'Mannheim',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
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    'OrderID': 10854,
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    'ShippedDate': '1998-02-05T05:00.05.000Z',
    'Freight': 100.22,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
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    'CustomerID': 'OLDWO',
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    'ShippedDate': '1998-02-04T07:00.05.000Z',
    'Freight': 170.97,
    'ShipName': 'Old World Delicatessen',
    'ShipAddress': '2743 Bering St.',
    'ShipCity': 'Anchorage',
    'ShipRegion': 'AK',
    'ShipCountry': 'USA'
  },
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    'CustomerID': 'ANTON',
    'OrderDate': '1998-01-28T08:00.05.000Z',
    'ShippedDate': '1998-02-10T09:00.05.000Z',
    'Freight': 58.43,
    'ShipName': 'Antonio Moreno Taquería',
    'ShipAddress': 'Mataderos 2312',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10857,
    'CustomerID': 'BERGS',
    'OrderDate': '1998-01-28T11:00.05.000Z',
    'ShippedDate': '1998-02-06T12:00.05.000Z',
    'Freight': 188.85,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
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    'CustomerID': 'LACOR',
    'OrderDate': '1998-01-29T13:00.05.000Z',
    'ShippedDate': '1998-02-03T14:00.05.000Z',
    'Freight': 52.51,
    'ShipName': 'La corne d\'abondance',
    'ShipAddress': '67, avenue de l\'Europe',
    'ShipCity': 'Versailles',
    'ShipRegion': null,

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    'ShipCountry': 'France'
  },
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    'Freight': 76.1,
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    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
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    'CustomerID': 'FRANR',
    'OrderDate': '1998-01-29T17:00.05.000Z',
    'ShippedDate': '1998-02-04T18:00.05.000Z',
    'Freight': 19.26,
    'ShipName': 'France restauration',
    'ShipAddress': '54, rue Royale',
    'ShipCity': 'Nantes',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
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    'CustomerID': 'WHITC',
    'OrderDate': '1998-01-30T19:00.05.000Z',
    'ShippedDate': '1998-02-17T20:00.05.000Z',
    'Freight': 14.93,
    'ShipName': 'White Clover Markets',
    'ShipAddress': '1029 - 12th Ave. S.',
    'ShipCity': 'Seattle',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10862,
    'CustomerID': 'LEHMS',
    'OrderDate': '1998-01-30T21:00.05.000Z',
    'ShippedDate': '1998-02-02T22:00.05.000Z',
    'Freight': 53.23,
    'ShipName': 'Lehmanns Marktstand',
    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10863,
    'CustomerID': 'HILAA',
    'OrderDate': '1998-02-02T23:00.05.000Z',
    'ShippedDate': '1998-02-17T01:15:00.000Z',
    'Freight': 30.26,
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        'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
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        'ShipRegion': 'Táchira',
        'ShipCountry': 'Venezuela'
    },
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        'ShippedDate': '1998-02-09T03:15:00.000Z',
        'Freight': 3.04,
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        'ShipAddress': 'Brook Farm Stratford St. Mary',
        'ShipCity': 'Colchester',
        'ShipRegion': 'Essex',
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10865,
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        'OrderDate': '1998-02-02T04:15:00.000Z',
        'ShippedDate': '1998-02-12T05:15:00.000Z',
        'Freight': 348.14,
        'ShipName': 'QUICK-Stop',
        'ShipAddress': 'Taucherstraße 10',
        'ShipCity': 'Cunewalde',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10866,
        'CustomerID': 'BERGS',
        'OrderDate': '1998-02-03T06:15:00.000Z',
        'ShippedDate': '1998-02-12T07:15:00.000Z',
        'Freight': 109.11,
        'ShipName': 'Berglunds snabbköp',
        'ShipAddress': 'Berguvsvägen 8',
        'ShipCity': 'Luleå',
        'ShipRegion': null,
        'ShipCountry': 'Sweden'
    },
    {
        'OrderID': 10867,
        'CustomerID': 'LONEP',
        'OrderDate': '1998-02-03T08:15:00.000Z',
        'ShippedDate': '1998-02-11T09:15:00.000Z',
        'Freight': 1.93,
        'ShipName': 'Lonesome Pine Restaurant',
        'ShipAddress': '89 Chiaroscuro Rd.',
        'ShipCity': 'Portland',
        'ShipRegion': 'OR',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10868,
        'CustomerID': 'QUEEN',
        'OrderDate': '1998-02-04T10:15:00.000Z',

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    'ShippedDate': '1998-02-23T11:15:00.000Z',
    'Freight': 191.27,
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    'ShipAddress': 'Alameda dos Canários, 891',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10869,
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    'OrderDate': '1998-02-04T12:15:00.000Z',
    'ShippedDate': '1998-02-09T13:15:00.000Z',
    'Freight': 143.28,
    'ShipName': 'Seven Seas Imports',
    'ShipAddress': '90 Wadhurst Rd.',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10870,
    'CustomerID': 'WOLZA',
    'OrderDate': '1998-02-04T14:15:00.000Z',
    'ShippedDate': '1998-02-13T15:15:00.000Z',
    'Freight': 12.04,
    'ShipName': 'Wolski Zajazd',
    'ShipAddress': 'ul. Filtrowa 68',
    'ShipCity': 'Warszawa',
    'ShipRegion': null,
    'ShipCountry': 'Poland'
  },
  {
    'OrderID': 10871,
    'CustomerID': 'BONAP',
    'OrderDate': '1998-02-05T16:15:00.000Z',
    'ShippedDate': '1998-02-10T17:15:00.000Z',
    'Freight': 112.27,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10872,
    'CustomerID': 'GODOS',
    'OrderDate': '1998-02-05T18:15:00.000Z',
    'ShippedDate': '1998-02-09T19:15:00.000Z',
    'Freight': 175.32,
    'ShipName': 'Godos Cocina Típica',
    'ShipAddress': 'C/ Romero, 33',
    'ShipCity': 'Sevilla',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
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    'OrderID': 10873,
    'CustomerID': 'WILMK',
    'OrderDate': '1998-02-06T20:15:00.000Z',
    'ShippedDate': '1998-02-09T21:15:00.000Z',
    'Freight': 0.82,
    'ShipName': 'Wilman Kala',
    'ShipAddress': 'Keskuskatu 45',
    'ShipCity': 'Helsinki',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 10874,
    'CustomerID': 'GODOS',
    'OrderDate': '1998-02-06T22:15:00.000Z',
    'ShippedDate': '1998-02-11T23:15:00.000Z',
    'Freight': 19.58,
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    'ShipAddress': 'C/ Romero, 33',
    'ShipCity': 'Sevilla',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
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    'CustomerID': 'BERGS',
    'OrderDate': '1998-02-06T01:30:00.000Z',
    'ShippedDate': '1998-03-03T02:30:00.000Z',
    'Freight': 32.37,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10876,
    'CustomerID': 'BONAP',
    'OrderDate': '1998-02-09T03:30:00.000Z',
    'ShippedDate': '1998-02-12T04:30:00.000Z',
    'Freight': 60.42,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10877,
    'CustomerID': 'RICAR',
    'OrderDate': '1998-02-09T05:30:00.000Z',
    'ShippedDate': '1998-02-19T06:30:00.000Z',
    'Freight': 38.06,
    'ShipName': 'Ricardo Adocicados',
    'ShipAddress': 'Av. Copacabana, 267',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',

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    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10878,
    'CustomerID': 'QUICK',
    'OrderDate': '1998-02-10T07:30:00.000Z',
    'ShippedDate': '1998-02-12T08:30:00.000Z',
    'Freight': 46.69,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10879,
    'CustomerID': 'WILMK',
    'OrderDate': '1998-02-10T09:30:00.000Z',
    'ShippedDate': '1998-02-12T10:30:00.000Z',
    'Freight': 8.5,
    'ShipName': 'Wilman Kala',
    'ShipAddress': 'Keskuskatu 45',
    'ShipCity': 'Helsinki',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 10880,
    'CustomerID': 'FOLKO',
    'OrderDate': '1998-02-10T11:30:00.000Z',
    'ShippedDate': '1998-02-18T12:30:00.000Z',
    'Freight': 88.01,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10881,
    'CustomerID': 'CACTU',
    'OrderDate': '1998-02-11T13:30:00.000Z',
    'ShippedDate': '1998-02-18T14:30:00.000Z',
    'Freight': 2.84,
    'ShipName': 'Cactus Comidas para llevar',
    'ShipAddress': 'Cerrito 333',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },
  {
    'OrderID': 10882,
    'CustomerID': 'SAVEA',
    'OrderDate': '1998-02-11T15:30:00.000Z',
    'ShippedDate': '1998-02-20T16:30:00.000Z',
    'Freight': 23.1,
    'ShipName': 'Save-a-lot Markets',
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        'ShipAddress': '187 Suffolk Ln.',
        'ShipCity': 'Boise',
        'ShipRegion': 'ID',
        'ShipCountry': 'USA'
    },
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        'CustomerID': 'LONEP',
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        'ShippedDate': '1998-02-20T18:30:00.000Z',
        'Freight': 0.53,
        'ShipName': 'Lonesome Pine Restaurant',
        'ShipAddress': '89 Chiaroscuro Rd.',
        'ShipCity': 'Portland',
        'ShipRegion': 'OR',
        'ShipCountry': 'USA'
    },
    {
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        'CustomerID': 'LETSS',
        'OrderDate': '1998-02-12T19:30:00.000Z',
        'ShippedDate': '1998-02-13T20:30:00.000Z',
        'Freight': 90.97,
        'ShipName': 'Let\'s Stop N Shop',
        'ShipAddress': '87 Polk St. Suite 5',
        'ShipCity': 'San Francisco',
        'ShipRegion': 'CA',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10885,
        'CustomerID': 'SUPRD',
        'OrderDate': '1998-02-12T21:30:00.000Z',
        'ShippedDate': '1998-02-18T22:30:00.000Z',
        'Freight': 5.64,
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        'ShipAddress': 'Boulevard Tirou, 255',
        'ShipCity': 'Charleroi',
        'ShipRegion': null,
        'ShipCountry': 'Belgium'
    },
    {
        'OrderID': 10886,
        'CustomerID': 'HANAR',
        'OrderDate': '1998-02-13T23:30:00.000Z',
        'ShippedDate': '1998-03-02T01:20:00.000Z',
        'Freight': 4.99,
        'ShipName': 'Hanari Carnes',
        'ShipAddress': 'Rua do Paço, 67',
        'ShipCity': 'Rio de Janeiro',
        'ShipRegion': 'RJ',
        'ShipCountry': 'Brazil'
    },
    {
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        'CustomerID': 'GALED',
        'OrderDate': '1998-02-13T02:20:00.000Z',

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    'ShippedDate': '1998-02-16T03:20:00.000Z',
    'Freight': 1.25,
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    'ShipAddress': 'Rambla de Cataluña, 23',
    'ShipCity': 'Barcelona',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10888,
    'CustomerID': 'GODOS',
    'OrderDate': '1998-02-16T04:20:00.000Z',
    'ShippedDate': '1998-02-23T05:20:00.000Z',
    'Freight': 51.87,
    'ShipName': 'Godos Cocina Típica',
    'ShipAddress': 'C/ Romero, 33',
    'ShipCity': 'Sevilla',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10889,
    'CustomerID': 'RATTC',
    'OrderDate': '1998-02-16T06:20:00.000Z',
    'ShippedDate': '1998-02-23T07:20:00.000Z',
    'Freight': 280.61,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10890,
    'CustomerID': 'DUMON',
    'OrderDate': '1998-02-16T08:20:00.000Z',
    'ShippedDate': '1998-02-18T09:20:00.000Z',
    'Freight': 32.76,
    'ShipName': 'Du monde entier',
    'ShipAddress': '67, rue des Cinquante Otages',
    'ShipCity': 'Nantes',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10891,
    'CustomerID': 'LEHMS',
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    'ShippedDate': '1998-02-19T11:20:00.000Z',
    'Freight': 20.37,
    'ShipName': 'Lehmanns Marktstand',
    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
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    'OrderID': 10892,
    'CustomerID': 'MAISD',
    'OrderDate': '1998-02-17T12:20:00.000Z',
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    'Freight': 120.27,
    'ShipName': 'Maison Dewey',
    'ShipAddress': 'Rue Joseph-Bens 532',
    'ShipCity': 'Bruxelles',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
    'OrderID': 10893,
    'CustomerID': 'KOENE',
    'OrderDate': '1998-02-18T14:20:00.000Z',
    'ShippedDate': '1998-02-20T15:20:00.000Z',
    'Freight': 77.78,
    'ShipName': 'Königlich Essen',
    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10894,
    'CustomerID': 'SAVEA',
    'OrderDate': '1998-02-18T16:20:00.000Z',
    'ShippedDate': '1998-02-20T17:20:00.000Z',
    'Freight': 116.13,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10895,
    'CustomerID': 'ERNSH',
    'OrderDate': '1998-02-18T18:20:00.000Z',
    'ShippedDate': '1998-02-23T19:20:00.000Z',
    'Freight': 162.75,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10896,
    'CustomerID': 'MAISD',
    'OrderDate': '1998-02-19T20:20:00.000Z',
    'ShippedDate': '1998-02-27T21:20:00.000Z',
    'Freight': 32.45,
    'ShipName': 'Maison Dewey',
    'ShipAddress': 'Rue Joseph-Bens 532',
    'ShipCity': 'Bruxelles',
    'ShipRegion': null,

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    'ShipCountry': 'Belgium'
  },
  {
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    'CustomerID': 'HUNGO',
    'OrderDate': '1998-02-19T22:20:00.000Z',
    'ShippedDate': '1998-02-25T23:20:00.000Z',
    'Freight': 603.54,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10898,
    'CustomerID': 'OCEAN',
    'OrderDate': '1998-02-20T01:55:00.000Z',
    'ShippedDate': '1998-03-06T02:55:00.000Z',
    'Freight': 1.27,
    'ShipName': 'Océano Atlántico Ltda.',
    'ShipAddress': 'Ing. Gustavo Moncada 8585 Piso 20-A',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },
  {
    'OrderID': 10899,
    'CustomerID': 'LILAS',
    'OrderDate': '1998-02-20T03:55:00.000Z',
    'ShippedDate': '1998-02-26T04:55:00.000Z',
    'Freight': 1.21,
    'ShipName': 'LILA-Supermercado',
    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10900,
    'CustomerID': 'WELLI',
    'OrderDate': '1998-02-20T05:55:00.000Z',
    'ShippedDate': '1998-03-04T06:55:00.000Z',
    'Freight': 1.66,
    'ShipName': 'Wellington Importadora',
    'ShipAddress': 'Rua do Mercado, 12',
    'ShipCity': 'Resende',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10901,
    'CustomerID': 'HILAA',
    'OrderDate': '1998-02-23T07:55:00.000Z',
    'ShippedDate': '1998-02-26T08:55:00.000Z',
    'Freight': 62.09,
    'ShipName': 'HILARION-Abastos',

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    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
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    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
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    'ShipCity': 'Rio de Janeiro',
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    'ShipCountry': 'Brazil'
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    'ShipCity': 'Seattle',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
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    'Freight': 13.72,
    'ShipName': 'Wellington Importadora',
    'ShipAddress': 'Rua do Mercado, 12',
    'ShipCity': 'Resende',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
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    'ShipCity': 'Warszawa',
    'ShipRegion': null,
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    'ShipRegion': null,
    'ShipCountry': 'France'
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    'Freight': 32.96,
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    'ShipAddress': 'Strada Provinciale 124',
    'ShipCity': 'Reggio Emilia',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
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    'ShippedDate': '1998-03-10T01:40:00.000Z',
    'Freight': 53.05,
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    'ShipAddress': 'Erling Skakkes gate 78',
    'ShipCity': 'Stavern',
    'ShipRegion': null,
    'ShipCountry': 'Norway'
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    'Freight': 38.11,
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    'ShipAddress': 'Keskuskatu 45',
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    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
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      'ShipCity': 'Sevilla',
      'ShipRegion': null,
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      'ShipCity': 'Cork',
      'ShipRegion': 'Co. Cork',
      'ShipCountry': 'Ireland'
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      'ShippedDate': '1998-03-04T09:40:00.000Z',
      'Freight': 33.05,
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      'ShipAddress': 'Alameda dos Canários, 891',
      'ShipCity': 'Sao Paulo',
      'ShipRegion': 'SP',
      'ShipCountry': 'Brazil'
    },
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      'Freight': 21.19,
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      'ShipAddress': 'Alameda dos Canários, 891',
      'ShipCity': 'Sao Paulo',
      'ShipRegion': 'SP',
      'ShipCountry': 'Brazil'
    },
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      'Freight': 3.51,
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      'ShipCity': 'México D.F.',
      'ShipRegion': null,

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    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
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    'Freight': 8.29,
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    'ShipAddress': 'Gran Vía, 1',
    'ShipCity': 'Madrid',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
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    'CustomerID': 'BOTTM',
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    'ShippedDate': '1998-03-11T19:40:00.000Z',
    'Freight': 48.83,
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    'ShipCity': 'Tsawassen',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
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    'ShippedDate': '1998-03-04T21:40:00.000Z',
    'Freight': 19.8,
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    'ShipAddress': 'Ave. 5 de Mayo Porlamar',
    'ShipCity': 'I. de Margarita',
    'ShipRegion': 'Nueva Esparta',
    'ShipCountry': 'Venezuela'
  },
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    'CustomerID': 'AROUT',
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    'ShippedDate': '1998-03-09T01:50:00.000Z',
    'Freight': 29.61,
    'ShipName': 'Around the Horn',
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        'ShipAddress': 'Smagsloget 45',
        'ShipCity': 'Århus',
        'ShipRegion': null,
        'ShipCountry': 'Denmark'
    },
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        'Freight': 62.74,
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        'ShipRegion': 'RJ',
        'ShipCountry': 'Brazil'
    },
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        'CustomerID': 'LAMAI',
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        'ShipAddress': '1 rue Alsace-Lorraine',
        'ShipCity': 'Toulouse',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
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        'CustomerID': 'BERGS',
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        'ShippedDate': '1998-04-08T08:50:00.000Z',
        'Freight': 151.52,
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        'ShipAddress': 'Berguvsvägen 8',
        'ShipCity': 'Luleå',
        'ShipRegion': null,
        'ShipCountry': 'Sweden'
    },
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        'CustomerID': 'HANAR',
        'OrderDate': '1998-03-04T09:50:00.000Z',

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    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
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    'Freight': 39.92,
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    'ShipAddress': 'Avda. de la Constitución 2222',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
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    'ShippedDate': '1998-04-08T14:50:00.000Z',
    'Freight': 19.79,
    'ShipName': 'La corne d\'abondance',
    'ShipAddress': '67, avenue de l\'Europe',
    'ShipCity': 'Versailles',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
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    'CustomerID': 'GALED',
    'OrderDate': '1998-03-05T15:50:00.000Z',
    'ShippedDate': '1998-03-18T16:50:00.000Z',
    'Freight': 1.36,
    'ShipName': 'Galería del gastronómo',
    'ShipAddress': 'Rambla de Cataluña, 23',
    'ShipCity': 'Barcelona',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
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    'CustomerID': 'FRANK',
    'OrderDate': '1998-03-05T17:50:00.000Z',
    'ShippedDate': '1998-03-12T18:50:00.000Z',
    'Freight': 33.93,
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    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
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    'ShippedDate': '1998-03-18T20:50:00.000Z',
    'Freight': 15.55,
    'ShipName': 'Suprêmes délices',
    'ShipAddress': 'Boulevard Tirou, 255',
    'ShipCity': 'Charleroi',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
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    'CustomerID': 'RICSU',
    'OrderDate': '1998-03-06T21:50:00.000Z',
    'ShippedDate': '1998-03-19T22:50:00.000Z',
    'Freight': 13.6,
    'ShipName': 'Richter Supermarkt',
    'ShipAddress': 'Starenweg 5',
    'ShipCity': 'Genève',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
  {
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    'CustomerID': 'BONAP',
    'OrderDate': '1998-03-06T23:50:00.000Z',
    'ShippedDate': '1998-03-24T01:50:00.000Z',
    'Freight': 134.64,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
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    'CustomerID': 'ISLAT',
    'OrderDate': '1998-03-06T02:20:00.000Z',
    'ShippedDate': '1998-03-16T03:20:00.000Z',
    'Freight': 54.15,
    'ShipName': 'Island Trading',
    'ShipAddress': 'Garden House Crowther Way',
    'ShipCity': 'Cowes',
    'ShipRegion': 'Isle of Wight',
    'ShipCountry': 'UK'
  },
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    'CustomerID': 'LEHMS',
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    'ShippedDate': '1998-03-12T05:20:00.000Z',
    'Freight': 32.01,
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    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,

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    'Freight': 47.59,
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    'ShipAddress': 'Rua do Mercado, 12',
    'ShipCity': 'Resende',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
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    'CustomerID': 'GREAL',
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    'ShippedDate': '1998-03-18T09:20:00.000Z',
    'Freight': 33.68,
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    'ShipAddress': '2732 Baker Blvd.',
    'ShipCity': 'Eugene',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'CACTU',
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    'Freight': 31.51,
    'ShipName': 'Cactus Comidas para llevar',
    'ShipAddress': 'Cerrito 333',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },
  {
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    'CustomerID': 'QUICK',
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    'ShippedDate': '1998-03-16T14:20:00.000Z',
    'Freight': 31.89,
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    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
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    'CustomerID': 'MAGAA',
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        'ShipCity': 'Bergamo',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
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        'CustomerID': 'BONAP',
        'OrderDate': '1998-03-11T16:20:00.000Z',
        'ShippedDate': '1998-03-23T17:20:00.000Z',
        'Freight': 19.77,
        'ShipName': 'Bon app',
        'ShipAddress': '12, rue des Bouchers',
        'ShipCity': 'Marseille',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
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        'CustomerID': 'SAVEA',
        'OrderDate': '1998-03-11T18:20:00.000Z',
        'ShippedDate': '1998-03-20T19:20:00.000Z',
        'Freight': 400.81,
        'ShipName': 'Save-a-lot Markets',
        'ShipAddress': '187 Suffolk Ln.',
        'ShipCity': 'Boise',
        'ShipRegion': 'ID',
        'ShipCountry': 'USA'
    },
    {
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        'CustomerID': 'REGGC',
        'OrderDate': '1998-03-11T20:20:00.000Z',
        'ShippedDate': '1998-03-18T21:20:00.000Z',
        'Freight': 17.95,
        'ShipName': 'Reggiani Caseifici',
        'ShipAddress': 'Strada Provinciale 124',
        'ShipCity': 'Reggio Emilia',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
    {
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        'CustomerID': 'BSBEV',
        'OrderDate': '1998-03-11T22:20:00.000Z',
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        'Freight': 2.17,
        'ShipName': 'B\'s Beverages',
        'ShipAddress': 'Fauntleroy Circus',
        'ShipCity': 'London',
        'ShipRegion': null,
        'ShipCountry': 'UK'
    },
    {
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        'CustomerID': 'BOTTM',
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    'ShipCity': 'Tsawassen',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
  {
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    'CustomerID': 'MORGK',
    'OrderDate': '1998-03-12T03:20:00.000Z',
    'ShippedDate': '1998-03-18T04:20:00.000Z',
    'Freight': 10.22,
    'ShipName': 'Morgenstern Gesundkost',
    'ShipAddress': 'Heerstr. 22',
    'ShipCity': 'Leipzig',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
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    'CustomerID': 'VAFFE',
    'OrderDate': '1998-03-12T05:20:00.000Z',
    'ShippedDate': '1998-03-19T06:20:00.000Z',
    'Freight': 27.2,
    'ShipName': 'Vaffeljernet',
    'ShipAddress': 'Smagsloget 45',
    'ShipCity': 'Århus',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
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    'CustomerID': 'BSBEV',
    'OrderDate': '1998-03-13T07:20:00.000Z',
    'ShippedDate': '1998-03-16T08:20:00.000Z',
    'Freight': 3.26,
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    'ShipAddress': 'Fauntleroy Circus',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
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    'CustomerID': 'GODOS',
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    'Freight': 23.39,
    'ShipName': 'Godos Cocina Típica',
    'ShipAddress': 'C/ Romero, 33',
    'ShipCity': 'Sevilla',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
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    'Freight': 74.44,
    'ShipName': 'Bottom-Dollar Markets',
    'ShipAddress': '23 Tsawassen Blvd.',
    'ShipCity': 'Tsawassen',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10950,
    'CustomerID': 'MAGAA',
    'OrderDate': '1998-03-16T13:20:00.000Z',
    'ShippedDate': '1998-03-23T14:20:00.000Z',
    'Freight': 2.5,
    'ShipName': 'Magazzini Alimentari Riuniti',
    'ShipAddress': 'Via Ludovico il Moro 22',
    'ShipCity': 'Bergamo',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 10951,
    'CustomerID': 'RICSU',
    'OrderDate': '1998-03-16T15:20:00.000Z',
    'ShippedDate': '1998-04-07T16:20:00.000Z',
    'Freight': 30.85,
    'ShipName': 'Richter Supermarkt',
    'ShipAddress': 'Starenweg 5',
    'ShipCity': 'Genève',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
  {
    'OrderID': 10952,
    'CustomerID': 'ALFKI',
    'OrderDate': '1998-03-16T17:20:00.000Z',
    'ShippedDate': '1998-03-24T18:20:00.000Z',
    'Freight': 40.42,
    'ShipName': 'Alfred's Futterkiste',
    'ShipAddress': 'Obere Str. 57',
    'ShipCity': 'Berlin',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
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    'CustomerID': 'AROUT',
    'OrderDate': '1998-03-16T19:20:00.000Z',
    'ShippedDate': '1998-03-25T20:20:00.000Z',
    'Freight': 23.72,
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    'ShipAddress': 'Brook Farm Stratford St. Mary',
    'ShipCity': 'Colchester',
    'ShipRegion': 'Essex',
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    'ShipCity': 'I. de Margarita',
    'ShipRegion': 'Nueva Esparta',
    'ShipCountry': 'Venezuela'
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    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
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    'ShippedDate': '1998-03-20T02:55:00.000Z',
    'Freight': 44.65,
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    'ShipAddress': 'Forsterstr. 57',
    'ShipCity': 'Mannheim',
    'ShipRegion': null,
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    'Freight': 105.36,
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    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
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    'ShipCity': 'Buenos Aires',
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    'Freight': 4.98,
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    'ShipAddress': 'Av. Brasil, 442',
    'ShipCity': 'Campinas',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
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    'ShippedDate': '1998-04-08T10:55:00.000Z',
    'Freight': 2.08,
    'ShipName': 'HILARION-Abastos',
    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
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    'CustomerID': 'QUEEN',
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    'Freight': 104.47,
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    'ShipAddress': 'Alameda dos Canários, 891',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10962,
    'CustomerID': 'QUICK',
    'OrderDate': '1998-03-19T13:55:00.000Z',
    'ShippedDate': '1998-03-23T14:55:00.000Z',
    'Freight': 275.79,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10963,
    'CustomerID': 'FURIB',
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    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
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    'CustomerID': 'SPECB',
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    'ShippedDate': '1998-03-24T18:55:00.000Z',
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    'ShipAddress': '25, rue Lauriston',
    'ShipCity': 'Paris',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
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    'CustomerID': 'OLDWO',
    'OrderDate': '1998-03-20T19:55:00.000Z',
    'ShippedDate': '1998-03-30T20:55:00.000Z',
    'Freight': 144.38,
    'ShipName': 'Old World Delicatessen',
    'ShipAddress': '2743 Bering St.',
    'ShipCity': 'Anchorage',
    'ShipRegion': 'AK',
    'ShipCountry': 'USA'
  },
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    'OrderID': 10966,
    'CustomerID': 'CHOPS',
    'OrderDate': '1998-03-20T21:55:00.000Z',
    'ShippedDate': '1998-04-08T22:55:00.000Z',
    'Freight': 27.19,
    'ShipName': 'Chop-suey Chinese',
    'ShipAddress': 'Hauptstr. 31',
    'ShipCity': 'Bern',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
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    'CustomerID': 'TOMSP',
    'OrderDate': '1998-03-23T23:55:00.000Z',
    'ShippedDate': '1998-04-02T12:55:00.000Z',
    'Freight': 62.22,
    'ShipName': 'Toms Spezialitäten',
    'ShipAddress': 'Luisenstr. 48',
    'ShipCity': 'Münster',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
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    'Freight': 74.6,
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    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
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    'CustomerID': 'COMMI',
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    'ShippedDate': '1998-03-30T04:00.05.000Z',
    'Freight': 0.21,
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    'ShipAddress': 'Av. dos Lusíadas, 23',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
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    'CustomerID': 'BOLID',
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    'ShippedDate': '1998-04-24T06:00.05.000Z',
    'Freight': 16.16,
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    'ShipAddress': 'C/ Araquil, 67',
    'ShipCity': 'Madrid',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
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    'OrderDate': '1998-03-24T07:00.05.000Z',
    'ShippedDate': '1998-04-02T08:00.05.000Z',
    'Freight': 121.82,
    'ShipName': 'France restauration',
    'ShipAddress': '54, rue Royale',
    'ShipCity': 'Nantes',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
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    'CustomerID': 'LACOR',
    'OrderDate': '1998-03-24T09:00.05.000Z',
    'ShippedDate': '1998-03-26T10:00.05.000Z',
    'Freight': 0.02,
    'ShipName': 'La corne d\'abondance',
    'ShipAddress': '67, avenue de l\'Europe',
    'ShipCity': 'Versailles',
    'ShipRegion': null,

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  },
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    'ShipCity': 'Versailles',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
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    'Freight': 12.96,
    'ShipName': 'Split Rail Beer & Ale',
    'ShipAddress': 'P.O. Box 555',
    'ShipCity': 'Lander',
    'ShipRegion': 'WY',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'BOTTM',
    'OrderDate': '1998-03-25T15:00.05.000Z',
    'ShippedDate': '1998-03-27T16:00.05.000Z',
    'Freight': 32.27,
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    'ShipAddress': '23 Tsawassen Blvd.',
    'ShipCity': 'Tsawassen',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
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    'CustomerID': 'HILAA',
    'OrderDate': '1998-03-25T17:00.05.000Z',
    'ShippedDate': '1998-04-03T18:00.05.000Z',
    'Freight': 37.97,
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    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
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    'CustomerID': 'FOLKO',
    'OrderDate': '1998-03-26T19:00.05.000Z',
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    'Freight': 208.5,
    'ShipName': 'Folk och fä HB',

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        'ShipRegion': null,
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        'Freight': 32.82,
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        'ShipAddress': 'Rue Joseph-Bens 532',
        'ShipCity': 'Bruxelles',
        'ShipRegion': null,
        'ShipCountry': 'Belgium'
    },
    {
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        'Freight': 353.07,
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        'ShipAddress': 'Kirchgasse 6',
        'ShipCity': 'Graz',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
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        'ShipAddress': 'Åkergatan 24',
        'ShipCity': 'Bräcke',
        'ShipRegion': null,
        'ShipCountry': 'Sweden'
    },
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        'ShippedDate': '1998-04-02T18:00.05.000Z',
        'Freight': 193.37,
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        'ShipAddress': 'Rua do Paço, 67',
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        'ShipRegion': 'RJ',
        'ShipCountry': 'Brazil'
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        'CustomerID': 'BOTTM',
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        'ShipRegion': 'BC',
        'ShipCountry': 'Canada'
    },
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        'CustomerID': 'SAVEA',
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        'Freight': 657.54,
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        'ShipAddress': '187 Suffolk Ln.',
        'ShipCity': 'Boise',
        'ShipRegion': 'ID',
        'ShipCountry': 'USA'
    },
    {
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        'CustomerID': 'SAVEA',
        'OrderDate': '1998-03-30T23:00.05.000Z',
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        'Freight': 211.22,
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        'ShipAddress': '187 Suffolk Ln.',
        'ShipCity': 'Boise',
        'ShipRegion': 'ID',
        'ShipCountry': 'USA'
    },
    {
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        'CustomerID': 'HUNGO',
        'OrderDate': '1998-03-30T01:25:00.000Z',
        'ShippedDate': '1998-04-02T02:25:00.000Z',
        'Freight': 91.51,
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        'ShipAddress': '8 Johnstown Road',
        'ShipCity': 'Cork',
        'ShipRegion': 'Co. Cork',
        'ShipCountry': 'Ireland'
    },
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        'Freight': 217.86,
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        'ShipAddress': 'Ing. Gustavo Moncada 8585 Piso 20-A',
        'ShipCity': 'Buenos Aires',
        'ShipRegion': null,
        'ShipCountry': 'Argentina'
    },
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    'Freight': 185.48,
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    'ShipAddress': '35 King George',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10988,
    'CustomerID': 'RATTC',
    'OrderDate': '1998-03-31T07:25:00.000Z',
    'ShippedDate': '1998-04-10T08:25:00.000Z',
    'Freight': 61.14,
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    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'QUEDE',
    'OrderDate': '1998-03-31T09:25:00.000Z',
    'ShippedDate': '1998-04-02T10:25:00.000Z',
    'Freight': 34.76,
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    'ShipAddress': 'Rua da Panificadora, 12',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
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    'CustomerID': 'ERNSH',
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    'Freight': 117.61,
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    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
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    'CustomerID': 'QUICK',
    'OrderDate': '1998-04-01T13:25:00.000Z',
    'ShippedDate': '1998-04-07T14:25:00.000Z',
    'Freight': 38.51,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,

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    'ShipCountry': 'Germany'
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    'CustomerID': 'THEBI',
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    'ShippedDate': '1998-04-03T16:25:00.000Z',
    'Freight': 4.27,
    'ShipName': 'The Big Cheese',
    'ShipAddress': '89 Jefferson Way Suite 2',
    'ShipCity': 'Portland',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10993,
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    'ShippedDate': '1998-04-10T18:25:00.000Z',
    'Freight': 8.81,
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    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
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    'CustomerID': 'VAFPE',
    'OrderDate': '1998-04-02T19:25:00.000Z',
    'ShippedDate': '1998-04-09T20:25:00.000Z',
    'Freight': 65.53,
    'ShipName': 'Vaffeljernet',
    'ShipAddress': 'Smagsloget 45',
    'ShipCity': 'Århus',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
    'OrderID': 10995,
    'CustomerID': 'PERIC',
    'OrderDate': '1998-04-02T21:25:00.000Z',
    'ShippedDate': '1998-04-06T22:25:00.000Z',
    'Freight': 46,
    'ShipName': 'Pericles Comidas clásicas',
    'ShipAddress': 'Calle Dr. Jorge Cash 321',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10996,
    'CustomerID': 'QUICK',
    'OrderDate': '1998-04-02T23:25:00.000Z',
    'ShippedDate': '1998-04-10T13:25:00.000Z',
    'Freight': 1.12,
    'ShipName': 'QUICK-Stop',

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        'ShipAddress': 'Taucherstraße 10',
        'ShipCity': 'Cunewalde',
        'ShipRegion': null,
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        'CustomerID': 'LILAS',
        'OrderDate': '1998-04-03T14:25:00.000Z',
        'ShippedDate': '1998-04-13T01:25:00.000Z',
        'Freight': 73.91,
        'ShipName': 'LILA-Supermercado',
        'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
        'ShipCity': 'Barquisimeto',
        'ShipRegion': 'Lara',
        'ShipCountry': 'Venezuela'
    },
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        'CustomerID': 'WOLZA',
        'OrderDate': '1998-04-03T02:25:00.000Z',
        'ShippedDate': '1998-04-17T03:25:00.000Z',
        'Freight': 20.31,
        'ShipName': 'Wolski Zajazd',
        'ShipAddress': 'ul. Filtrowa 68',
        'ShipCity': 'Warszawa',
        'ShipRegion': null,
        'ShipCountry': 'Poland'
    },
    {
        'OrderID': 10999,
        'CustomerID': 'OTTIK',
        'OrderDate': '1998-04-03T04:25:00.000Z',
        'ShippedDate': '1998-04-10T05:25:00.000Z',
        'Freight': 96.35,
        'ShipName': 'Ottilies Käseladen',
        'ShipAddress': 'Mehrheimerstr. 369',
        'ShipCity': 'Köln',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 11000,
        'CustomerID': 'RATTC',
        'OrderDate': '1998-04-06T06:25:00.000Z',
        'ShippedDate': '1998-04-14T07:25:00.000Z',
        'Freight': 55.12,
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        'ShipAddress': '2817 Milton Dr.',
        'ShipCity': 'Albuquerque',
        'ShipRegion': 'NM',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 11001,
        'CustomerID': 'FOLKO',
        'OrderDate': '1998-04-06T08:25:00.000Z',

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    'ShippedDate': '1998-04-14T09:25:00.000Z',
    'Freight': 197.3,
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    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 11002,
    'CustomerID': 'SAVEA',
    'OrderDate': '1998-04-06T10:25:00.000Z',
    'ShippedDate': '1998-04-16T11:25:00.000Z',
    'Freight': 141.16,
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    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 11003,
    'CustomerID': 'THECR',
    'OrderDate': '1998-04-06T12:25:00.000Z',
    'ShippedDate': '1998-04-08T13:25:00.000Z',
    'Freight': 14.91,
    'ShipName': 'The Cracker Box',
    'ShipAddress': '55 Grizzly Peak Rd.',
    'ShipCity': 'Butte',
    'ShipRegion': 'MT',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 11004,
    'CustomerID': 'MAISD',
    'OrderDate': '1998-04-07T14:25:00.000Z',
    'ShippedDate': '1998-04-20T15:25:00.000Z',
    'Freight': 44.84,
    'ShipName': 'Maison Dewey',
    'ShipAddress': 'Rue Joseph-Bens 532',
    'ShipCity': 'Bruxelles',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
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    'CustomerID': 'WILMK',
    'OrderDate': '1998-04-07T16:25:00.000Z',
    'ShippedDate': '1998-04-10T17:25:00.000Z',
    'Freight': 0.75,
    'ShipName': 'Wilman Kala',
    'ShipAddress': 'Keskuskatu 45',
    'ShipCity': 'Helsinki',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {

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    'OrderID': 11006,
    'CustomerID': 'GREAL',
    'OrderDate': '1998-04-07T18:25:00.000Z',
    'ShippedDate': '1998-04-15T19:25:00.000Z',
    'Freight': 25.19,
    'ShipName': 'Great Lakes Food Market',
    'ShipAddress': '2732 Baker Blvd.',
    'ShipCity': 'Eugene',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 11007,
    'CustomerID': 'PRINI',
    'OrderDate': '1998-04-08T20:25:00.000Z',
    'ShippedDate': '1998-04-13T21:25:00.000Z',
    'Freight': 202.24,
    'ShipName': 'Princesa Isabel Vinhos',
    'ShipAddress': 'Estrada da saúde n. 58',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {
    'OrderID': 11008,
    'CustomerID': 'ERNSH',
    'OrderDate': '1998-04-08T22:25:00.000Z',
    'ShippedDate': null,
    'Freight': 79.46,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 11009,
    'CustomerID': 'GODOS',
    'OrderDate': '1998-04-08T23:25:00.000Z',
    'ShippedDate': '1998-04-10T01:25:00.000Z',
    'Freight': 59.11,
    'ShipName': 'Godos Cocina Típica',
    'ShipAddress': 'C/ Romero, 33',
    'ShipCity': 'Sevilla',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
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    'CustomerID': 'REGGC',
    'OrderDate': '1998-04-09T02:55:00.000Z',
    'ShippedDate': '1998-04-21T03:55:00.000Z',
    'Freight': 28.71,
    'ShipName': 'Reggiani Caseifici',
    'ShipAddress': 'Strada Provinciale 124',
    'ShipCity': 'Reggio Emilia',
    'ShipRegion': null,

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    'ShipCountry': 'Italy'
  },
  {
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    'CustomerID': 'ALFKI',
    'OrderDate': '1998-04-09T04:55:00.000Z',
    'ShippedDate': '1998-04-13T05:55:00.000Z',
    'Freight': 1.21,
    'ShipName': 'Alfred\'s Futterkiste',
    'ShipAddress': 'Obere Str. 57',
    'ShipCity': 'Berlin',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 11012,
    'CustomerID': 'FRANK',
    'OrderDate': '1998-04-09T06:55:00.000Z',
    'ShippedDate': '1998-04-17T07:55:00.000Z',
    'Freight': 242.95,
    'ShipName': 'Frankenversand',
    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 11013,
    'CustomerID': 'ROMEY',
    'OrderDate': '1998-04-09T08:55:00.000Z',
    'ShippedDate': '1998-04-10T09:55:00.000Z',
    'Freight': 32.99,
    'ShipName': 'Romero y tomillo',
    'ShipAddress': 'Gran Vía, 1',
    'ShipCity': 'Madrid',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
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    'CustomerID': 'LINOD',
    'OrderDate': '1998-04-10T10:55:00.000Z',
    'ShippedDate': '1998-04-15T11:55:00.000Z',
    'Freight': 23.6,
    'ShipName': 'LINO-Delicateses',
    'ShipAddress': 'Ave. 5 de Mayo Porlamar',
    'ShipCity': 'I. de Margarita',
    'ShipRegion': 'Nueva Esparta',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 11015,
    'CustomerID': 'SANTG',
    'OrderDate': '1998-04-10T12:55:00.000Z',
    'ShippedDate': '1998-04-20T13:55:00.000Z',
    'Freight': 4.62,
    'ShipName': 'Santé Gourmet',

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        'ShipAddress': 'Erling Skakkess gate 78',
        'ShipCity': 'Stavern',
        'ShipRegion': null,
        'ShipCountry': 'Norway'
    },
    {
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        'CustomerID': 'AROUT',
        'OrderDate': '1998-04-10T14:55:00.000Z',
        'ShippedDate': '1998-04-13T15:55:00.000Z',
        'Freight': 33.8,
        'ShipName': 'Around the Horn',
        'ShipAddress': 'Brook Farm Stratford St. Mary',
        'ShipCity': 'Colchester',
        'ShipRegion': 'Essex',
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 11017,
        'CustomerID': 'ERNSH',
        'OrderDate': '1998-04-13T16:55:00.000Z',
        'ShippedDate': '1998-04-20T17:55:00.000Z',
        'Freight': 754.26,
        'ShipName': 'Ernst Handel',
        'ShipAddress': 'Kirchgasse 6',
        'ShipCity': 'Graz',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
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        'CustomerID': 'LONEP',
        'OrderDate': '1998-04-13T18:55:00.000Z',
        'ShippedDate': '1998-04-16T19:55:00.000Z',
        'Freight': 11.65,
        'ShipName': 'Lonesome Pine Restaurant',
        'ShipAddress': '89 Chiaroscuro Rd.',
        'ShipCity': 'Portland',
        'ShipRegion': 'OR',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 11019,
        'CustomerID': 'RANCH',
        'OrderDate': '1998-04-13T20:55:00.000Z',
        'ShippedDate': null,
        'Freight': 3.17,
        'ShipName': 'Rancho grande',
        'ShipAddress': 'Av. del Libertador 900',
        'ShipCity': 'Buenos Aires',
        'ShipRegion': null,
        'ShipCountry': 'Argentina'
    },
    {
        'OrderID': 11020,
        'CustomerID': 'OTTIK',
        'OrderDate': '1998-04-14T21:55:00.000Z',

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    'ShippedDate': '1998-04-16T22:55:00.000Z',
    'Freight': 43.3,
    'ShipName': 'Ottilies Käseladen',
    'ShipAddress': 'Mehrheimerstr. 369',
    'ShipCity': 'Köln',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 11021,
    'CustomerID': 'QUICK',
    'OrderDate': '1998-04-14T23:55:00.000Z',
    'ShippedDate': '1998-04-21T13:50:00.000Z',
    'Freight': 297.18,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 11022,
    'CustomerID': 'HANAR',
    'OrderDate': '1998-04-14T03:50:00.000Z',
    'ShippedDate': '1998-05-04T01:50:00.000Z',
    'Freight': 6.27,
    'ShipName': 'Hanari Carnes',
    'ShipAddress': 'Rua do Paço, 67',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 11023,
    'CustomerID': 'BSBEV',
    'OrderDate': '1998-04-14T02:50:00.000Z',
    'ShippedDate': '1998-04-24T03:50:00.000Z',
    'Freight': 123.83,
    'ShipName': 'B\'s Beverages',
    'ShipAddress': 'Fauntleroy Circus',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 11024,
    'CustomerID': 'EASTC',
    'OrderDate': '1998-04-15T04:50:00.000Z',
    'ShippedDate': '1998-04-20T05:50:00.000Z',
    'Freight': 74.36,
    'ShipName': 'Eastern Connection',
    'ShipAddress': '35 King George',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  }
]

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    'OrderID': 11025,
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    'OrderDate': '1998-04-15T06:50:00.000Z',
    'ShippedDate': '1998-04-24T07:50:00.000Z',
    'Freight': 29.17,
    'ShipName': 'Wartian Herkku',
    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 11026,
    'CustomerID': 'FRANS',
    'OrderDate': '1998-04-15T08:50:00.000Z',
    'ShippedDate': '1998-04-28T09:50:00.000Z',
    'Freight': 47.09,
    'ShipName': 'Franchi S.p.A.',
    'ShipAddress': 'Via Monte Bianco 34',
    'ShipCity': 'Torino',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 11027,
    'CustomerID': 'BOTTM',
    'OrderDate': '1998-04-16T10:50:00.000Z',
    'ShippedDate': '1998-04-20T11:50:00.000Z',
    'Freight': 52.52,
    'ShipName': 'Bottom-Dollar Markets',
    'ShipAddress': '23 Tsawassen Blvd.',
    'ShipCity': 'Tsawassen',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 11028,
    'CustomerID': 'KOENE',
    'OrderDate': '1998-04-16T12:50:00.000Z',
    'ShippedDate': '1998-04-22T13:50:00.000Z',
    'Freight': 29.59,
    'ShipName': 'Königlich Essen',
    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 11029,
    'CustomerID': 'CHOPS',
    'OrderDate': '1998-04-16T14:50:00.000Z',
    'ShippedDate': '1998-04-27T15:50:00.000Z',
    'Freight': 47.84,
    'ShipName': 'Chop-suey Chinese',
    'ShipAddress': 'Hauptstr. 31',
    'ShipCity': 'Bern',
    'ShipRegion': null,

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    'ShipCountry': 'Switzerland'
  },
  {
    'OrderID': 11030,
    'CustomerID': 'SAVEA',
    'OrderDate': '1998-04-17T16:50:00.000Z',
    'ShippedDate': '1998-04-27T17:50:00.000Z',
    'Freight': 830.75,
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    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 11031,
    'CustomerID': 'SAVEA',
    'OrderDate': '1998-04-17T18:50:00.000Z',
    'ShippedDate': '1998-04-24T19:50:00.000Z',
    'Freight': 227.22,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 11032,
    'CustomerID': 'WHITC',
    'OrderDate': '1998-04-17T20:50:00.000Z',
    'ShippedDate': '1998-04-23T21:50:00.000Z',
    'Freight': 606.19,
    'ShipName': 'White Clover Markets',
    'ShipAddress': '1029 - 12th Ave. S.',
    'ShipCity': 'Seattle',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 11033,
    'CustomerID': 'RICSU',
    'OrderDate': '1998-04-17T22:50:00.000Z',
    'ShippedDate': '1998-04-23T23:50:00.000Z',
    'Freight': 84.74,
    'ShipName': 'Richter Supermarkt',
    'ShipAddress': 'Starenweg 5',
    'ShipCity': 'Genève',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
  {
    'OrderID': 11034,
    'CustomerID': 'OLDWO',
    'OrderDate': '1998-04-20T01:05:00.000Z',
    'ShippedDate': '1998-04-27T02:05:00.000Z',
    'Freight': 40.32,
    'ShipName': 'Old World Delicatessen',

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        'ShipAddress': '2743 Bering St.',
        'ShipCity': 'Anchorage',
        'ShipRegion': 'AK',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 11035,
        'CustomerID': 'SUPRD',
        'OrderDate': '1998-04-20T03:05:00.000Z',
        'ShippedDate': '1998-04-24T04:05:00.000Z',
        'Freight': 0.17,
        'ShipName': 'Suprêmes délices',
        'ShipAddress': 'Boulevard Tirou, 255',
        'ShipCity': 'Charleroi',
        'ShipRegion': null,
        'ShipCountry': 'Belgium'
    },
    {
        'OrderID': 11036,
        'CustomerID': 'DRACD',
        'OrderDate': '1998-04-20T05:05:00.000Z',
        'ShippedDate': '1998-04-22T06:05:00.000Z',
        'Freight': 149.47,
        'ShipName': 'Drachenblut Delikatessen',
        'ShipAddress': 'Walserweg 21',
        'ShipCity': 'Aachen',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 11037,
        'CustomerID': 'GODOS',
        'OrderDate': '1998-04-21T07:05:00.000Z',
        'ShippedDate': '1998-04-27T08:05:00.000Z',
        'Freight': 3.2,
        'ShipName': 'Godos Cocina Típica',
        'ShipAddress': 'C/ Romero, 33',
        'ShipCity': 'Sevilla',
        'ShipRegion': null,
        'ShipCountry': 'Spain'
    },
    {
        'OrderID': 11038,
        'CustomerID': 'SUPRD',
        'OrderDate': '1998-04-21T09:05:00.000Z',
        'ShippedDate': '1998-04-30T10:05:00.000Z',
        'Freight': 29.59,
        'ShipName': 'Suprêmes délices',
        'ShipAddress': 'Boulevard Tirou, 255',
        'ShipCity': 'Charleroi',
        'ShipRegion': null,
        'ShipCountry': 'Belgium'
    },
    {
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        'CustomerID': 'LINOD',
        'OrderDate': '1998-04-21T11:05:00.000Z',

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        'ShippedDate': null,
        'Freight': 65,
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        'ShipCity': 'I. de Margarita',
        'ShipRegion': 'Nueva Esparta',
        'ShipCountry': 'Venezuela'
    },
    {
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        'CustomerID': 'GREAL',
        'OrderDate': '1998-04-22T12:05:00.000Z',
        'ShippedDate': null,
        'Freight': 18.84,
        'ShipName': 'Great Lakes Food Market',
        'ShipAddress': '2732 Baker Blvd.',
        'ShipCity': 'Eugene',
        'ShipRegion': 'OR',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 11041,
        'CustomerID': 'CHOPS',
        'OrderDate': '1998-04-22T13:05:00.000Z',
        'ShippedDate': '1998-04-28T14:05:00.000Z',
        'Freight': 48.22,
        'ShipName': 'Chop-suey Chinese',
        'ShipAddress': 'Hauptstr. 31',
        'ShipCity': 'Bern',
        'ShipRegion': null,
        'ShipCountry': 'Switzerland'
    },
    {
        'OrderID': 11042,
        'CustomerID': 'COMMI',
        'OrderDate': '1998-04-22T15:05:00.000Z',
        'ShippedDate': '1998-05-01T16:05:00.000Z',
        'Freight': 29.99,
        'ShipName': 'Comércio Mineiro',
        'ShipAddress': 'Av. dos Lusíadas, 23',
        'ShipCity': 'Sao Paulo',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
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        'CustomerID': 'SPECB',
        'OrderDate': '1998-04-22T17:05:00.000Z',
        'ShippedDate': '1998-04-29T18:05:00.000Z',
        'Freight': 8.8,
        'ShipName': 'Spécialités du monde',
        'ShipAddress': '25, rue Lauriston',
        'ShipCity': 'Paris',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {

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    'OrderID': 11044,
    'CustomerID': 'WOLZA',
    'OrderDate': '1998-04-23T19:05:00.000Z',
    'ShippedDate': '1998-05-01T20:05:00.000Z',
    'Freight': 8.72,
    'ShipName': 'Wolski Zajazd',
    'ShipAddress': 'ul. Filtrowa 68',
    'ShipCity': 'Warszawa',
    'ShipRegion': null,
    'ShipCountry': 'Poland'
  },
  {
    'OrderID': 11045,
    'CustomerID': 'BOTTM',
    'OrderDate': '1998-04-23T21:05:00.000Z',
    'ShippedDate': null,
    'Freight': 70.58,
    'ShipName': 'Bottom-Dollar Markets',
    'ShipAddress': '23 Tsawassen Blvd.',
    'ShipCity': 'Tsawassen',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 11046,
    'CustomerID': 'WANDK',
    'OrderDate': '1998-04-23T22:05:00.000Z',
    'ShippedDate': '1998-04-24T23:05:00.000Z',
    'Freight': 71.64,
    'ShipName': 'Die Wandernde Kuh',
    'ShipAddress': 'Adenauerallee 900',
    'ShipCity': 'Stuttgart',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 11047,
    'CustomerID': 'EASTC',
    'OrderDate': '1998-04-24T01:30:00.000Z',
    'ShippedDate': '1998-05-01T02:30:00.000Z',
    'Freight': 46.62,
    'ShipName': 'Eastern Connection',
    'ShipAddress': '35 King George',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 11048,
    'CustomerID': 'BOTTM',
    'OrderDate': '1998-04-24T03:30:00.000Z',
    'ShippedDate': '1998-04-30T04:30:00.000Z',
    'Freight': 24.12,
    'ShipName': 'Bottom-Dollar Markets',
    'ShipAddress': '23 Tsawassen Blvd.',
    'ShipCity': 'Tsawassen',
    'ShipRegion': 'BC',

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    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 11049,
    'CustomerID': 'GOURL',
    'OrderDate': '1998-04-24T05:30:00.000Z',
    'ShippedDate': '1998-05-04T06:30:00.000Z',
    'Freight': 8.34,
    'ShipName': 'Gourmet Lanchonetes',
    'ShipAddress': 'Av. Brasil, 442',
    'ShipCity': 'Campinas',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 11050,
    'CustomerID': 'FOLKO',
    'OrderDate': '1998-04-27T07:30:00.000Z',
    'ShippedDate': '1998-05-05T08:30:00.000Z',
    'Freight': 59.41,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 11051,
    'CustomerID': 'LAMAI',
    'OrderDate': '1998-04-27T09:30:00.000Z',
    'ShippedDate': null,
    'Freight': 2.79,
    'ShipName': 'La maison d\'Asie',
    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 11052,
    'CustomerID': 'HANAR',
    'OrderDate': '1998-04-27T10:30:00.000Z',
    'ShippedDate': '1998-05-01T11:30:00.000Z',
    'Freight': 67.26,
    'ShipName': 'Hanari Carnes',
    'ShipAddress': 'Rua do Paço, 67',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 11053,
    'CustomerID': 'PICCO',
    'OrderDate': '1998-04-27T12:30:00.000Z',
    'ShippedDate': '1998-04-29T13:30:00.000Z',
    'Freight': 53.05,
    'ShipName': 'Piccolo und mehr',

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        'ShipAddress': 'Geislweg 14',
        'ShipCity': 'Salzburg',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
        'OrderID': 11054,
        'CustomerID': 'CACTU',
        'OrderDate': '1998-04-28T14:30:00.000Z',
        'ShippedDate': '1998-04-29T15:30:00.000Z',
        'Freight': 0.33,
        'ShipName': 'Cactus Comidas para llevar',
        'ShipAddress': 'Cerrito 333',
        'ShipCity': 'Buenos Aires',
        'ShipRegion': null,
        'ShipCountry': 'Argentina'
    },
    {
        'OrderID': 11055,
        'CustomerID': 'HILAA',
        'OrderDate': '1998-04-28T16:30:00.000Z',
        'ShippedDate': '1998-05-05T17:30:00.000Z',
        'Freight': 120.92,
        'ShipName': 'HILARION-Abastos',
        'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
        'ShipCity': 'San Cristóbal',
        'ShipRegion': 'Táchira',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 11056,
        'CustomerID': 'EASTC',
        'OrderDate': '1998-04-28T18:30:00.000Z',
        'ShippedDate': '1998-05-01T19:30:00.000Z',
        'Freight': 278.96,
        'ShipName': 'Eastern Connection',
        'ShipAddress': '35 King George',
        'ShipCity': 'London',
        'ShipRegion': null,
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 11057,
        'CustomerID': 'NORTS',
        'OrderDate': '1998-04-29T20:30:00.000Z',
        'ShippedDate': '1998-05-01T21:30:00.000Z',
        'Freight': 4.13,
        'ShipName': 'North/South',
        'ShipAddress': 'South House 300 Queensbridge',
        'ShipCity': 'London',
        'ShipRegion': null,
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 11058,
        'CustomerID': 'BLAUS',
        'OrderDate': '1998-04-29T22:30:00.000Z',

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        'ShippedDate': null,
        'Freight': 31.14,
        'ShipName': 'Blauer See Delikatessen',
        'ShipAddress': 'Forsterstr. 57',
        'ShipCity': 'Mannheim',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 11059,
        'CustomerID': 'RICAR',
        'OrderDate': '1998-04-29T23:30:00.000Z',
        'ShippedDate': null,
        'Freight': 85.8,
        'ShipName': 'Ricardo Adocicados',
        'ShipAddress': 'Av. Copacabana, 267',
        'ShipCity': 'Rio de Janeiro',
        'ShipRegion': 'RJ',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 11060,
        'CustomerID': 'FRANS',
        'OrderDate': '1998-04-30T01:05:00.000Z',
        'ShippedDate': '1998-05-04T02:05:00.000Z',
        'Freight': 10.98,
        'ShipName': 'Franchi S.p.A.',
        'ShipAddress': 'Via Monte Bianco 34',
        'ShipCity': 'Torino',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
    {
        'OrderID': 11061,
        'CustomerID': 'GREAL',
        'OrderDate': '1998-04-30T03:05:00.000Z',
        'ShippedDate': null,
        'Freight': 14.01,
        'ShipName': 'Great Lakes Food Market',
        'ShipAddress': '2732 Baker Blvd.',
        'ShipCity': 'Eugene',
        'ShipRegion': 'OR',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 11062,
        'CustomerID': 'REGGC',
        'OrderDate': '1998-04-30T04:05:00.000Z',
        'ShippedDate': null,
        'Freight': 29.93,
        'ShipName': 'Reggiani Caseifici',
        'ShipAddress': 'Strada Provinciale 124',
        'ShipCity': 'Reggio Emilia',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
    {

```

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    'OrderID': 11063,
    'CustomerID': 'HUNGO',
    'OrderDate': '1998-04-30T05:05:00.000Z',
    'ShippedDate': '1998-05-06T06:05:00.000Z',
    'Freight': 81.73,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 11064,
    'CustomerID': 'SAVEA',
    'OrderDate': '1998-05-01T07:05:00.000Z',
    'ShippedDate': '1998-05-04T10:05:00.000Z',
    'Freight': 30.09,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 11065,
    'CustomerID': 'LILAS',
    'OrderDate': '1998-05-01T11:05:00.000Z',
    'ShippedDate': null,
    'Freight': 12.91,
    'ShipName': 'LILA-Supermercado',
    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 11066,
    'CustomerID': 'WHITC',
    'OrderDate': '1998-05-01T12:05:00.000Z',
    'ShippedDate': '1998-05-04T13:05:00.000Z',
    'Freight': 44.72,
    'ShipName': 'White Clover Markets',
    'ShipAddress': '1029 - 12th Ave. S.',
    'ShipCity': 'Seattle',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 11067,
    'CustomerID': 'DRACD',
    'OrderDate': '1998-05-04T14:05:00.000Z',
    'ShippedDate': '1998-05-06T15:05:00.000Z',
    'Freight': 7.98,
    'ShipName': 'Drachenblut Delikatessen',
    'ShipAddress': 'Walserweg 21',
    'ShipCity': 'Aachen',
    'ShipRegion': null,

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    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 11068,
    'CustomerID': 'QUEEN',
    'OrderDate': '1998-05-04T16:05:00.000Z',
    'ShippedDate': null,
    'Freight': 81.75,
    'ShipName': 'Queen Cozinha',
    'ShipAddress': 'Alameda dos Canários, 891',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 11069,
    'CustomerID': 'TORTU',
    'OrderDate': '1998-05-04T17:05:00.000Z',
    'ShippedDate': '1998-05-06T18:05:00.000Z',
    'Freight': 15.67,
    'ShipName': 'Tortuga Restaurante',
    'ShipAddress': 'Avda. Azteca 123',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 11070,
    'CustomerID': 'LEHMS',
    'OrderDate': '1998-05-05T19:05:00.000Z',
    'ShippedDate': null,
    'Freight': 136,
    'ShipName': 'Lehmanns Marktstand',
    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 11071,
    'CustomerID': 'LILAS',
    'OrderDate': '1998-05-05T20:05:00.000Z',
    'ShippedDate': null,
    'Freight': 0.93,
    'ShipName': 'LILA-Supermercado',
    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 11072,
    'CustomerID': 'ERNSH',
    'OrderDate': '1998-05-05T21:05:00.000Z',
    'ShippedDate': null,
    'Freight': 258.64,
    'ShipName': 'Ernst Handel',

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        'ShipAddress': 'Kirchgasse 6',
        'ShipCity': 'Graz',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
        'OrderID': 11073,
        'CustomerID': 'PERIC',
        'OrderDate': '1998-05-05T22:05:00.000Z',
        'ShippedDate': null,
        'Freight': 24.95,
        'ShipName': 'Pericles Comidas clásicas',
        'ShipAddress': 'Calle Dr. Jorge Cash 321',
        'ShipCity': 'México D.F.',
        'ShipRegion': null,
        'ShipCountry': 'Mexico'
    },
    {
        'OrderID': 11074,
        'CustomerID': 'SIMOB',
        'OrderDate': '1998-05-06T23:05:00.000Z',
        'ShippedDate': null,
        'Freight': 18.44,
        'ShipName': 'Simons bistro',
        'ShipAddress': 'Vinbæltet 34',
        'ShipCity': 'Kobenhavn',
        'ShipRegion': null,
        'ShipCountry': 'Denmark'
    },
    {
        'OrderID': 11075,
        'CustomerID': 'RICSU',
        'OrderDate': '1998-05-06T01:30:00.000Z',
        'ShippedDate': null,
        'Freight': 6.19,
        'ShipName': 'Richter Supermarkt',
        'ShipAddress': 'Starenweg 5',
        'ShipCity': 'Genève',
        'ShipRegion': null,
        'ShipCountry': 'Switzerland'
    },
    {
        'OrderID': 11076,
        'CustomerID': 'BONAP',
        'OrderDate': '1998-05-06T02:30:00.000Z',
        'ShippedDate': null,
        'Freight': 38.28,
        'ShipName': 'Bon app',
        'ShipAddress': '12, rue des Bouchers',
        'ShipCity': 'Marseille',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 11077,
        'CustomerID': 'RATTC',
        'OrderDate': '1998-05-06T03:50:00.000Z',

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        'ShippedDate': null,
        'Freight': 8.53,
        'ShipName': 'Rattlesnake Canyon Grocery',
        'ShipAddress': '2817 Milton Dr.',
        'ShipCity': 'Albuquerque',
        'ShipRegion': 'NM',
        'ShipCountry': 'USA'
    }
];

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DATASOURCE.TSX

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export let employeeData: Object[] = [{
    'EmployeeID': 1,
    'LastName': 'Davolio',
    'FirstName': 'Nancy',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-664743600000),
    'HireDate': new Date(704692800000),
    'Address': '507 - 20th Ave. E.\r\nApt. 2A',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98122',
    'Country': 'USA',
    'HomePhone': '(206) 555-9857',
    'Extension': '5467',
    'Photo': { 'Length': 21626 },
    'Notes': 'Education includes a BA in psychology from Colorado State University in 1970. She also completed \r\nThe Art of the Cold Call.' Nancy is a member of Toastmasters International.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
    'EmployeeID': 2,
    'LastName': 'Fuller',
    'FirstName': 'Andrew',
    'Title': 'Vice President, Sales',
    'TitleOfCourtesy': 'Dr.',
    'BirthDate': new Date(-563828400000),
    'HireDate': new Date(713764800000),
    'Address': '908 W. Capital Way',
    'City': 'Tacoma',
    'Region': 'WA',
    'PostalCode': '98401',
    'Country': 'USA',
    'HomePhone': '(206) 555-9482',
    'Extension': '3457',
    'Photo': { 'Length': 21626 },
    'Notes': 'Andrew received his BTS commercial in 1974 and a Ph.D. in international marketing from the University of \r\nDallas in 1981. He is fluent in French and Italian and reads German. He joined the company as a sales representative, \r\n

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    was promoted to sales manager in January 1992 and to vice president of
    sales in March 1993. Andrew is a member of the \
    Sales Management Roundtable, the Seattle Chamber of Commerce, and the
    Pacific Rim Importers Association.',
    'ReportsTo': 0,
    'PhotoPath': 'http://accweb/emmployees/fuller.bmp'
  },
  {
    'EmployeeID': 3,
    'LastName': 'Leverling',
    'FirstName': 'Janet',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-200088000000),
    'HireDate': new Date(702104400000),
    'Address': '722 Moss Bay Blvd.',
    'City': 'Kirkland',
    'Region': 'WA',
    'PostalCode': '98033',
    'Country': 'USA',
    'HomePhone': '(206) 555-3412',
    'Extension': '3355',
    'Photo': { 'Length': 21722 },
    'Notes': 'Janet has a BS degree in chemistry from Boston College (1984).
    \
    She has also completed a certificate program in food retailing
    management.\
    Janet was hired as a sales associate in 1991 and promoted to sales
    representative in February 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/leverling.bmp'
  },
  {
    'EmployeeID': 4,
    'LastName': 'Peacock',
    'FirstName': 'Margaret',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Mrs.',
    'BirthDate': new Date(-1018814400000),
    'HireDate': new Date(736401600000),
    'Address': '4110 Old Redmond Rd.',
    'City': 'Redmond',
    'Region': 'WA',
    'PostalCode': '98052',
    'Country': 'USA',
    'HomePhone': '(206) 555-8122',
    'Extension': '5176',
    'Photo': { 'Length': 21626 },
    'Notes': 'Margaret holds a BA in English literature from Concordia
    College (1958) and an MA from the American \
    Institute of Culinary Arts (1966). She was assigned to the London office
    temporarily from July through November 1992.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/peacock.bmp'
  },
  {
    'EmployeeID': 5,

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        'LastName': 'Buchanan',
        'FirstName': 'Steven',
        'Title': 'Sales Manager',
        'TitleOfCourtesy': 'Mr.',
        'BirthDate': new Date(-468010800000),
        'HireDate': new Date(750830400000),
        'Address': '14 Garrett Hill',
        'City': 'London',
        'Region': null,
        'PostalCode':
        'SW1 8JR',
        'Country': 'UK',
        'HomePhone': '(71) 555-4848',
        'Extension': '3453',
        'Photo': { 'Length': 21626 },
        'Notes': 'Steven Buchanan graduated from St. Andrews University,
Scotland, with a BSC degree in 1976. Upon joining the company as \
a sales representative in 1992, he spent 6 months in an orientation
program at the Seattle office and then returned to his permanent \
post in London. He was promoted to sales manager in March 1993. Mr.
Buchanan has completed the courses \'Successful \
Telemarketing\' and \'International Sales Management.\' He is fluent in
French.',
        'ReportsTo': 2,
        'PhotoPath': 'http://accweb/employees/buchanan.bmp'
    },
    {
        'EmployeeID': 6,
        'LastName': 'Suyama',
        'FirstName': 'Michael',
        'Title': 'Sales Representative',
        'TitleOfCourtesy': 'Mr.',
        'BirthDate': new Date(-205185600000),
        'HireDate': new Date(750830400000),
        'Address': 'Coventry House\r\nMiner Rd.',
        'City': 'London',
        'Region': null,
        'PostalCode': 'EC2 7JR',
        'Country': 'UK',
        'HomePhone': '(71) 555-7773',
        'Extension': '428',
        'Photo': { 'Length': 21626 },
        'Notes': 'Michael is a graduate of Sussex University (MA, economics,
1983) and the University of California at Los Angeles \
(MBA, marketing, 1986). He has also taken the courses \'Multi-Cultural
Selling\' and \'Time Management for the Sales Professional.\' \
He is fluent in Japanese and can read and write French, Portuguese, and
Spanish.',
        'ReportsTo': 5,
        'PhotoPath': 'http://accweb/employees/davolio.bmp'
    },
    {
        'EmployeeID': 7,
        'LastName': 'King',
        'FirstName': 'Robert',
        'Title': 'Sales Representative',
        'TitleOfCourtesy': 'Mr.',

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    'BirthDate': new Date(-302731200000),
    'HireDate': new Date(757486800000),
    'Address': 'Edgeham Hollow\r\nWinchester Way',
    'City': 'London',
    'Region': null,
    'PostalCode': 'RG1 9SP',
    'Country': 'UK',
    'HomePhone': '(71) 555-5598',
    'Extension': '465',
    'Photo': { 'Length': 21626 },
    'Notes': 'Robert King served in the Peace Corps and traveled extensively
before completing his degree in English at the \
University of Michigan in 1992, the year he joined the company. After
completing a course entitled \'Selling in Europe,\' \
he was transferred to the London office in March 1993.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
    'EmployeeID': 8,
    'LastName': 'Callahan',
    'FirstName': 'Laura',
    'Title': 'Inside Sales Coordinator',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-377982000000),
    'HireDate': new Date(762843600000),
    'Address': '4726 - 11th Ave. N.E.',
    'City': 'Seattle',
    'Region': 'WA',
    'PostalCode': '98105',
    'Country': 'USA',
    'HomePhone': '(206) 555-1189',
    'Extension': '2344',
    'Photo': { 'Length': 21626 },
    'Notes': 'Laura received a BA in psychology from the University of
Washington. She has also completed a course in business \
French. She reads and writes French.',
    'ReportsTo': 2,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
},
{
    'EmployeeID': 9,
    'LastName': 'Dodsworth',
    'FirstName': 'Anne',
    'Title': 'Sales Representative',
    'TitleOfCourtesy': 'Ms.',
    'BirthDate': new Date(-123966000000),
    'HireDate': new Date(784875600000),
    'Address': '7 Houndstooth Rd.',
    'City': 'London',
    'Region': null,
    'PostalCode': 'WG2 7LT',
    'Country': 'UK',
    'HomePhone': '(71) 555-4444',
    'Extension': '452',
    'Photo': { 'Length': 21626 },

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    'Notes': 'Anne has a BA degree in English from St. Lawrence College. She
is fluent in French and German.',
    'ReportsTo': 5,
    'PhotoPath': 'http://accweb/emmployees/davolio.bmp'
  }];
export let data: Object[] = [
  {
    OrderID: 10248, CustomerID: 'VINET', Role: 'Admin', EmployeeID: 5,
    OrderDate: new Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', Mask: '1111', ShipPostalCode: '51100', ShipCountry:
    'France', Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', Role: 'Employee', EmployeeID: 6,
    OrderDate: new Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', Mask: '2222', ShipPostalCode: '44087', ShipCountry:
    'Germany', Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 4,
    OrderDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', Mask: '3333', ShipPostalCode: '05454-876',
    ShipCountry: 'Brazil', Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', Role: 'Manager', EmployeeID: 3,
    OrderDate: new Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', Mask: '4444', ShipPostalCode: '69004', ShipCountry:
    'France', Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', Role: 'Manager', EmployeeID: 4,
    OrderDate: new Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', Mask: '5555', ShipPostalCode: 'B-6000',
    ShipCountry: 'Belgium', Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 3,
    OrderDate: new Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', Mask: '6666', ShipPostalCode: '05454-876',
    ShipCountry: 'Brazil', Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', Role: 'Employee', EmployeeID: 5,
    OrderDate: new Date(8370234e5),

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        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', Mask: '7777', ShipPostalCode: '3012', ShipCountry:
'Switzerland', Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', Role: 'Admin', EmployeeID: 9,
OrderDate: new Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', Mask: '8888', ShipPostalCode: '1204', ShipCountry:
'Switzerland', Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', Role: 'Employee', EmployeeID: 3,
OrderDate: new Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', Mask: '9999', ShipPostalCode: '08737-363',
ShipCountry: 'Brazil', Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', Role: 'Admin', EmployeeID: 4,
OrderDate: new Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', Mask: '1234', ShipPostalCode: '5022',
ShipCountry: 'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', Role: 'Manager', EmployeeID: 1,
OrderDate: new Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', Mask: '2345', ShipPostalCode: '8010', ShipCountry:
'Austria', Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', Role: 'Admin', EmployeeID: 4,
OrderDate: new Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', Mask: '3456', ShipPostalCode: '05022', ShipCountry:
'Mexico', Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', Role: 'Admin', EmployeeID: 4,
OrderDate: new Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', Mask: '4567', ShipPostalCode: '50739', ShipCountry:
'Germany', Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', Role: 'Manager', EmployeeID: 4,
OrderDate: new Date(8377146e5),

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        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', Mask: '5678', ShipPostalCode: '02389-673',
        ShipCountry: 'Brazil', Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', Role: 'Employee', EmployeeID: 8,
        OrderDate: new Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', Mask: '6789', ShipPostalCode: '87110', ShipCountry:
        'USA', Freight: 48.29, Verified: !0
    }];
export let sdata: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
        Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'Brazil',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),

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        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Brazil',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    }
    ]];
export let productData: Object[] = [
    {
        ProductID: 1,
        ProductName: 'Chai',
        UnitPrice: 18.0,
        UnitsInStock: 39,
        TotalCost: 702
    },

    {
        ProductID: 2,
        ProductName: 'Chang',
        UnitPrice: 19.0,
        UnitsInStock: 17,
        TotalCost: 323
    },

    {
        ProductID: 3,
        ProductName: 'Aniseed Syrup',
        UnitPrice: 10.0,
        UnitsInStock: 13,
        TotalCost: 130
    },

    {
        ProductID: 4,
        ProductName: "Chef Anton's Cajun Seasoning",
        UnitPrice: 22.0,
        UnitsInStock: 53,
        TotalCost: 1166
    },

    {
        ProductID: 5,
        ProductName: "Chef Anton's Gumbo Mix",

```

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        UnitPrice: 21.35,
        UnitsInStock: 0,
        TotalCost: 0
    }
];
export let employeeDetails: Object[] = [
    {
        EmployeeID: 1, Role: 'TeamLead', Salary: 15000, Address: 'Chennai'
    },
    {
        EmployeeID: 2, Role: 'Manager', Salary: 20000, Address: 'Bangalore'
    },
    {
        EmployeeID: 3, Role: 'Engineer', Salary: 10000, Address: 'Cochin'
    },
    {
        EmployeeID: 4, Role: 'Sales', Salary: 20000, Address: 'Trivandrum'
    },
    {
        EmployeeID: 5, Role: 'Support', Salary: 10000, Address: 'Delhi'
    }
];
export let purchaseData: Object[] = [
    {
        'OrderID': 10248,
        'CustomerID': 'VINET',
        'OrderDate': '1996-07-04T10:10:00.000Z',
        'ShippedDate': '1996-07-16T12:20:00.000Z',
        'Freight': 32.38,
        'ShipName': 'Vins et alcools Chevalier',
        'ShipAddress': '59 rue de l\'Abbaye',
        'ShipCity': 'Reims',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10249,
        'CustomerID': 'TOMSP',
        'OrderDate': '1996-07-05T12:20:00.000Z',
        'ShippedDate': '1996-07-10T13:20:00.000Z',
        'Freight': 11.61,
        'ShipName': 'Toms Spezialitäten',
        'ShipAddress': 'Luisenstr. 48',
        'ShipCity': 'Münster',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10250,
        'CustomerID': 'HANAR',
        'OrderDate': '1996-07-08T08:40:00.000Z',
        'ShippedDate': '1996-07-12T07:50:00.000Z',
        'Freight': 65.83,
        'ShipName': 'Hanari Carnes',
        'ShipAddress': 'Rua do Paço, 67',
        'ShipCity': 'Rio de Janeiro',
        'ShipRegion': 'RJ',
    }
];

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    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10251,
    'CustomerID': 'VICTE',
    'OrderDate': '1996-07-08T07:50:00.000Z',
    'ShippedDate': '1996-07-15T15:50:00.000Z',
    'Freight': 41.34,
    'ShipName': 'Victuailles en stock',
    'ShipAddress': '2, rue du Commerce',
    'ShipCity': 'Lyon',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10252,
    'CustomerID': 'SUPRD',
    'OrderDate': '1996-07-09T12:05:00.000Z',
    'ShippedDate': '1996-07-11T17:30:00.000Z',
    'Freight': 51.3,
    'ShipName': 'Suprêmes délices',
    'ShipAddress': 'Boulevard Tirou, 255',
    'ShipCity': 'Charleroi',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
    'OrderID': 10253,
    'CustomerID': 'HANAR',
    'OrderDate': '1996-07-10T11:20:00.000Z',
    'ShippedDate': '1996-07-16T10:10:00.000Z',
    'Freight': 58.17,
    'ShipName': 'Hanari Carnes',
    'ShipAddress': 'Rua do Paço, 67',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10254,
    'CustomerID': 'CHOPS',
    'OrderDate': '1996-07-17T18:30:00.000Z',
    'ShippedDate': '1996-07-23T20:40:00.000Z',
    'Freight': 22.98,
    'ShipName': 'Chop-suey Chinese',
    'ShipAddress': 'Hauptstr. 31',
    'ShipCity': 'Bern',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
  {
    'OrderID': 10255,
    'CustomerID': 'RICSU',
    'OrderDate': '1996-07-12T10:40:00.000Z',
    'ShippedDate': '1996-07-15T05:40:00.000Z',
    'Freight': 148.33,
    'ShipName': 'Richter Supermarkt',

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        'ShipAddress': 'Starenweg 5',
        'ShipCity': 'Genève',
        'ShipRegion': null,
        'ShipCountry': 'Switzerland'
    },
    {
        'OrderID': 10256,
        'CustomerID': 'WELLI',
        'OrderDate': '1996-07-15T20:50:00.000Z',
        'ShippedDate': '1996-07-17T21:50:00.000Z',
        'Freight': 13.97,
        'ShipName': 'Wellington Importadora',
        'ShipAddress': 'Rua do Mercado, 12',
        'ShipCity': 'Resende',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10257,
        'CustomerID': 'HILAA',
        'OrderDate': '1996-07-16T03:20:00.000Z',
        'ShippedDate': '1996-07-22T14:40:00.000Z',
        'Freight': 81.91,
        'ShipName': 'HILARION-Abastos',
        'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
        'ShipCity': 'San Cristóbal',
        'ShipRegion': 'Táchira',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 10258,
        'CustomerID': 'ERNSH',
        'OrderDate': '1996-07-17T18:30:00.000Z',
        'ShippedDate': '1996-07-23T14:50:00.000Z',
        'Freight': 140.51,
        'ShipName': 'Ernst Handel',
        'ShipAddress': 'Kirchgasse 6',
        'ShipCity': 'Graz',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
        'OrderID': 10259,
        'CustomerID': 'CENTC',
        'OrderDate': '1996-07-18T01:20:00.000Z',
        'ShippedDate': '1996-07-25T16:20:00.000Z',
        'Freight': 3.25,
        'ShipName': 'Centro comercial Moctezuma',
        'ShipAddress': 'Sierras de Granada 9993',
        'ShipCity': 'México D.F.',
        'ShipRegion': null,
        'ShipCountry': 'Mexico'
    },
    {
        'OrderID': 10260,
        'CustomerID': 'OTTIK',
        'OrderDate': '1996-07-19T11:20:00.000Z',

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    'ShippedDate': '1996-07-29T03:10:00.000Z',
    'Freight': 55.09,
    'ShipName': 'Ottilies Käseladen',
    'ShipAddress': 'Mehrheimerstr. 369',
    'ShipCity': 'Köln',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10261,
    'CustomerID': 'QUEDE',
    'OrderDate': '1996-07-19T18:30:00.000Z',
    'ShippedDate': '1996-07-30T23:10:00.000Z',
    'Freight': 3.05,
    'ShipName': 'Que Delícia',
    'ShipAddress': 'Rua da Panificadora, 12',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10262,
    'CustomerID': 'RATTC',
    'OrderDate': '1996-07-22T21:40:00.000Z',
    'ShippedDate': '1996-07-25T19:10:00.000Z',
    'Freight': 48.29,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10263,
    'CustomerID': 'ERNSH',
    'OrderDate': '1996-07-23T00:10:00.000Z',
    'ShippedDate': '1996-07-31T22:50:00.000Z',
    'Freight': 146.06,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10264,
    'CustomerID': 'FOLKO',
    'OrderDate': '1996-07-24T20:10:00.000Z',
    'ShippedDate': '1996-08-23T11:40:00.000Z',
    'Freight': 3.67,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {

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    'OrderID': 10265,
    'CustomerID': 'BLONP',
    'OrderDate': '1996-07-25T23:50:00.000Z',
    'ShippedDate': '1996-08-12T02:10:00.000Z',
    'Freight': 55.28,
    'ShipName': 'Blondel père et fils',
    'ShipAddress': '24, place Kléber',
    'ShipCity': 'Strasbourg',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10266,
    'CustomerID': 'WARTH',
    'OrderDate': '1996-07-26T03:10:00.000Z',
    'ShippedDate': '1996-07-31T01:50:00.000Z',
    'Freight': 25.73,
    'ShipName': 'Wartian Herkku',
    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 10267,
    'CustomerID': 'FRANK',
    'OrderDate': '1996-07-29T04:10:00.000Z',
    'ShippedDate': '1996-08-06T17:20:00.000Z',
    'Freight': 208.58,
    'ShipName': 'Frankenversand',
    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10268,
    'CustomerID': 'GROSR',
    'OrderDate': '1996-07-30T01:20:00.000Z',
    'ShippedDate': '1996-08-02T03:40:00.000Z',
    'Freight': 66.29,
    'ShipName': 'GROSELLA-Restaurante',
    'ShipAddress': '5a Ave. Los Palos Grandes',
    'ShipCity': 'Caracas',
    'ShipRegion': 'DF',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10269,
    'CustomerID': 'WHITC',
    'OrderDate': '1996-07-31T05:10:00.000Z',
    'ShippedDate': '1996-08-09T07:10:00.000Z',
    'Freight': 4.56,
    'ShipName': 'White Clover Markets',
    'ShipAddress': '1029 - 12th Ave. S.',
    'ShipCity': 'Seattle',
    'ShipRegion': 'WA',

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    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10270,
    'CustomerID': 'WARTH',
    'OrderDate': '1996-08-01T09:10:00.000Z',
    'ShippedDate': '1996-08-02T11:10:00.000Z',
    'Freight': 136.54,
    'ShipName': 'Wartian Herkku',
    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 10271,
    'CustomerID': 'SPLIR',
    'OrderDate': '1996-08-01T13:10:00.000Z',
    'ShippedDate': '1996-08-30T15:10:00.000Z',
    'Freight': 4.54,
    'ShipName': 'Split Rail Beer & Ale',
    'ShipAddress': 'P.O. Box 555',
    'ShipCity': 'Lander',
    'ShipRegion': 'WY',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10272,
    'CustomerID': 'RATTC',
    'OrderDate': '1996-08-02T17:10:00.000Z',
    'ShippedDate': '1996-08-06T19:10:00.000Z',
    'Freight': 98.03,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10273,
    'CustomerID': 'QUICK',
    'OrderDate': '1996-08-05T21:10:00.000Z',
    'ShippedDate': '1996-08-12T23:10:00.000Z',
    'Freight': 76.07,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10274,
    'CustomerID': 'VINET',
    'OrderDate': '1996-08-06T02:10:00.000Z',
    'ShippedDate': '1996-08-16T04:10:00.000Z',
    'Freight': 6.01,
    'ShipName': 'Vins et alcools Chevalier',

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        'ShipAddress': '59 rue de l\'Abbaye',
        'ShipCity': 'Reims',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10275,
        'CustomerID': 'MAGAA',
        'OrderDate': '1996-08-07T06:10:00.000Z',
        'ShippedDate': '1996-08-09T08:10:00.000Z',
        'Freight': 26.93,
        'ShipName': 'Magazzini Alimentari Riuniti',
        'ShipAddress': 'Via Ludovico il Moro 22',
        'ShipCity': 'Bergamo',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
    {
        'OrderID': 10276,
        'CustomerID': 'TORTU',
        'OrderDate': '1996-08-08T10:10:00.000Z',
        'ShippedDate': '1996-08-14T12:10:00.000Z',
        'Freight': 13.84,
        'ShipName': 'Tortuga Restaurante',
        'ShipAddress': 'Avda. Azteca 123',
        'ShipCity': 'México D.F.',
        'ShipRegion': null,
        'ShipCountry': 'Mexico'
    },
    {
        'OrderID': 10277,
        'CustomerID': 'MORGK',
        'OrderDate': '1996-08-09T14:10:00.000Z',
        'ShippedDate': '1996-08-13T16:10:00.000Z',
        'Freight': 125.77,
        'ShipName': 'Morgenstern Gesundkost',
        'ShipAddress': 'Heerstr. 22',
        'ShipCity': 'Leipzig',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10278,
        'CustomerID': 'BERGS',
        'OrderDate': '1996-08-12T18:10:00.000Z',
        'ShippedDate': '1996-08-16T20:10:00.000Z',
        'Freight': 92.69,
        'ShipName': 'Berglunds snabbköp',
        'ShipAddress': 'Berguvsvägen 8',
        'ShipCity': 'Luleå',
        'ShipRegion': null,
        'ShipCountry': 'Sweden'
    },
    {
        'OrderID': 10279,
        'CustomerID': 'LEHMS',
        'OrderDate': '1996-08-13T22:10:00.000Z',

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    'ShippedDate': '1996-08-16T02:10:00.000Z',
    'Freight': 25.83,
    'ShipName': 'Lehmanns Marktstand',
    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10280,
    'CustomerID': 'BERGS',
    'OrderDate': '1996-08-14T01:40:00.000Z',
    'ShippedDate': '1996-09-12T02:40:00.000Z',
    'Freight': 8.98,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10281,
    'CustomerID': 'ROMEY',
    'OrderDate': '1996-08-14T03:40:00.000Z',
    'ShippedDate': '1996-08-21T04:40:00.000Z',
    'Freight': 2.94,
    'ShipName': 'Romero y tomillo',
    'ShipAddress': 'Gran Vía, 1',
    'ShipCity': 'Madrid',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10282,
    'CustomerID': 'ROMEY',
    'OrderDate': '1996-08-15T05:40:00.000Z',
    'ShippedDate': '1996-08-21T06:40:00.000Z',
    'Freight': 12.69,
    'ShipName': 'Romero y tomillo',
    'ShipAddress': 'Gran Vía, 1',
    'ShipCity': 'Madrid',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10283,
    'CustomerID': 'LILAS',
    'OrderDate': '1996-08-16T07:40:00.000Z',
    'ShippedDate': '1996-08-23T08:40:00.000Z',
    'Freight': 84.81,
    'ShipName': 'LILA-Supermercado',
    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },
  {

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    'OrderID': 10284,
    'CustomerID': 'LEHMS',
    'OrderDate': '1996-08-19T09:40:00.000Z',
    'ShippedDate': '1996-08-27T10:40:00.000Z',
    'Freight': 76.56,
    'ShipName': 'Lehmanns Marktstand',
    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10285,
    'CustomerID': 'QUICK',
    'OrderDate': '1996-08-20T11:40:00.000Z',
    'ShippedDate': '1996-08-26T12:40:00.000Z',
    'Freight': 76.83,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10286,
    'CustomerID': 'QUICK',
    'OrderDate': '1996-08-21T01:50:00.000Z',
    'ShippedDate': '1996-08-30T02:50:00.000Z',
    'Freight': 229.24,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10287,
    'CustomerID': 'RICAR',
    'OrderDate': '1996-08-22T03:50:00.000Z',
    'ShippedDate': '1996-08-28T04:50:00.000Z',
    'Freight': 12.76,
    'ShipName': 'Ricardo Adocicados',
    'ShipAddress': 'Av. Copacabana, 267',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10288,
    'CustomerID': 'REGGC',
    'OrderDate': '1996-08-23T05:50:00.000Z',
    'ShippedDate': '1996-09-03T06:50:00.000Z',
    'Freight': 7.45,
    'ShipName': 'Reggiani Caseifici',
    'ShipAddress': 'Strada Provinciale 124',
    'ShipCity': 'Reggio Emilia',
    'ShipRegion': null,

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    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 10289,
    'CustomerID': 'BSBEV',
    'OrderDate': '1996-08-26T07:50:00.000Z',
    'ShippedDate': '1996-08-28T08:50:00.000Z',
    'Freight': 22.77,
    'ShipName': 'B\'s Beverages',
    'ShipAddress': 'Fauntleroy Circus',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10290,
    'CustomerID': 'COMMI',
    'OrderDate': '1996-08-27T09:50:00.000Z',
    'ShippedDate': '1996-09-03T10:50:00.000Z',
    'Freight': 79.7,
    'ShipName': 'Comércio Mineiro',
    'ShipAddress': 'Av. dos Lusíadas, 23',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10291,
    'CustomerID': 'QUEDE',
    'OrderDate': '1996-08-27T11:50:00.000Z',
    'ShippedDate': '1996-09-04T12:50:00.000Z',
    'Freight': 6.4,
    'ShipName': 'Que Delícia',
    'ShipAddress': 'Rua da Panificadora, 12',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10292,
    'CustomerID': 'TRADH',
    'OrderDate': '1996-08-28T01:10:00.000Z',
    'ShippedDate': '1996-09-02T02:10:00.000Z',
    'Freight': 1.35,
    'ShipName': 'Tradição Hipermercados',
    'ShipAddress': 'Av. Inês de Castro, 414',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10293,
    'CustomerID': 'TORTU',
    'OrderDate': '1996-08-29T03:10:00.000Z',
    'ShippedDate': '1996-09-11T04:10:00.000Z',
    'Freight': 21.18,
    'ShipName': 'Tortuga Restaurante',
```

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        'ShipAddress': 'Avda. Azteca 123',
        'ShipCity': 'México D.F.',
        'ShipRegion': null,
        'ShipCountry': 'Mexico'
    },
    {
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        'CustomerID': 'RATTC',
        'OrderDate': '1996-08-30T05:10:00.000Z',
        'ShippedDate': '1996-09-05T06:10:00.000Z',
        'Freight': 147.26,
        'ShipName': 'Rattlesnake Canyon Grocery',
        'ShipAddress': '2817 Milton Dr.',
        'ShipCity': 'Albuquerque',
        'ShipRegion': 'NM',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10295,
        'CustomerID': 'VINET',
        'OrderDate': '1996-09-02T07:10:00.000Z',
        'ShippedDate': '1996-09-10T08:10:00.000Z',
        'Freight': 1.15,
        'ShipName': 'Vins et alcools Chevalier',
        'ShipAddress': '59 rue de l\'Abbaye',
        'ShipCity': 'Reims',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10296,
        'CustomerID': 'LILAS',
        'OrderDate': '1996-09-03T09:10:00.000Z',
        'ShippedDate': '1996-09-11T10:10:00.000Z',
        'Freight': 0.12,
        'ShipName': 'LILA-Supermercado',
        'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
        'ShipCity': 'Barquisimeto',
        'ShipRegion': 'Lara',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 10297,
        'CustomerID': 'BLONP',
        'OrderDate': '1996-09-04T11:10:00.000Z',
        'ShippedDate': '1996-09-10T12:10:00.000Z',
        'Freight': 5.74,
        'ShipName': 'Blondel père et fils',
        'ShipAddress': '24, place Kléber',
        'ShipCity': 'Strasbourg',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10298,
        'CustomerID': 'HUNGO',
        'OrderDate': '1996-09-05T01:10:00.000Z',

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        'ShippedDate': '1996-09-11T02:20:00.000Z',
        'Freight': 168.22,
        'ShipName': 'Hungry Owl All-Night Grocers',
        'ShipAddress': '8 Johnstown Road',
        'ShipCity': 'Cork',
        'ShipRegion': 'Co. Cork',
        'ShipCountry': 'Ireland'
    },
    {
        'OrderID': 10299,
        'CustomerID': 'RICAR',
        'OrderDate': '1996-09-06T03:20:00.000Z',
        'ShippedDate': '1996-09-13T04:20:00.000Z',
        'Freight': 29.76,
        'ShipName': 'Ricardo Adocicados',
        'ShipAddress': 'Av. Copacabana, 267',
        'ShipCity': 'Rio de Janeiro',
        'ShipRegion': 'RJ',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10300,
        'CustomerID': 'MAGAA',
        'OrderDate': '1996-09-09T05:20:00.000Z',
        'ShippedDate': '1996-09-18T06:20:00.000Z',
        'Freight': 17.68,
        'ShipName': 'Magazzini Alimentari Riuniti',
        'ShipAddress': 'Via Ludovico il Moro 22',
        'ShipCity': 'Bergamo',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
    {
        'OrderID': 10301,
        'CustomerID': 'WANDK',
        'OrderDate': '1996-09-09T07:20:00.000Z',
        'ShippedDate': '1996-09-17T08:20:00.000Z',
        'Freight': 45.08,
        'ShipName': 'Die Wandernde Kuh',
        'ShipAddress': 'Adenauerallee 900',
        'ShipCity': 'Stuttgart',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10302,
        'CustomerID': 'SUPRD',
        'OrderDate': '1996-09-10T09:20:00.000Z',
        'ShippedDate': '1996-10-09T10:20:00.000Z',
        'Freight': 6.27,
        'ShipName': 'Suprêmes délices',
        'ShipAddress': 'Boulevard Tirou, 255',
        'ShipCity': 'Charleroi',
        'ShipRegion': null,
        'ShipCountry': 'Belgium'
    }
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    'OrderDate': '1996-09-11T11:20:00.000Z',
    'ShippedDate': '1996-09-18T12:20:00.000Z',
    'Freight': 107.83,
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    'ShipAddress': 'C/ Romero, 33',
    'ShipCity': 'Sevilla',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10304,
    'CustomerID': 'TORTU',
    'OrderDate': '1996-09-12T00:10:00.000Z',
    'ShippedDate': '1996-09-17T01:20:00.000Z',
    'Freight': 63.79,
    'ShipName': 'Tortuga Restaurante',
    'ShipAddress': 'Avda. Azteca 123',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10305,
    'CustomerID': 'OLDWO',
    'OrderDate': '1996-09-13T01:20:00.000Z',
    'ShippedDate': '1996-10-09T02:20:00.000Z',
    'Freight': 257.62,
    'ShipName': 'Old World Delicatessen',
    'ShipAddress': '2743 Bering St.',
    'ShipCity': 'Anchorage',
    'ShipRegion': 'AK',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10306,
    'CustomerID': 'ROMEY',
    'OrderDate': '1996-09-16T03:20:00.000Z',
    'ShippedDate': '1996-09-23T04:20:00.000Z',
    'Freight': 7.56,
    'ShipName': 'Romero y tomillo',
    'ShipAddress': 'Gran Vía, 1',
    'ShipCity': 'Madrid',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10307,
    'CustomerID': 'LONEP',
    'OrderDate': '1996-09-17T05:20:00.000Z',
    'ShippedDate': '1996-09-25T06:20:00.000Z',
    'Freight': 0.56,
    'ShipName': 'Lonesome Pine Restaurant',
    'ShipAddress': '89 Chiaroscuro Rd.',
    'ShipCity': 'Portland',
    'ShipRegion': 'OR',

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    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'ANATR',
    'OrderDate': '1996-09-18T07:20:00.000Z',
    'ShippedDate': '1996-09-24T08:20:00.000Z',
    'Freight': 1.61,
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    'ShipAddress': 'Avda. de la Constitución 2222',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10309,
    'CustomerID': 'HUNGO',
    'OrderDate': '1996-09-19T09:20:00.000Z',
    'ShippedDate': '1996-10-23T10:20:00.000Z',
    'Freight': 47.3,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10310,
    'CustomerID': 'THEBI',
    'OrderDate': '1996-09-20T11:20:00.000Z',
    'ShippedDate': '1996-09-27T12:20:00.000Z',
    'Freight': 17.52,
    'ShipName': 'The Big Cheese',
    'ShipAddress': '89 Jefferson Way Suite 2',
    'ShipCity': 'Portland',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10311,
    'CustomerID': 'DUMON',
    'OrderDate': '1996-09-20T13:20:00.000Z',
    'ShippedDate': '1996-09-26T14:20:00.000Z',
    'Freight': 24.69,
    'ShipName': 'Du monde entier',
    'ShipAddress': '67, rue des Cinquante Otages',
    'ShipCity': 'Nantes',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10312,
    'CustomerID': 'WANDK',
    'OrderDate': '1996-09-23T15:20:00.000Z',
    'ShippedDate': '1996-10-03T16:20:00.000Z',
    'Freight': 40.26,
    'ShipName': 'Die Wandernde Kuh',
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    'ShipAddress': 'Adenauerallee 900',
    'ShipCity': 'Stuttgart',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
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    'CustomerID': 'QUICK',
    'OrderDate': '1996-09-24T17:20:00.000Z',
    'ShippedDate': '1996-10-04T18:20:00.000Z',
    'Freight': 1.96,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10314,
    'CustomerID': 'RATTC',
    'OrderDate': '1996-09-25T19:20:00.000Z',
    'ShippedDate': '1996-10-04T20:20:00.000Z',
    'Freight': 74.16,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10315,
    'CustomerID': 'ISLAT',
    'OrderDate': '1996-09-26T21:20:00.000Z',
    'ShippedDate': '1996-10-03T22:20:00.000Z',
    'Freight': 41.76,
    'ShipName': 'Island Trading',
    'ShipAddress': 'Garden House Crowther Way',
    'ShipCity': 'Cowes',
    'ShipRegion': 'Isle of Wight',
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10316,
    'CustomerID': 'RATTC',
    'OrderDate': '1996-09-27T23:20:00.000Z',
    'ShippedDate': '1996-10-08T00:30:00.000Z',
    'Freight': 150.15,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10317,
    'CustomerID': 'LONEP',
    'OrderDate': '1996-09-30T01:30:00.000Z',

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    'ShippedDate': '1996-10-10T02:30:00.000Z',
    'Freight': 12.69,
    'ShipName': 'Lonesome Pine Restaurant',
    'ShipAddress': '89 Chiaroscuro Rd.',
    'ShipCity': 'Portland',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10318,
    'CustomerID': 'ISLAT',
    'OrderDate': '1996-10-01T03:30:00.000Z',
    'ShippedDate': '1996-10-04T03:30:00.000Z',
    'Freight': 4.73,
    'ShipName': 'Island Trading',
    'ShipAddress': 'Garden House Crowther Way',
    'ShipCity': 'Cowes',
    'ShipRegion': 'Isle of Wight',
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10319,
    'CustomerID': 'TORTU',
    'OrderDate': '1996-10-02T04:30:00.000Z',
    'ShippedDate': '1996-10-11T05:30:00.000Z',
    'Freight': 64.5,
    'ShipName': 'Tortuga Restaurante',
    'ShipAddress': 'Avda. Azteca 123',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10320,
    'CustomerID': 'WARTH',
    'OrderDate': '1996-10-03T06:30:00.000Z',
    'ShippedDate': '1996-10-18T07:30:00.000Z',
    'Freight': 34.57,
    'ShipName': 'Wartian Herkku',
    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 10321,
    'CustomerID': 'ISLAT',
    'OrderDate': '1996-10-03T08:30:00.000Z',
    'ShippedDate': '1996-10-11T09:30:00.000Z',
    'Freight': 3.43,
    'ShipName': 'Island Trading',
    'ShipAddress': 'Garden House Crowther Way',
    'ShipCity': 'Cowes',
    'ShipRegion': 'Isle of Wight',
    'ShipCountry': 'UK'
  },
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    'OrderID': 10322,
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    'OrderDate': '1996-10-04T10:30:00.000Z',
    'ShippedDate': '1996-10-23T11:30:00.000Z',
    'Freight': 0.4,
    'ShipName': 'Pericles Comidas clásicas',
    'ShipAddress': 'Calle Dr. Jorge Cash 321',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10323,
    'CustomerID': 'KOENE',
    'OrderDate': '1996-10-07T12:30:00.000Z',
    'ShippedDate': '1996-10-14T13:30:00.000Z',
    'Freight': 4.88,
    'ShipName': 'Königlich Essen',
    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10324,
    'CustomerID': 'SAVEA',
    'OrderDate': '1996-10-08T14:30:00.000Z',
    'ShippedDate': '1996-10-10T15:30:00.000Z',
    'Freight': 214.27,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10325,
    'CustomerID': 'KOENE',
    'OrderDate': '1996-10-09T16:30:00.000Z',
    'ShippedDate': '1996-10-14T17:30:00.000Z',
    'Freight': 64.86,
    'ShipName': 'Königlich Essen',
    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10326,
    'CustomerID': 'BOLID',
    'OrderDate': '1996-10-10T18:30:00.000Z',
    'ShippedDate': '1996-10-14T19:30:00.000Z',
    'Freight': 77.92,
    'ShipName': 'Bólido Comidas preparadas',
    'ShipAddress': 'C/ Araquil, 67',
    'ShipCity': 'Madrid',
    'ShipRegion': null,

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    'ShipCountry': 'Spain'
  },
  {
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    'CustomerID': 'FOLKO',
    'OrderDate': '1996-10-11T20:30:00.000Z',
    'ShippedDate': '1996-10-14T21:30:00.000Z',
    'Freight': 63.36,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10328,
    'CustomerID': 'FURIB',
    'OrderDate': '1996-10-14T22:30:00.000Z',
    'ShippedDate': '1996-10-17T23:30:00.000Z',
    'Freight': 87.03,
    'ShipName': 'Furia Bacalhau e Frutos do Mar',
    'ShipAddress': 'Jardim das rosas n. 32',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {
    'OrderID': 10329,
    'CustomerID': 'SPLIR',
    'OrderDate': '1996-10-15T00:40:00.000Z',
    'ShippedDate': '1996-10-23T01:40:00.000Z',
    'Freight': 191.67,
    'ShipName': 'Split Rail Beer & Ale',
    'ShipAddress': 'P.O. Box 555',
    'ShipCity': 'Lander',
    'ShipRegion': 'WY',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10330,
    'CustomerID': 'LILAS',
    'OrderDate': '1996-10-16T02:40:00.000Z',
    'ShippedDate': '1996-10-28T03:40:00.000Z',
    'Freight': 12.75,
    'ShipName': 'LILA-Supermercado',
    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10331,
    'CustomerID': 'BONAP',
    'OrderDate': '1996-10-16T02:40:00.000Z',
    'ShippedDate': '1996-10-21T03:40:00.000Z',
    'Freight': 10.19,
    'ShipName': 'Bon app',

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        'ShipAddress': '12, rue des Bouchers',
        'ShipCity': 'Marseille',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
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        'CustomerID': 'MEREP',
        'OrderDate': '1996-10-17T04:40:00.000Z',
        'ShippedDate': '1996-10-21T05:40:00.000Z',
        'Freight': 52.84,
        'ShipName': 'Mère Paillarde',
        'ShipAddress': '43 rue St. Laurent',
        'ShipCity': 'Montréal',
        'ShipRegion': 'Québec',
        'ShipCountry': 'Canada'
    },
    {
        'OrderID': 10333,
        'CustomerID': 'WARTH',
        'OrderDate': '1996-10-18T06:40:00.000Z',
        'ShippedDate': '1996-10-25T07:40:00.000Z',
        'Freight': 0.59,
        'ShipName': 'Wartian Herkku',
        'ShipAddress': 'Torikatu 38',
        'ShipCity': 'Oulu',
        'ShipRegion': null,
        'ShipCountry': 'Finland'
    },
    {
        'OrderID': 10334,
        'CustomerID': 'VICTE',
        'OrderDate': '1996-10-21T08:40:00.000Z',
        'ShippedDate': '1996-10-28T09:40:00.000Z',
        'Freight': 8.56,
        'ShipName': 'Victuailles en stock',
        'ShipAddress': '2, rue du Commerce',
        'ShipCity': 'Lyon',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10335,
        'CustomerID': 'HUNGO',
        'OrderDate': '1996-10-22T10:40:00.000Z',
        'ShippedDate': '1996-10-24T11:40:00.000Z',
        'Freight': 42.11,
        'ShipName': 'Hungry Owl All-Night Grocers',
        'ShipAddress': '8 Johnstown Road',
        'ShipCity': 'Cork',
        'ShipRegion': 'Co. Cork',
        'ShipCountry': 'Ireland'
    },
    {
        'OrderID': 10336,
        'CustomerID': 'PRINI',
        'OrderDate': '1996-10-23T12:40:00.000Z',

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        'ShippedDate': '1996-10-25T13:40:00.000Z',
        'Freight': 15.51,
        'ShipName': 'Princesa Isabel Vinhos',
        'ShipAddress': 'Estrada da saúde n. 58',
        'ShipCity': 'Lisboa',
        'ShipRegion': null,
        'ShipCountry': 'Portugal'
    },
    {
        'OrderID': 10337,
        'CustomerID': 'FRANK',
        'OrderDate': '1996-10-24T14:40:00.000Z',
        'ShippedDate': '1996-10-29T14:40:00.000Z',
        'Freight': 108.26,
        'ShipName': 'Frankenversand',
        'ShipAddress': 'Berliner Platz 43',
        'ShipCity': 'München',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10338,
        'CustomerID': 'OLDWO',
        'OrderDate': '1996-10-25T15:40:00.000Z',
        'ShippedDate': '1996-10-29T16:40:00.000Z',
        'Freight': 84.21,
        'ShipName': 'Old World Delicatessen',
        'ShipAddress': '2743 Bering St.',
        'ShipCity': 'Anchorage',
        'ShipRegion': 'AK',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10339,
        'CustomerID': 'MEREP',
        'OrderDate': '1996-10-28T17:40:00.000Z',
        'ShippedDate': '1996-11-04T18:40:00.000Z',
        'Freight': 15.66,
        'ShipName': 'Mère Paillarde',
        'ShipAddress': '43 rue St. Laurent',
        'ShipCity': 'Montréal',
        'ShipRegion': 'Québec',
        'ShipCountry': 'Canada'
    },
    {
        'OrderID': 10340,
        'CustomerID': 'BONAP',
        'OrderDate': '1996-10-29T19:40:00.000Z',
        'ShippedDate': '1996-11-08T20:40:00.000Z',
        'Freight': 166.31,
        'ShipName': 'Bon app',
        'ShipAddress': '12, rue des Bouchers',
        'ShipCity': 'Marseille',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {

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    'CustomerID': 'SIMOB',
    'OrderDate': '1996-10-29T21:40:00.000Z',
    'ShippedDate': '1996-11-05T22:40:00.000Z',
    'Freight': 26.78,
    'ShipName': 'Simons bistro',
    'ShipAddress': 'Vinbæltet 34',
    'ShipCity': 'Kobenhavn',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
    'OrderID': 10342,
    'CustomerID': 'FRANK',
    'OrderDate': '1996-10-30T23:40:00.000Z',
    'ShippedDate': '1996-11-04T00:50:00.000Z',
    'Freight': 54.83,
    'ShipName': 'Frankenversand',
    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10343,
    'CustomerID': 'LEHMS',
    'OrderDate': '1996-10-31T01:50:00.000Z',
    'ShippedDate': '1996-11-06T02:50:00.000Z',
    'Freight': 110.37,
    'ShipName': 'Lehmanns Marktstand',
    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10344,
    'CustomerID': 'WHITC',
    'OrderDate': '1996-11-01T03:50:00.000Z',
    'ShippedDate': '1996-11-05T04:50:00.000Z',
    'Freight': 23.29,
    'ShipName': 'White Clover Markets',
    'ShipAddress': '1029 - 12th Ave. S.',
    'ShipCity': 'Seattle',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10345,
    'CustomerID': 'QUICK',
    'OrderDate': '1996-11-04T05:50:00.000Z',
    'ShippedDate': '1996-11-11T05:50:00.000Z',
    'Freight': 249.06,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,

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    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10346,
    'CustomerID': 'RATTC',
    'OrderDate': '1996-11-05T06:50:00.000Z',
    'ShippedDate': '1996-11-08T07:50:00.000Z',
    'Freight': 142.08,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10347,
    'CustomerID': 'FAMIA',
    'OrderDate': '1996-11-06T08:50:00.000Z',
    'ShippedDate': '1996-11-08T09:50:00.000Z',
    'Freight': 3.1,
    'ShipName': 'Familia Arquibaldo',
    'ShipAddress': 'Rua Orós, 92',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10348,
    'CustomerID': 'WANDK',
    'OrderDate': '1996-11-07T10:50:00.000Z',
    'ShippedDate': '1996-11-15T11:50:00.000Z',
    'Freight': 0.78,
    'ShipName': 'Die Wandernde Kuh',
    'ShipAddress': 'Adenauerallee 900',
    'ShipCity': 'Stuttgart',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10349,
    'CustomerID': 'SPLIR',
    'OrderDate': '1996-11-08T12:50:00.000Z',
    'ShippedDate': '1996-11-15T13:50:00.000Z',
    'Freight': 8.63,
    'ShipName': 'Split Rail Beer & Ale',
    'ShipAddress': 'P.O. Box 555',
    'ShipCity': 'Lander',
    'ShipRegion': 'WY',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10350,
    'CustomerID': 'LAMAI',
    'OrderDate': '1996-11-11T14:50:00.000Z',
    'ShippedDate': '1996-12-03T15:50:00.000Z',
    'Freight': 64.19,
    'ShipName': 'La maison d\'Asie',

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        'ShipAddress': '1 rue Alsace-Lorraine',
        'ShipCity': 'Toulouse',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10351,
        'CustomerID': 'ERNSH',
        'OrderDate': '1996-11-11T16:50:00.000Z',
        'ShippedDate': '1996-11-20T17:50:00.000Z',
        'Freight': 162.33,
        'ShipName': 'Ernst Handel',
        'ShipAddress': 'Kirchgasse 6',
        'ShipCity': 'Graz',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
        'OrderID': 10352,
        'CustomerID': 'FURIB',
        'OrderDate': '1996-11-12T18:50:00.000Z',
        'ShippedDate': '1996-11-18T19:50:00.000Z',
        'Freight': 1.3,
        'ShipName': 'Furia Bacalhau e Frutos do Mar',
        'ShipAddress': 'Jardim das rosas n. 32',
        'ShipCity': 'Lisboa',
        'ShipRegion': null,
        'ShipCountry': 'Portugal'
    },
    {
        'OrderID': 10353,
        'CustomerID': 'PICCO',
        'OrderDate': '1996-11-13T20:50:00.000Z',
        'ShippedDate': '1996-11-25T21:50:00.000Z',
        'Freight': 360.63,
        'ShipName': 'Piccolo und mehr',
        'ShipAddress': 'Geislweg 14',
        'ShipCity': 'Salzburg',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
        'OrderID': 10354,
        'CustomerID': 'PERIC',
        'OrderDate': '1996-11-14T21:50:00.000Z',
        'ShippedDate': '1996-11-20T22:50:00.000Z',
        'Freight': 53.8,
        'ShipName': 'Pericles Comidas clásicas',
        'ShipAddress': 'Calle Dr. Jorge Cash 321',
        'ShipCity': 'México D.F.',
        'ShipRegion': null,
        'ShipCountry': 'Mexico'
    },
    {
        'OrderID': 10355,
        'CustomerID': 'AROUT',
        'OrderDate': '1996-11-15T23:50:00.000Z',

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        'ShippedDate': '1996-11-20T00:50:00.000Z',
        'Freight': 41.95,
        'ShipName': 'Around the Horn',
        'ShipAddress': 'Brook Farm Stratford St. Mary',
        'ShipCity': 'Colchester',
        'ShipRegion': 'Essex',
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10356,
        'CustomerID': 'WANDK',
        'OrderDate': '1996-11-18T01:05:00.000Z',
        'ShippedDate': '1996-11-27T02:05:00.000Z',
        'Freight': 36.71,
        'ShipName': 'Die Wandernde Kuh',
        'ShipAddress': 'Adenauerallee 900',
        'ShipCity': 'Stuttgart',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10357,
        'CustomerID': 'LILAS',
        'OrderDate': '1996-11-19T03:05:00.000Z',
        'ShippedDate': '1996-12-02T04:05:00.000Z',
        'Freight': 34.88,
        'ShipName': 'LILA-Supermercado',
        'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
        'ShipCity': 'Barquisimeto',
        'ShipRegion': 'Lara',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 10358,
        'CustomerID': 'LAMAI',
        'OrderDate': '1996-11-20T05:05:00.000Z',
        'ShippedDate': '1996-11-27T06:05:00.000Z',
        'Freight': 19.64,
        'ShipName': 'La maison d\'Asie',
        'ShipAddress': '1 rue Alsace-Lorraine',
        'ShipCity': 'Toulouse',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10359,
        'CustomerID': 'SEVES',
        'OrderDate': '1996-11-21T07:05:00.000Z',
        'ShippedDate': '1996-11-26T08:05:00.000Z',
        'Freight': 288.43,
        'ShipName': 'Seven Seas Imports',
        'ShipAddress': '90 Wadhurst Rd.',
        'ShipCity': 'London',
        'ShipRegion': null,
        'ShipCountry': 'UK'
    }
]

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    'OrderID': 10360,
    'CustomerID': 'BLONP',
    'OrderDate': '1996-11-22T09:05:00.000Z',
    'ShippedDate': '1996-12-02T10:05:00.000Z',
    'Freight': 131.7,
    'ShipName': 'Blondel père et fils',
    'ShipAddress': '24, place Kléber',
    'ShipCity': 'Strasbourg',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10361,
    'CustomerID': 'QUICK',
    'OrderDate': '1996-11-22T11:05:00.000Z',
    'ShippedDate': '1996-12-03T12:05:00.000Z',
    'Freight': 183.17,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10362,
    'CustomerID': 'BONAP',
    'OrderDate': '1996-11-25T13:05:00.000Z',
    'ShippedDate': '1996-11-28T14:05:00.000Z',
    'Freight': 96.04,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10363,
    'CustomerID': 'DRACD',
    'OrderDate': '1996-11-26T15:05:00.000Z',
    'ShippedDate': '1996-12-04T16:05:00.000Z',
    'Freight': 30.54,
    'ShipName': 'Drachenblut Delikatessen',
    'ShipAddress': 'Walserweg 21',
    'ShipCity': 'Aachen',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10364,
    'CustomerID': 'EASTC',
    'OrderDate': '1996-11-26T17:05:00.000Z',
    'ShippedDate': '1996-12-04T18:05:00.000Z',
    'Freight': 71.97,
    'ShipName': 'Eastern Connection',
    'ShipAddress': '35 King George',
    'ShipCity': 'London',
    'ShipRegion': null,

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    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10365,
    'CustomerID': 'ANTON',
    'OrderDate': '1996-11-27T19:05:00.000Z',
    'ShippedDate': '1996-12-02T20:05:00.000Z',
    'Freight': 22,
    'ShipName': 'Antonio Moreno Taquería',
    'ShipAddress': 'Mataderos 2312',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10366,
    'CustomerID': 'GALED',
    'OrderDate': '1996-11-28T21:05:00.000Z',
    'ShippedDate': '1996-12-30T22:05:00.000Z',
    'Freight': 10.14,
    'ShipName': 'Galería del gastronómo',
    'ShipAddress': 'Rambla de Cataluña, 23',
    'ShipCity': 'Barcelona',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10367,
    'CustomerID': 'VAFFE',
    'OrderDate': '1996-11-28T23:05:00.000Z',
    'ShippedDate': '1996-12-02T00:05:00.000Z',
    'Freight': 13.55,
    'ShipName': 'Vaffeljernet',
    'ShipAddress': 'Smagsloget 45',
    'ShipCity': 'Århus',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
    'OrderID': 10368,
    'CustomerID': 'ERNSH',
    'OrderDate': '1996-11-29T02:00.00.000Z',
    'ShippedDate': '1996-12-02T04:00.00.000Z',
    'Freight': 101.95,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10369,
    'CustomerID': 'SPLIR',
    'OrderDate': '1996-12-02T04:00.00.000Z',
    'ShippedDate': '1996-12-09T07:25:00.000Z',
    'Freight': 195.68,
    'ShipName': 'Split Rail Beer & Ale',

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        'ShipAddress': 'P.O. Box 555',
        'ShipCity': 'Lander',
        'ShipRegion': 'WY',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10370,
        'CustomerID': 'CHOPS',
        'OrderDate': '1996-12-03T06:00.00.000Z',
        'ShippedDate': '1996-12-27T07:00.00.000Z',
        'Freight': 1.17,
        'ShipName': 'Chop-suey Chinese',
        'ShipAddress': 'Hauptstr. 31',
        'ShipCity': 'Bern',
        'ShipRegion': null,
        'ShipCountry': 'Switzerland'
    },
    {
        'OrderID': 10371,
        'CustomerID': 'LAMAI',
        'OrderDate': '1996-12-03T08:00.00.000Z',
        'ShippedDate': '1996-12-24T09:00.00.000Z',
        'Freight': 0.45,
        'ShipName': 'La maison d\'Asie',
        'ShipAddress': '1 rue Alsace-Lorraine',
        'ShipCity': 'Toulouse',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10372,
        'CustomerID': 'QUEEN',
        'OrderDate': '1996-12-04T10:00.00.000Z',
        'ShippedDate': '1996-12-09T11:00.00.000Z',
        'Freight': 890.78,
        'ShipName': 'Queen Cozinha',
        'ShipAddress': 'Alameda dos Canários, 891',
        'ShipCity': 'Sao Paulo',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10373,
        'CustomerID': 'HUNGO',
        'OrderDate': '1996-12-05T12:00.00.000Z',
        'ShippedDate': '1996-12-11T13:00.00.000Z',
        'Freight': 124.12,
        'ShipName': 'Hungry Owl All-Night Grocers',
        'ShipAddress': '8 Johnstown Road',
        'ShipCity': 'Cork',
        'ShipRegion': 'Co. Cork',
        'ShipCountry': 'Ireland'
    },
    {
        'OrderID': 10374,
        'CustomerID': 'WOLZA',
        'OrderDate': '1996-12-05T14:00.00.000Z',

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    'ShippedDate': '1996-12-09T15:00.00.000Z',
    'Freight': 3.94,
    'ShipName': 'Wolski Zajazd',
    'ShipAddress': 'ul. Filtrowa 68',
    'ShipCity': 'Warszawa',
    'ShipRegion': null,
    'ShipCountry': 'Poland'
  },
  {
    'OrderID': 10375,
    'CustomerID': 'HUNGC',
    'OrderDate': '1996-12-06T16:00.00.000Z',
    'ShippedDate': '1996-12-09T17:00.00.000Z',
    'Freight': 20.12,
    'ShipName': 'Hungry Coyote Import Store',
    'ShipAddress': 'City Center Plaza 516 Main St.',
    'ShipCity': 'Elgin',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10376,
    'CustomerID': 'MEREP',
    'OrderDate': '1996-12-09T18:00.00.000Z',
    'ShippedDate': '1996-12-13T19:00.00.000Z',
    'Freight': 20.39,
    'ShipName': 'Mère Paillarde',
    'ShipAddress': '43 rue St. Laurent',
    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10377,
    'CustomerID': 'SEVES',
    'OrderDate': '1996-12-09T20:00.00.000Z',
    'ShippedDate': '1996-12-13T21:00.00.000Z',
    'Freight': 22.21,
    'ShipName': 'Seven Seas Imports',
    'ShipAddress': '90 Wadhurst Rd.',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10378,
    'CustomerID': 'FOLKO',
    'OrderDate': '1996-12-10T22:00.00.000Z',
    'ShippedDate': '1996-12-19T23:00.00.000Z',
    'Freight': 5.44,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {

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    'OrderID': 10379,
    'CustomerID': 'QUEDE',
    'OrderDate': '1996-12-11T01:25:00.000Z',
    'ShippedDate': '1996-12-13T02:25:00.000Z',
    'Freight': 45.03,
    'ShipName': 'Que Delícia',
    'ShipAddress': 'Rua da Panificadora, 12',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10380,
    'CustomerID': 'HUNGO',
    'OrderDate': '1996-12-12T03:25:00.000Z',
    'ShippedDate': '1997-01-16T04:25:00.000Z',
    'Freight': 35.03,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10381,
    'CustomerID': 'LILAS',
    'OrderDate': '1996-12-12T05:25:00.000Z',
    'ShippedDate': '1996-12-13T06:25:00.000Z',
    'Freight': 7.99,
    'ShipName': 'LILA-Supermercado',
    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10382,
    'CustomerID': 'ERNSH',
    'OrderDate': '1996-12-13T07:25:00.000Z',
    'ShippedDate': '1996-12-16T07:25:00.000Z',
    'Freight': 94.77,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10383,
    'CustomerID': 'AROUT',
    'OrderDate': '1996-12-16T07:25:00.000Z',
    'ShippedDate': '1996-12-18T02:25:00.000Z',
    'Freight': 34.24,
    'ShipName': 'Around the Horn',
    'ShipAddress': 'Brook Farm Stratford St. Mary',
    'ShipCity': 'Colchester',
    'ShipRegion': 'Essex',

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    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10384,
    'CustomerID': 'BERGS',
    'OrderDate': '1996-12-16T03:25:00.000Z',
    'ShippedDate': '1996-12-20T04:25:00.000Z',
    'Freight': 168.64,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10385,
    'CustomerID': 'SPLIR',
    'OrderDate': '1996-12-17T04:25:00.000Z',
    'ShippedDate': '1996-12-23T04:25:00.000Z',
    'Freight': 30.96,
    'ShipName': 'Split Rail Beer & Ale',
    'ShipAddress': 'P.O. Box 555',
    'ShipCity': 'Lander',
    'ShipRegion': 'WY',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10386,
    'CustomerID': 'FAMIA',
    'OrderDate': '1996-12-18T05:25:00.000Z',
    'ShippedDate': '1996-12-25T06:25:00.000Z',
    'Freight': 13.99,
    'ShipName': 'Familia Arquibaldo',
    'ShipAddress': 'Rua Orós, 92',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10387,
    'CustomerID': 'SANTG',
    'OrderDate': '1996-12-18T07:25:00.000Z',
    'ShippedDate': '1996-12-20T08:25:00.000Z',
    'Freight': 93.63,
    'ShipName': 'Santé Gourmet',
    'ShipAddress': 'Erling Skakkes gate 78',
    'ShipCity': 'Stavern',
    'ShipRegion': null,
    'ShipCountry': 'Norway'
  },
  {
    'OrderID': 10388,
    'CustomerID': 'SEVES',
    'OrderDate': '1996-12-19T09:25:00.000Z',
    'ShippedDate': '1996-12-20T10:25:00.000Z',
    'Freight': 34.86,
    'ShipName': 'Seven Seas Imports',
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        'ShipAddress': '90 Wadhurst Rd.',
        'ShipCity': 'London',
        'ShipRegion': null,
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10389,
        'CustomerID': 'BOTTM',
        'OrderDate': '1996-12-20T11:25:00.000Z',
        'ShippedDate': '1996-12-24T12:25:00.000Z',
        'Freight': 47.42,
        'ShipName': 'Bottom-Dollar Markets',
        'ShipAddress': '23 Tsawassen Blvd.',
        'ShipCity': 'Tsawassen',
        'ShipRegion': 'BC',
        'ShipCountry': 'Canada'
    },
    {
        'OrderID': 10390,
        'CustomerID': 'ERNSH',
        'OrderDate': '1996-12-23T13:25:00.000Z',
        'ShippedDate': '1996-12-26T14:25:00.000Z',
        'Freight': 126.38,
        'ShipName': 'Ernst Handel',
        'ShipAddress': 'Kirchgasse 6',
        'ShipCity': 'Graz',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
        'OrderID': 10391,
        'CustomerID': 'DRACD',
        'OrderDate': '1996-12-23T15:25:00.000Z',
        'ShippedDate': '1996-12-31T16:25:00.000Z',
        'Freight': 5.45,
        'ShipName': 'Drachenblut Delikatessen',
        'ShipAddress': 'Walserweg 21',
        'ShipCity': 'Aachen',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10392,
        'CustomerID': 'PICCO',
        'OrderDate': '1996-12-24T17:25:00.000Z',
        'ShippedDate': '1997-01-01T18:25:00.000Z',
        'Freight': 122.46,
        'ShipName': 'Piccolo und mehr',
        'ShipAddress': 'Geislweg 14',
        'ShipCity': 'Salzburg',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
        'OrderID': 10393,
        'CustomerID': 'SAVEA',
        'OrderDate': '1996-12-25T19:25:00.000Z',

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    'ShippedDate': '1997-01-03T20:25:00.000Z',
    'Freight': 126.56,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10394,
    'CustomerID': 'HUNGC',
    'OrderDate': '1996-12-25T21:25:00.000Z',
    'ShippedDate': '1997-01-03T22:25:00.000Z',
    'Freight': 30.34,
    'ShipName': 'Hungry Coyote Import Store',
    'ShipAddress': 'City Center Plaza 516 Main St.',
    'ShipCity': 'Elgin',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10395,
    'CustomerID': 'HILAA',
    'OrderDate': '1996-12-26T23:25:00.000Z',
    'ShippedDate': '1997-01-03T00:25:00.000Z',
    'Freight': 184.41,
    'ShipName': 'HILARION-Abastos',
    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10396,
    'CustomerID': 'FRANK',
    'OrderDate': '1996-12-27T01:45:00.000Z',
    'ShippedDate': '1997-01-06T02:45:00.000Z',
    'Freight': 135.35,
    'ShipName': 'Frankenversand',
    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10397,
    'CustomerID': 'PRINI',
    'OrderDate': '1996-12-27T03:45:00.000Z',
    'ShippedDate': '1997-01-02T04:45:00.000Z',
    'Freight': 60.26,
    'ShipName': 'Princesa Isabel Vinhos',
    'ShipAddress': 'Estrada da saúde n. 58',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {

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    'ShipRegion': 'ID',
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    'Freight': 27.36,
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    'Freight': 83.93,
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    'Freight': 12.51,
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    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
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    'CustomerID': 'ERNSH',
    'OrderDate': '1997-01-02T13:45:00.000Z',
    'ShippedDate': '1997-01-10T14:45:00.000Z',
    'Freight': 67.88,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
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    'ShipRegion': null,

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    'Freight': 73.79,
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    'ShipRegion': null,
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    'Freight': 155.97,
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    'ShipAddress': 'Via Ludovico il Moro 22',
    'ShipCity': 'Bergamo',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
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    'OrderDate': '1997-01-06T19:45:00.000Z',
    'ShippedDate': '1997-01-22T20:45:00.000Z',
    'Freight': 34.82,
    'ShipName': 'LINO-Delicateses',
    'ShipAddress': 'Ave. 5 de Mayo Porlamar',
    'ShipCity': 'I. de Margarita',
    'ShipRegion': 'Nueva Esparta',
    'ShipCountry': 'Venezuela'
  },
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    'CustomerID': 'QUEEN',
    'OrderDate': '1997-01-07T21:45:00.000Z',
    'ShippedDate': '1997-01-13T22:45:00.000Z',
    'Freight': 108.04,
    'ShipName': 'Queen Cozinha',
    'ShipAddress': 'Alameda dos Canários, 891',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
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    'CustomerID': 'OTTIK',
    'OrderDate': '1997-01-07T23:45:00.000Z',
    'ShippedDate': '1997-01-30T01:55:00.000Z',
    'Freight': 91.48,
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        'ShipCity': 'Köln',
        'ShipRegion': null,
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        'ShipAddress': '184, chaussée de Tournai',
        'ShipCity': 'Lille',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
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        'Freight': 29.83,
        'ShipName': 'Océano Atlántico Ltda.',
        'ShipAddress': 'Ing. Gustavo Moncada 8585 Piso 20-A',
        'ShipCity': 'Buenos Aires',
        'ShipRegion': null,
        'ShipCountry': 'Argentina'
    },
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        'CustomerID': 'BOTTM',
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        'Freight': 2.4,
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        'ShipCity': 'Tsawassen',
        'ShipRegion': 'BC',
        'ShipCountry': 'Canada'
    },
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        'CustomerID': 'BOTTM',
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        'Freight': 23.65,
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        'ShipCity': 'Tsawassen',
        'ShipRegion': 'BC',
        'ShipCountry': 'Canada'
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    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
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    'Freight': 95.66,
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    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
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    'CustomerID': 'FAMIA',
    'OrderDate': '1997-01-14T12:55:00.000Z',
    'ShippedDate': '1997-01-17T13:55:00.000Z',
    'Freight': 21.48,
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    'ShipAddress': 'Rua Orós, 92',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
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    'Freight': 0.2,
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    'ShipAddress': 'City Center Plaza 516 Main St.',
    'ShipCity': 'Elgin',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
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    'CustomerID': 'WARTH',
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    'Freight': 22.72,
    'ShipName': 'Wartian Herkku',
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    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
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    'Freight': 70.29,
    'ShipName': 'Simons bistro',
    'ShipAddress': 'Vinbæltet 34',
    'ShipCity': 'Kobenhavn',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
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    'ShippedDate': '1997-01-24T21:55:00.000Z',
    'Freight': 17.55,
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    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
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    'OrderID': 10419,
    'CustomerID': 'RICSU',
    'OrderDate': '1997-01-20T22:55:00.000Z',
    'ShippedDate': '1997-01-30T23:55:00.000Z',
    'Freight': 137.35,
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    'ShipAddress': 'Starenweg 5',
    'ShipCity': 'Genève',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
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    'CustomerID': 'WELLI',
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    'ShippedDate': '1997-01-27T012:05:00.000Z',
    'Freight': 44.12,
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    'ShipAddress': 'Rua do Mercado, 12',
    'ShipCity': 'Resende',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
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    'CustomerID': 'QUEDE',
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    'ShippedDate': '1997-01-27T03:05:00.000Z',
    'Freight': 99.23,
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    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
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        'ShipAddress': 'Via Monte Bianco 34',
        'ShipCity': 'Torino',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
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        'Freight': 24.5,
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        'ShipAddress': 'Av. Brasil, 442',
        'ShipCity': 'Campinas',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
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        'Freight': 370.61,
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        'ShipAddress': '43 rue St. Laurent',
        'ShipCity': 'Montréal',
        'ShipRegion': 'Québec',
        'ShipCountry': 'Canada'
    },
    {
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        'CustomerID': 'LAMAI',
        'OrderDate': '1997-01-24T10:05:00.000Z',
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        'Freight': 7.93,
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        'ShipAddress': '1 rue Alsace-Lorraine',
        'ShipCity': 'Toulouse',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
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        'CustomerID': 'GALED',
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        'Freight': 18.69,
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        'ShippedDate': '1997-03-03T15:05:00.000Z',
        'Freight': 31.29,
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        'ShipAddress': 'Geislweg 14',
        'ShipCity': 'Salzburg',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
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        'CustomerID': 'REGGC',
        'OrderDate': '1997-01-28T16:05:00.000Z',
        'ShippedDate': '1997-02-04T17:05:00.000Z',
        'Freight': 11.09,
        'ShipName': 'Reggiani Caseifici',
        'ShipAddress': 'Strada Provinciale 124',
        'ShipCity': 'Reggio Emilia',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
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        'ShipAddress': '8 Johnstown Road',
        'ShipCity': 'Cork',
        'ShipRegion': 'Co. Cork',
        'ShipCountry': 'Ireland'
    },
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        'Freight': 458.78,
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        'ShipAddress': 'Kirchgasse 6',
        'ShipCity': 'Graz',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
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    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
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    'OrderDate': '1997-01-31T01:15:00.000Z',
    'ShippedDate': '1997-02-07T02:15:00.000Z',
    'Freight': 4.34,
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    'ShipAddress': 'P.O. Box 555',
    'ShipCity': 'Lander',
    'ShipRegion': 'WY',
    'ShipCountry': 'USA'
  },
  {
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    'ShippedDate': '1997-03-04T04:15:00.000Z',
    'Freight': 73.83,
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    'ShipAddress': 'Estrada da saúde n. 58',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {
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    'ShippedDate': '1997-02-13T06:15:00.000Z',
    'Freight': 17.92,
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    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
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    'Freight': 9.21,
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    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
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    'Freight': 156.66,
    'ShipName': 'Blondel père et fils',
    'ShipAddress': '24, place Kléber',
    'ShipCity': 'Strasbourg',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
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    'CustomerID': 'WARTH',
    'OrderDate': '1997-02-05T11:15:00.000Z',
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    'Freight': 19.97,
    'ShipName': 'Wartian Herkku',
    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
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    'CustomerID': 'TOMSP',
    'OrderDate': '1997-02-06T13:15:00.000Z',
    'ShippedDate': '1997-02-14T14:15:00.000Z',
    'Freight': 8.24,
    'ShipName': 'Toms Spezialitäten',
    'ShipAddress': 'Luisenstr. 48',
    'ShipCity': 'Münster',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
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    'CustomerID': 'MEREP',
    'OrderDate': '1997-02-07T15:15:00.000Z',
    'ShippedDate': '1997-02-10T16:15:00.000Z',
    'Freight': 4.07,
    'ShipName': 'Mère Paillarde',
    'ShipAddress': '43 rue St. Laurent',
    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
  },
  {
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    'CustomerID': 'SAVEA',
    'OrderDate': '1997-02-10T17:15:00.000Z',
    'ShippedDate': '1997-02-28T18:15:00.000Z',
    'Freight': 86.53,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',

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    'Freight': 73.02,
    'ShipName': 'Old World Delicatessen',
    'ShipAddress': '2743 Bering St.',
    'ShipCity': 'Anchorage',
    'ShipRegion': 'AK',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'ERNSH',
    'OrderDate': '1997-02-11T21:15:00.000Z',
    'ShippedDate': '1997-02-18T22:15:00.000Z',
    'Freight': 47.94,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10443,
    'CustomerID': 'REGGC',
    'OrderDate': '1997-02-12T23:15:00.000Z',
    'ShippedDate': '1997-02-14T00:25:00.000Z',
    'Freight': 13.95,
    'ShipName': 'Reggiani Caseifici',
    'ShipAddress': 'Strada Provinciale 124',
    'ShipCity': 'Reggio Emilia',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
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    'CustomerID': 'BERGS',
    'OrderDate': '1997-02-12T00:25:00.000Z',
    'ShippedDate': '1997-02-21T01:25:00.000Z',
    'Freight': 3.5,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10445,
    'CustomerID': 'BERGS',
    'OrderDate': '1997-02-13T02:25:00.000Z',
    'ShippedDate': '1997-02-20T03:00.00.000Z',
    'Freight': 9.3,
    'ShipName': 'Berglunds snabbköp',
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        'ShipAddress': 'Berguvsvägen 8',
        'ShipCity': 'Luleå',
        'ShipRegion': null,
        'ShipCountry': 'Sweden'
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        'CustomerID': 'TOMSP',
        'OrderDate': '1997-02-14T04:00.00.000Z',
        'ShippedDate': '1997-02-19T05:00.00.000Z',
        'Freight': 14.68,
        'ShipName': 'Toms Spezialitäten',
        'ShipAddress': 'Luisenstr. 48',
        'ShipCity': 'Münster',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
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        'CustomerID': 'RICAR',
        'OrderDate': '1997-02-14T05:00.00.000Z',
        'ShippedDate': '1997-03-07T06:25:00.000Z',
        'Freight': 68.66,
        'ShipName': 'Ricardo Adocicados',
        'ShipAddress': 'Av. Copacabana, 267',
        'ShipCity': 'Rio de Janeiro',
        'ShipRegion': 'RJ',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10448,
        'CustomerID': 'RANCH',
        'OrderDate': '1997-02-17T07:25:00.000Z',
        'ShippedDate': '1997-02-24T08:25:00.000Z',
        'Freight': 38.82,
        'ShipName': 'Rancho grande',
        'ShipAddress': 'Av. del Libertador 900',
        'ShipCity': 'Buenos Aires',
        'ShipRegion': null,
        'ShipCountry': 'Argentina'
    },
    {
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        'CustomerID': 'BLONP',
        'OrderDate': '1997-02-18T09:25:00.000Z',
        'ShippedDate': '1997-02-27T10:25:00.000Z',
        'Freight': 53.3,
        'ShipName': 'Blondel père et fils',
        'ShipAddress': '24, place Kléber',
        'ShipCity': 'Strasbourg',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10450,
        'CustomerID': 'VICTE',
        'OrderDate': '1997-02-19T11:25:00.000Z',

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    'ShippedDate': '1997-03-11T12:25:00.000Z',
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    'ShipCity': 'Lyon',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
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    'Freight': 189.09,
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    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10452,
    'CustomerID': 'SAVEA',
    'OrderDate': '1997-02-20T15:25:00.000Z',
    'ShippedDate': '1997-02-26T16:25:00.000Z',
    'Freight': 140.26,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10453,
    'CustomerID': 'AROUT',
    'OrderDate': '1997-02-21T17:25:00.000Z',
    'ShippedDate': '1997-02-26T18:25:00.000Z',
    'Freight': 25.36,
    'ShipName': 'Around the Horn',
    'ShipAddress': 'Brook Farm Stratford St. Mary',
    'ShipCity': 'Colchester',
    'ShipRegion': 'Essex',
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10454,
    'CustomerID': 'LAMAI',
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    'ShippedDate': '1997-02-25T20:25:00.000Z',
    'Freight': 2.74,
    'ShipName': 'La maison d\'Asie',
    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
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    'ShippedDate': '1997-03-03T22:25:00.000Z',
    'Freight': 180.45,
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    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
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    'OrderID': 10456,
    'CustomerID': 'KOENE',
    'OrderDate': '1997-02-25T23:25:00.000Z',
    'ShippedDate': '1997-02-28T01:25:00.000Z',
    'Freight': 8.12,
    'ShipName': 'Königlich Essen',
    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10457,
    'CustomerID': 'KOENE',
    'OrderDate': '1997-02-25T01:35:00.000Z',
    'ShippedDate': '1997-03-03T02:35:00.000Z',
    'Freight': 11.57,
    'ShipName': 'Königlich Essen',
    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10458,
    'CustomerID': 'SUPRD',
    'OrderDate': '1997-02-26T03:35:00.000Z',
    'ShippedDate': '1997-03-04T04:35:00.000Z',
    'Freight': 147.06,
    'ShipName': 'Suprêmes délices',
    'ShipAddress': 'Boulevard Tirou, 255',
    'ShipCity': 'Charleroi',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
    'OrderID': 10459,
    'CustomerID': 'VICTE',
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    'ShippedDate': '1997-02-28T04:35:00.000Z',
    'Freight': 25.09,
    'ShipName': 'Victuailles en stock',
    'ShipAddress': '2, rue du Commerce',
    'ShipCity': 'Lyon',
    'ShipRegion': null,

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    'ShipCountry': 'France'
  },
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    'CustomerID': 'FOLKO',
    'OrderDate': '1997-02-28T05:35:00.000Z',
    'ShippedDate': '1997-03-03T06:35:00.000Z',
    'Freight': 16.27,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10461,
    'CustomerID': 'LILAS',
    'OrderDate': '1997-02-28T07:35:00.000Z',
    'ShippedDate': '1997-03-05T08:35:00.000Z',
    'Freight': 148.61,
    'ShipName': 'LILA-Supermercado',
    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },
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    'OrderID': 10462,
    'CustomerID': 'CONSH',
    'OrderDate': '1997-03-03T09:00.00.000Z',
    'ShippedDate': '1997-03-18T10:00.00.000Z',
    'Freight': 6.17,
    'ShipName': 'Consolidated Holdings',
    'ShipAddress': 'Berkeley Gardens 12 Brewery',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10463,
    'CustomerID': 'SUPRD',
    'OrderDate': '1997-03-04T11:00.00.000Z',
    'ShippedDate': '1997-03-06T12:00.00.000Z',
    'Freight': 14.78,
    'ShipName': 'Suprêmes délices',
    'ShipAddress': 'Boulevard Tirou, 255',
    'ShipCity': 'Charleroi',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
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    'CustomerID': 'FURIB',
    'OrderDate': '1997-03-04T13:00.00.000Z',
    'ShippedDate': '1997-03-14T14:00.00.000Z',
    'Freight': 89,
    'ShipName': 'Furia Bacalhau e Frutos do Mar',

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        'ShipAddress': 'Jardim das rosas n. 32',
        'ShipCity': 'Lisboa',
        'ShipRegion': null,
        'ShipCountry': 'Portugal'
    },
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        'OrderID': 10465,
        'CustomerID': 'VAFFE',
        'OrderDate': '1997-03-05T15:00.00.000Z',
        'ShippedDate': '1997-03-14T16:00.00.000Z',
        'Freight': 145.04,
        'ShipName': 'Vaffeljernet',
        'ShipAddress': 'Smagsloget 45',
        'ShipCity': 'Århus',
        'ShipRegion': null,
        'ShipCountry': 'Denmark'
    },
    {
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        'CustomerID': 'COMMI',
        'OrderDate': '1997-03-06T17:00.00.000Z',
        'ShippedDate': '1997-03-13T18:00.00.000Z',
        'Freight': 11.93,
        'ShipName': 'Comércio Mineiro',
        'ShipAddress': 'Av. dos Lusíadas, 23',
        'ShipCity': 'Sao Paulo',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10467,
        'CustomerID': 'MAGAA',
        'OrderDate': '1997-03-06T19:00.00.000Z',
        'ShippedDate': '1997-03-11T20:00.00.000Z',
        'Freight': 4.93,
        'ShipName': 'Magazzini Alimentari Riuniti',
        'ShipAddress': 'Via Ludovico il Moro 22',
        'ShipCity': 'Bergamo',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
    {
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        'CustomerID': 'KOENE',
        'OrderDate': '1997-03-07T21:00.00.000Z',
        'ShippedDate': '1997-03-12T22:00.00.000Z',
        'Freight': 44.12,
        'ShipName': 'Königlich Essen',
        'ShipAddress': 'Maubelstr. 90',
        'ShipCity': 'Brandenburg',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10469,
        'CustomerID': 'WHITC',
        'OrderDate': '1997-03-10T23:00.00.000Z',

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    'ShippedDate': '1997-03-14T01:00.00.000Z',
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    'ShipAddress': '1029 - 12th Ave. S.',
    'ShipCity': 'Seattle',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10470,
    'CustomerID': 'BONAP',
    'OrderDate': '1997-03-11T02:00.00.000Z',
    'ShippedDate': '1997-03-14T03:00.00.000Z',
    'Freight': 64.56,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
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    'CustomerID': 'BSBEV',
    'OrderDate': '1997-03-11T04:00.00.000Z',
    'ShippedDate': '1997-03-18T05:00.00.000Z',
    'Freight': 45.59,
    'ShipName': 'B\'s Beverages',
    'ShipAddress': 'Fauntleroy Circus',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10472,
    'CustomerID': 'SEVES',
    'OrderDate': '1997-03-12T06:00.00.000Z',
    'ShippedDate': '1997-03-19T07:00.00.000Z',
    'Freight': 4.2,
    'ShipName': 'Seven Seas Imports',
    'ShipAddress': '90 Wadhurst Rd.',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10473,
    'CustomerID': 'ISLAT',
    'OrderDate': '1997-03-13T08:00.00.000Z',
    'ShippedDate': '1997-03-21T09:00.00.000Z',
    'Freight': 16.37,
    'ShipName': 'Island Trading',
    'ShipAddress': 'Garden House Crowther Way',
    'ShipCity': 'Cowes',
    'ShipRegion': 'Isle of Wight',
    'ShipCountry': 'UK'
  },
  {

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    'OrderID': 10474,
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    'OrderDate': '1997-03-13T10:00.00.000Z',
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    'Freight': 83.49,
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    'ShipAddress': 'Calle Dr. Jorge Cash 321',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10475,
    'CustomerID': 'SUPRD',
    'OrderDate': '1997-03-14T12:00.00.000Z',
    'ShippedDate': '1997-04-04T13:00.00.000Z',
    'Freight': 68.52,
    'ShipName': 'Suprêmes délices',
    'ShipAddress': 'Boulevard Tirou, 255',
    'ShipCity': 'Charleroi',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
    'OrderID': 10476,
    'CustomerID': 'HILAA',
    'OrderDate': '1997-03-17T14:00.00.000Z',
    'ShippedDate': '1997-03-24T15:00.00.000Z',
    'Freight': 4.41,
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    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10477,
    'CustomerID': 'PRINI',
    'OrderDate': '1997-03-17T16:00.00.000Z',
    'ShippedDate': '1997-03-25T17:00.00.000Z',
    'Freight': 13.02,
    'ShipName': 'Princesa Isabel Vinhos',
    'ShipAddress': 'Estrada da saúde n. 58',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {
    'OrderID': 10478,
    'CustomerID': 'VICTE',
    'OrderDate': '1997-03-18T18:00.00.000Z',
    'ShippedDate': '1997-03-26T19:00.00.000Z',
    'Freight': 4.81,
    'ShipName': 'Victuailles en stock',
    'ShipAddress': '2, rue du Commerce',
    'ShipCity': 'Lyon',
    'ShipRegion': null,

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    'ShipCountry': 'France'
  },
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    'OrderID': 10479,
    'CustomerID': 'RATTC',
    'OrderDate': '1997-03-19T20:00.00.000Z',
    'ShippedDate': '1997-03-21T21:00.00.000Z',
    'Freight': 708.95,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10480,
    'CustomerID': 'FOLIG',
    'OrderDate': '1997-03-20T22:00.00.000Z',
    'ShippedDate': '1997-03-24T23:00.00.000Z',
    'Freight': 1.35,
    'ShipName': 'Folies gourmandes',
    'ShipAddress': '184, chaussée de Tournai',
    'ShipCity': 'Lille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10481,
    'CustomerID': 'RICAR',
    'OrderDate': '1997-03-20T01:00.00.000Z',
    'ShippedDate': '1997-03-25T02:00.00.000Z',
    'Freight': 64.33,
    'ShipName': 'Ricardo Adocicados',
    'ShipAddress': 'Av. Copacabana, 267',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10482,
    'CustomerID': 'LAZYK',
    'OrderDate': '1997-03-21T03:00.00.000Z',
    'ShippedDate': '1997-04-10T04:00.00.000Z',
    'Freight': 7.48,
    'ShipName': 'Lazy K Kountry Store',
    'ShipAddress': '12 Orchestra Terrace',
    'ShipCity': 'Walla Walla',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10483,
    'CustomerID': 'WHITC',
    'OrderDate': '1997-03-24T05:00.00.000Z',
    'ShippedDate': '1997-04-25T06:00.00.000Z',
    'Freight': 15.28,
    'ShipName': 'White Clover Markets',

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        'ShipAddress': '1029 - 12th Ave. S.',
        'ShipCity': 'Seattle',
        'ShipRegion': 'WA',
        'ShipCountry': 'USA'
    },
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        'CustomerID': 'BSBEV',
        'OrderDate': '1997-03-24T07:00.00.000Z',
        'ShippedDate': '1997-04-01T08:00.00.000Z',
        'Freight': 6.88,
        'ShipName': 'B\'s Beverages',
        'ShipAddress': 'Fauntleroy Circus',
        'ShipCity': 'London',
        'ShipRegion': null,
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10485,
        'CustomerID': 'LINOD',
        'OrderDate': '1997-03-25T09:00.00.000Z',
        'ShippedDate': '1997-03-31T10:00.00.000Z',
        'Freight': 64.45,
        'ShipName': 'LINO-Delicateses',
        'ShipAddress': 'Ave. 5 de Mayo Porlamar',
        'ShipCity': 'I. de Margarita',
        'ShipRegion': 'Nueva Esparta',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 10486,
        'CustomerID': 'HILAA',
        'OrderDate': '1997-03-26T11:00.00.000Z',
        'ShippedDate': '1997-04-02T12:00.00.000Z',
        'Freight': 30.53,
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        'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
        'ShipCity': 'San Cristóbal',
        'ShipRegion': 'Táchira',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 10487,
        'CustomerID': 'QUEEN',
        'OrderDate': '1997-03-26T13:00.00.000Z',
        'ShippedDate': '1997-03-28T14:00.00.000Z',
        'Freight': 71.07,
        'ShipName': 'Queen Cozinha',
        'ShipAddress': 'Alameda dos Canários, 891',
        'ShipCity': 'Sao Paulo',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
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        'CustomerID': 'FRANK',
        'OrderDate': '1997-03-27T15:00.00.000Z',

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    'ShippedDate': '1997-04-02T16:00.00.000Z',
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    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10489,
    'CustomerID': 'PICCO',
    'OrderDate': '1997-03-28T17:00.00.000Z',
    'ShippedDate': '1997-04-09T18:00.00.000Z',
    'Freight': 5.29,
    'ShipName': 'Piccolo und mehr',
    'ShipAddress': 'Geislweg 14',
    'ShipCity': 'Salzburg',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10490,
    'CustomerID': 'HILAA',
    'OrderDate': '1997-03-31T19:00.00.000Z',
    'ShippedDate': '1997-04-03T20:00.00.000Z',
    'Freight': 210.19,
    'ShipName': 'HILARION-Abastos',
    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10491,
    'CustomerID': 'FURIB',
    'OrderDate': '1997-03-31T21:00.00.000Z',
    'ShippedDate': '1997-04-08T22:00.00.000Z',
    'Freight': 16.96,
    'ShipName': 'Furia Bacalhau e Frutos do Mar',
    'ShipAddress': 'Jardim das rosas n. 32',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {
    'OrderID': 10492,
    'CustomerID': 'BOTTM',
    'OrderDate': '1997-04-01T23:00.00.000Z',
    'ShippedDate': '1997-04-11T01:00.00.000Z',
    'Freight': 62.89,
    'ShipName': 'Bottom-Dollar Markets',
    'ShipAddress': '23 Tsawassen Blvd.',
    'ShipCity': 'Tsawassen',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
  {

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    'OrderID': 10493,
    'CustomerID': 'LAMAI',
    'OrderDate': '1997-04-02T02:00.00.000Z',
    'ShippedDate': '1997-04-10T03:00.00.000Z',
    'Freight': 10.64,
    'ShipName': 'La maison d\'Asie',
    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10494,
    'CustomerID': 'COMMI',
    'OrderDate': '1997-04-02T04:00.00.000Z',
    'ShippedDate': '1997-04-09T05:00.00.000Z',
    'Freight': 65.99,
    'ShipName': 'Comércio Mineiro',
    'ShipAddress': 'Av. dos Lusíadas, 23',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10495,
    'CustomerID': 'LAUGB',
    'OrderDate': '1997-04-03T06:00.00.000Z',
    'ShippedDate': '1997-04-11T07:00.00.000Z',
    'Freight': 4.65,
    'ShipName': 'Laughing Bacchus Wine Cellars',
    'ShipAddress': '2319 Elm St.',
    'ShipCity': 'Vancouver',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10496,
    'CustomerID': 'TRADH',
    'OrderDate': '1997-04-04T08:00.00.000Z',
    'ShippedDate': '1997-04-07T09:00.00.000Z',
    'Freight': 46.77,
    'ShipName': 'Tradição Hipermercados',
    'ShipAddress': 'Av. Inês de Castro, 414',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10497,
    'CustomerID': 'LEHMS',
    'OrderDate': '1997-04-04T10:00.00.000Z',
    'ShippedDate': '1997-04-07T11:00.00.000Z',
    'Freight': 36.21,
    'ShipName': 'Lehmanns Marktstand',
    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,

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        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10498,
        'CustomerID': 'HILAA',
        'OrderDate': '1997-04-07T12:00.00.000Z',
        'ShippedDate': '1997-04-11T13:00.00.000Z',
        'Freight': 29.75,
        'ShipName': 'HILARION-Abastos',
        'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
        'ShipCity': 'San Cristóbal',
        'ShipRegion': 'Táchira',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 10499,
        'CustomerID': 'LILAS',
        'OrderDate': '1997-04-08T14:00.00.000Z',
        'ShippedDate': '1997-04-16T15:00.00.000Z',
        'Freight': 102.02,
        'ShipName': 'LILA-Supermercado',
        'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
        'ShipCity': 'Barquisimeto',
        'ShipRegion': 'Lara',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 10500,
        'CustomerID': 'LAMAI',
        'OrderDate': '1997-04-09T16:00.00.000Z',
        'ShippedDate': '1997-04-17T17:00.00.000Z',
        'Freight': 42.68,
        'ShipName': 'La maison d\'Asie',
        'ShipAddress': '1 rue Alsace-Lorraine',
        'ShipCity': 'Toulouse',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10501,
        'CustomerID': 'BLAUS',
        'OrderDate': '1997-04-09T18:00.00.000Z',
        'ShippedDate': '1997-04-16T19:00.00.000Z',
        'Freight': 8.85,
        'ShipName': 'Blauer See Delikatessen',
        'ShipAddress': 'Forsterstr. 57',
        'ShipCity': 'Mannheim',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10502,
        'CustomerID': 'PERIC',
        'OrderDate': '1997-04-10T20:00.00.000Z',
        'ShippedDate': '1997-04-29T21:00.00.000Z',
        'Freight': 69.32,
        'ShipName': 'Pericles Comidas clásicas',

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    'ShipAddress': 'Calle Dr. Jorge Cash 321',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10503,
    'CustomerID': 'HUNGO',
    'OrderDate': '1997-04-11T22:00.00.000Z',
    'ShippedDate': '1997-04-16T23:00.00.000Z',
    'Freight': 16.74,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10504,
    'CustomerID': 'WHITC',
    'OrderDate': '1997-04-11T01:00.00.000Z',
    'ShippedDate': '1997-04-18T02:00.00.000Z',
    'Freight': 59.13,
    'ShipName': 'White Clover Markets',
    'ShipAddress': '1029 - 12th Ave. S.',
    'ShipCity': 'Seattle',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10505,
    'CustomerID': 'MEREP',
    'OrderDate': '1997-04-14T03:00.00.000Z',
    'ShippedDate': '1997-04-21T04:00.00.000Z',
    'Freight': 7.13,
    'ShipName': 'Mère Paillarde',
    'ShipAddress': '43 rue St. Laurent',
    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10506,
    'CustomerID': 'KOENE',
    'OrderDate': '1997-04-15T05:05:00.000Z',
    'ShippedDate': '1997-05-02T06:05:00.000Z',
    'Freight': 21.19,
    'ShipName': 'Königlich Essen',
    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10507,
    'CustomerID': 'ANTON',
    'OrderDate': '1997-04-15T07:05:00.000Z',

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    'ShippedDate': '1997-04-22T08:05:00.000Z',
    'Freight': 47.45,
    'ShipName': 'Antonio Moreno Taquería',
    'ShipAddress': 'Mataderos 2312',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10508,
    'CustomerID': 'OTTIK',
    'OrderDate': '1997-04-16T09:05:00.000Z',
    'ShippedDate': '1997-05-13T10:05:00.000Z',
    'Freight': 4.99,
    'ShipName': 'Ottilies Käseladen',
    'ShipAddress': 'Mehrheimerstr. 369',
    'ShipCity': 'Köln',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10509,
    'CustomerID': 'BLAUS',
    'OrderDate': '1997-04-17T11:05:00.000Z',
    'ShippedDate': '1997-04-29T12:05:00.000Z',
    'Freight': 0.15,
    'ShipName': 'Blauer See Delikatessen',
    'ShipAddress': 'Forsterstr. 57',
    'ShipCity': 'Mannheim',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10510,
    'CustomerID': 'SAVEA',
    'OrderDate': '1997-04-18T13:05:00.000Z',
    'ShippedDate': '1997-04-28T14:05:00.000Z',
    'Freight': 367.63,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10511,
    'CustomerID': 'BONAP',
    'OrderDate': '1997-04-18T15:05:00.000Z',
    'ShippedDate': '1997-04-21T01:05:00.000Z',
    'Freight': 350.64,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {

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    'OrderID': 10512,
    'CustomerID': 'FAMIA',
    'OrderDate': '1997-04-21T02:05:00.000Z',
    'ShippedDate': '1997-04-24T03:05:00.000Z',
    'Freight': 3.53,
    'ShipName': 'Familia Arquibaldo',
    'ShipAddress': 'Rua Orós, 92',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10513,
    'CustomerID': 'WANDK',
    'OrderDate': '1997-04-22T04:05:00.000Z',
    'ShippedDate': '1997-04-28T05:05:00.000Z',
    'Freight': 105.65,
    'ShipName': 'Die Wandernde Kuh',
    'ShipAddress': 'Adenauerallee 900',
    'ShipCity': 'Stuttgart',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10514,
    'CustomerID': 'ERNSH',
    'OrderDate': '1997-04-22T05:05:00.000Z',
    'ShippedDate': '1997-05-16T07:05:00.000Z',
    'Freight': 789.95,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10515,
    'CustomerID': 'QUICK',
    'OrderDate': '1997-04-23T08:05:00.000Z',
    'ShippedDate': '1997-05-23T09:05:00.000Z',
    'Freight': 204.47,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10516,
    'CustomerID': 'HUNGO',
    'OrderDate': '1997-04-24T10:05:00.000Z',
    'ShippedDate': '1997-05-01T11:05:00.000Z',
    'Freight': 62.78,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
  }

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    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10517,
    'CustomerID': 'NORTS',
    'OrderDate': '1997-04-24T12:05:00.000Z',
    'ShippedDate': '1997-04-29T13:05:00.000Z',
    'Freight': 32.07,
    'ShipName': 'North/South',
    'ShipAddress': 'South House 300 Queensbridge',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10518,
    'CustomerID': 'TORTU',
    'OrderDate': '1997-04-25T14:05:00.000Z',
    'ShippedDate': '1997-05-05T15:05:00.000Z',
    'Freight': 218.15,
    'ShipName': 'Tortuga Restaurante',
    'ShipAddress': 'Avda. Azteca 123',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10519,
    'CustomerID': 'CHOPS',
    'OrderDate': '1997-04-28T16:05:00.000Z',
    'ShippedDate': '1997-05-01T17:05:00.000Z',
    'Freight': 91.76,
    'ShipName': 'Chop-suey Chinese',
    'ShipAddress': 'Hauptstr. 31',
    'ShipCity': 'Bern',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
  {
    'OrderID': 10520,
    'CustomerID': 'SANTG',
    'OrderDate': '1997-04-29T18:05:00.000Z',
    'ShippedDate': '1997-05-01T19:05:00.000Z',
    'Freight': 13.37,
    'ShipName': 'Santé Gourmet',
    'ShipAddress': 'Erling Skakkes gate 78',
    'ShipCity': 'Stavern',
    'ShipRegion': null,
    'ShipCountry': 'Norway'
  },
  {
    'OrderID': 10521,
    'CustomerID': 'CACTU',
    'OrderDate': '1997-04-29T20:05:00.000Z',
    'ShippedDate': '1997-05-02T21:05:00.000Z',
    'Freight': 17.22,
    'ShipName': 'Cactus Comidas para llevar',

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    'ShipAddress': 'Cerrito 333',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },
  {
    'OrderID': 10522,
    'CustomerID': 'LEHMS',
    'OrderDate': '1997-04-30T22:05:00.000Z',
    'ShippedDate': '1997-05-06T23:05:00.000Z',
    'Freight': 45.33,
    'ShipName': 'Lehmanns Marktstand',
    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10523,
    'CustomerID': 'SEVES',
    'OrderDate': '1997-05-01T01:10:00.000Z',
    'ShippedDate': '1997-05-30T02:10:00.000Z',
    'Freight': 77.63,
    'ShipName': 'Seven Seas Imports',
    'ShipAddress': '90 Wadhurst Rd.',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10524,
    'CustomerID': 'BERGS',
    'OrderDate': '1997-05-01T03:10:00.000Z',
    'ShippedDate': '1997-05-07T04:10:00.000Z',
    'Freight': 244.79,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10525,
    'CustomerID': 'BONAP',
    'OrderDate': '1997-05-02T05:10:00.000Z',
    'ShippedDate': '1997-05-23T06:10:00.000Z',
    'Freight': 11.06,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10526,
    'CustomerID': 'WARTH',
    'OrderDate': '1997-05-05T07:10:00.000Z',

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    'ShippedDate': '1997-05-15T08:10:00.000Z',
    'Freight': 58.59,
    'ShipName': 'Wartian Herkku',
    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 10527,
    'CustomerID': 'QUICK',
    'OrderDate': '1997-05-05T09:10:00.000Z',
    'ShippedDate': '1997-05-07T10:10:00.000Z',
    'Freight': 41.9,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10528,
    'CustomerID': 'GREAL',
    'OrderDate': '1997-05-06T11:10:00.000Z',
    'ShippedDate': '1997-05-09T12:10:00.000Z',
    'Freight': 3.35,
    'ShipName': 'Great Lakes Food Market',
    'ShipAddress': '2732 Baker Blvd.',
    'ShipCity': 'Eugene',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10529,
    'CustomerID': 'MAISD',
    'OrderDate': '1997-05-07T13:10:00.000Z',
    'ShippedDate': '1997-05-09T14:10:00.000Z',
    'Freight': 66.69,
    'ShipName': 'Maison Dewey',
    'ShipAddress': 'Rue Joseph-Bens 532',
    'ShipCity': 'Bruxelles',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
    'OrderID': 10530,
    'CustomerID': 'PICCO',
    'OrderDate': '1997-05-08T15:10:00.000Z',
    'ShippedDate': '1997-05-12T16:10:00.000Z',
    'Freight': 339.22,
    'ShipName': 'Piccolo und mehr',
    'ShipAddress': 'Geislweg 14',
    'ShipCity': 'Salzburg',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {

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    'OrderID': 10531,
    'CustomerID': 'OCEAN',
    'OrderDate': '1997-05-08T17:10:00.000Z',
    'ShippedDate': '1997-05-19T18:10:00.000Z',
    'Freight': 8.12,
    'ShipName': 'Océano Atlántico Ltda.',
    'ShipAddress': 'Ing. Gustavo Moncada 8585 Piso 20-A',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },
  {
    'OrderID': 10532,
    'CustomerID': 'EASTC',
    'OrderDate': '1997-05-09T19:10:00.000Z',
    'ShippedDate': '1997-05-12T20:10:00.000Z',
    'Freight': 74.46,
    'ShipName': 'Eastern Connection',
    'ShipAddress': '35 King George',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10533,
    'CustomerID': 'FOLKO',
    'OrderDate': '1997-05-12T21:10:00.000Z',
    'ShippedDate': '1997-05-22T22:10:00.000Z',
    'Freight': 188.04,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10534,
    'CustomerID': 'LEHMS',
    'OrderDate': '1997-05-12T23:10:00.000Z',
    'ShippedDate': '1997-05-14T01:15:00.000Z',
    'Freight': 27.94,
    'ShipName': 'Lehmanns Marktstand',
    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10535,
    'CustomerID': 'ANTON',
    'OrderDate': '1997-05-13T02:15:00.000Z',
    'ShippedDate': '1997-05-21T03:15:00.000Z',
    'Freight': 15.64,
    'ShipName': 'Antonio Moreno Taquería',
    'ShipAddress': 'Mataderos 2312',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,

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    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10536,
    'CustomerID': 'LEHMS',
    'OrderDate': '1997-05-14T04:15:00.000Z',
    'ShippedDate': '1997-06-06T05:15:00.000Z',
    'Freight': 58.88,
    'ShipName': 'Lehmanns Marktstand',
    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10537,
    'CustomerID': 'RICSU',
    'OrderDate': '1997-05-14T06:15:00.000Z',
    'ShippedDate': '1997-05-19T07:15:00.000Z',
    'Freight': 78.85,
    'ShipName': 'Richter Supermarkt',
    'ShipAddress': 'Starenweg 5',
    'ShipCity': 'Genève',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
  {
    'OrderID': 10538,
    'CustomerID': 'BSBEV',
    'OrderDate': '1997-05-15T08:15:00.000Z',
    'ShippedDate': '1997-05-16T09:15:00.000Z',
    'Freight': 4.87,
    'ShipName': 'B\'s Beverages',
    'ShipAddress': 'Fauntleroy Circus',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10539,
    'CustomerID': 'BSBEV',
    'OrderDate': '1997-05-16T10:15:00.000Z',
    'ShippedDate': '1997-05-23T11:15:00.000Z',
    'Freight': 12.36,
    'ShipName': 'B\'s Beverages',
    'ShipAddress': 'Fauntleroy Circus',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10540,
    'CustomerID': 'QUICK',
    'OrderDate': '1997-05-19T12:15:00.000Z',
    'ShippedDate': '1997-06-13T13:15:00.000Z',
    'Freight': 1007.64,
    'ShipName': 'QUICK-Stop',

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        'ShipAddress': 'Taucherstraße 10',
        'ShipCity': 'Cunewalde',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10541,
        'CustomerID': 'HANAR',
        'OrderDate': '1997-05-19T14:15:00.000Z',
        'ShippedDate': '1997-05-29T15:15:00.000Z',
        'Freight': 68.65,
        'ShipName': 'Hanari Carnes',
        'ShipAddress': 'Rua do Paço, 67',
        'ShipCity': 'Rio de Janeiro',
        'ShipRegion': 'RJ',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10542,
        'CustomerID': 'KOENE',
        'OrderDate': '1997-05-20T16:15:00.000Z',
        'ShippedDate': '1997-05-26T17:15:00.000Z',
        'Freight': 10.95,
        'ShipName': 'Königlich Essen',
        'ShipAddress': 'Maubelstr. 90',
        'ShipCity': 'Brandenburg',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10543,
        'CustomerID': 'LILAS',
        'OrderDate': '1997-05-21T18:15:00.000Z',
        'ShippedDate': '1997-05-23T19:15:00.000Z',
        'Freight': 48.17,
        'ShipName': 'LILA-Supermercado',
        'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
        'ShipCity': 'Barquisimeto',
        'ShipRegion': 'Lara',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 10544,
        'CustomerID': 'LONEP',
        'OrderDate': '1997-05-21T20:15:00.000Z',
        'ShippedDate': '1997-05-30T21:15:00.000Z',
        'Freight': 24.91,
        'ShipName': 'Lonesome Pine Restaurant',
        'ShipAddress': '89 Chiaroscuro Rd.',
        'ShipCity': 'Portland',
        'ShipRegion': 'OR',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10545,
        'CustomerID': 'LAZYK',
        'OrderDate': '1997-05-22T23:15:00.000Z',

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    'ShippedDate': '1997-06-26T01:20:00.000Z',
    'Freight': 11.92,
    'ShipName': 'Lazy K Kountry Store',
    'ShipAddress': '12 Orchestra Terrace',
    'ShipCity': 'Walla Walla',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10546,
    'CustomerID': 'VICTE',
    'OrderDate': '1997-05-23T02:20:00.000Z',
    'ShippedDate': '1997-05-27T03:20:00.000Z',
    'Freight': 194.72,
    'ShipName': 'Victuailles en stock',
    'ShipAddress': '2, rue du Commerce',
    'ShipCity': 'Lyon',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10547,
    'CustomerID': 'SEVES',
    'OrderDate': '1997-05-23T04:20:00.000Z',
    'ShippedDate': '1997-06-02T05:20:00.000Z',
    'Freight': 178.43,
    'ShipName': 'Seven Seas Imports',
    'ShipAddress': '90 Wadhurst Rd.',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10548,
    'CustomerID': 'TOMSP',
    'OrderDate': '1997-05-26T06:20:00.000Z',
    'ShippedDate': '1997-06-02T07:20:00.000Z',
    'Freight': 1.43,
    'ShipName': 'Toms Spezialitäten',
    'ShipAddress': 'Luisenstr. 48',
    'ShipCity': 'Münster',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10549,
    'CustomerID': 'QUICK',
    'OrderDate': '1997-05-27T08:20:00.000Z',
    'ShippedDate': '1997-05-30T09:20:00.000Z',
    'Freight': 171.24,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {

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    'OrderID': 10550,
    'CustomerID': 'GODOS',
    'OrderDate': '1997-05-28T10:20:00.000Z',
    'ShippedDate': '1997-06-06T11:20:00.000Z',
    'Freight': 4.32,
    'ShipName': 'Godos Cocina Típica',
    'ShipAddress': 'C/ Romero, 33',
    'ShipCity': 'Sevilla',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10551,
    'CustomerID': 'FURIB',
    'OrderDate': '1997-05-28T12:20:00.000Z',
    'ShippedDate': '1997-06-06T13:20:00.000Z',
    'Freight': 72.95,
    'ShipName': 'Furia Bacalhau e Frutos do Mar',
    'ShipAddress': 'Jardim das rosas n. 32',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {
    'OrderID': 10552,
    'CustomerID': 'HILAA',
    'OrderDate': '1997-05-29T14:20:00.000Z',
    'ShippedDate': '1997-06-05T15:20:00.000Z',
    'Freight': 83.22,
    'ShipName': 'HILARION-Abastos',
    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10553,
    'CustomerID': 'WARTH',
    'OrderDate': '1997-05-30T16:20:00.000Z',
    'ShippedDate': '1997-06-03T17:20:00.000Z',
    'Freight': 149.49,
    'ShipName': 'Wartian Herkku',
    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
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    'CustomerID': 'OTTIK',
    'OrderDate': '1997-05-30T18:20:00.000Z',
    'ShippedDate': '1997-06-05T19:20:00.000Z',
    'Freight': 120.97,
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    'ShipAddress': 'Mehrheimerstr. 369',
    'ShipCity': 'Köln',
    'ShipRegion': null,

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    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10555,
    'CustomerID': 'SAVEA',
    'OrderDate': '1997-06-02T20:20:00.000Z',
    'ShippedDate': '1997-06-04T21:20:00.000Z',
    'Freight': 252.49,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10556,
    'CustomerID': 'SIMOB',
    'OrderDate': '1997-06-03T22:20:00.000Z',
    'ShippedDate': '1997-06-13T23:20:00.000Z',
    'Freight': 9.8,
    'ShipName': 'Simons bistro',
    'ShipAddress': 'Vinbæltet 34',
    'ShipCity': 'Kobenhavn',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
    'OrderID': 10557,
    'CustomerID': 'LEHMS',
    'OrderDate': '1997-06-03T01:25:00.000Z',
    'ShippedDate': '1997-06-06T02:25:00.000Z',
    'Freight': 96.72,
    'ShipName': 'Lehmanns Marktstand',
    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10558,
    'CustomerID': 'AROUT',
    'OrderDate': '1997-06-04T03:25:00.000Z',
    'ShippedDate': '1997-06-10T04:25:00.000Z',
    'Freight': 72.97,
    'ShipName': 'Around the Horn',
    'ShipAddress': 'Brook Farm Stratford St. Mary',
    'ShipCity': 'Colchester',
    'ShipRegion': 'Essex',
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10559,
    'CustomerID': 'BLONP',
    'OrderDate': '1997-06-05T05:25:00.000Z',
    'ShippedDate': '1997-06-13T06:25:00.000Z',
    'Freight': 8.05,
    'ShipName': 'Blondel père et fils',

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        'ShipAddress': '24, place Kléber',
        'ShipCity': 'Strasbourg',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
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        'CustomerID': 'FRANK',
        'OrderDate': '1997-06-06T07:25:00.000Z',
        'ShippedDate': '1997-06-09T08:25:00.000Z',
        'Freight': 36.65,
        'ShipName': 'Frankenversand',
        'ShipAddress': 'Berliner Platz 43',
        'ShipCity': 'München',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10561,
        'CustomerID': 'FOLKO',
        'OrderDate': '1997-06-06T09:25:00.000Z',
        'ShippedDate': '1997-06-09T10:25:00.000Z',
        'Freight': 242.21,
        'ShipName': 'Folk och fä HB',
        'ShipAddress': 'Åkergatan 24',
        'ShipCity': 'Bräcke',
        'ShipRegion': null,
        'ShipCountry': 'Sweden'
    },
    {
        'OrderID': 10562,
        'CustomerID': 'REGGC',
        'OrderDate': '1997-06-09T11:25:00.000Z',
        'ShippedDate': '1997-06-12T12:25:00.000Z',
        'Freight': 22.95,
        'ShipName': 'Reggiani Caseifici',
        'ShipAddress': 'Strada Provinciale 124',
        'ShipCity': 'Reggio Emilia',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
    {
        'OrderID': 10563,
        'CustomerID': 'RICAR',
        'OrderDate': '1997-06-10T13:25:00.000Z',
        'ShippedDate': '1997-06-24T14:25:00.000Z',
        'Freight': 60.43,
        'ShipName': 'Ricardo Adocicados',
        'ShipAddress': 'Av. Copacabana, 267',
        'ShipCity': 'Rio de Janeiro',
        'ShipRegion': 'RJ',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10564,
        'CustomerID': 'RATTC',
        'OrderDate': '1997-06-10T15:25:00.000Z',

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    'ShippedDate': '1997-06-16T16:25:00.000Z',
    'Freight': 13.75,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10565,
    'CustomerID': 'MEREP',
    'OrderDate': '1997-06-11T17:25:00.000Z',
    'ShippedDate': '1997-06-18T18:25:00.000Z',
    'Freight': 7.15,
    'ShipName': 'Mère Paillarde',
    'ShipAddress': '43 rue St. Laurent',
    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10566,
    'CustomerID': 'BLONP',
    'OrderDate': '1997-06-12T01:10:00.000Z',
    'ShippedDate': '1997-06-18T02:10:00.000Z',
    'Freight': 88.4,
    'ShipName': 'Blondel père et fils',
    'ShipAddress': '24, place Kléber',
    'ShipCity': 'Strasbourg',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10567,
    'CustomerID': 'HUNGO',
    'OrderDate': '1997-06-12T03:10:00.000Z',
    'ShippedDate': '1997-06-17T03:10:00.000Z',
    'Freight': 33.97,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10568,
    'CustomerID': 'GALED',
    'OrderDate': '1997-06-13T04:10:00.000Z',
    'ShippedDate': '1997-07-09T05:10:00.000Z',
    'Freight': 6.54,
    'ShipName': 'Galería del gastronómo',
    'ShipAddress': 'Rambla de Catalunya, 23',
    'ShipCity': 'Barcelona',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {

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    'OrderID': 10569,
    'CustomerID': 'RATTC',
    'OrderDate': '1997-06-16T06:10:00.000Z',
    'ShippedDate': '1997-07-11T07:10:00.000Z',
    'Freight': 58.98,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10570,
    'CustomerID': 'MEREP',
    'OrderDate': '1997-06-17T08:10:00.000Z',
    'ShippedDate': '1997-06-19T09:10:00.000Z',
    'Freight': 188.99,
    'ShipName': 'Mère Paillarde',
    'ShipAddress': '43 rue St. Laurent',
    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10571,
    'CustomerID': 'ERNSH',
    'OrderDate': '1997-06-17T10:10:00.000Z',
    'ShippedDate': '1997-07-04T11:10:00.000Z',
    'Freight': 26.06,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10572,
    'CustomerID': 'BERGS',
    'OrderDate': '1997-06-18T12:10:00.000Z',
    'ShippedDate': '1997-06-25T13:10:00.000Z',
    'Freight': 116.43,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10573,
    'CustomerID': 'ANTON',
    'OrderDate': '1997-06-19T14:10:00.000Z',
    'ShippedDate': '1997-06-20T15:10:00.000Z',
    'Freight': 84.84,
    'ShipName': 'Antonio Moreno Taquería',
    'ShipAddress': 'Mataderos 2312',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,

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    'ShipCountry': 'Mexico'
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  {
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    'CustomerID': 'TRAIH',
    'OrderDate': '1997-06-19T16:10:00.000Z',
    'ShippedDate': '1997-06-30T17:10:00.000Z',
    'Freight': 37.6,
    'ShipName': 'Trail\'s Head Gourmet Provisioners',
    'ShipAddress': '722 DaVinci Blvd.',
    'ShipCity': 'Kirkland',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10575,
    'CustomerID': 'MORGK',
    'OrderDate': '1997-06-20T18:10:00.000Z',
    'ShippedDate': '1997-06-30T19:10:00.000Z',
    'Freight': 127.34,
    'ShipName': 'Morgenstern Gesundkost',
    'ShipAddress': 'Heerstr. 22',
    'ShipCity': 'Leipzig',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10576,
    'CustomerID': 'TORTU',
    'OrderDate': '1997-06-23T20:10:00.000Z',
    'ShippedDate': '1997-06-30T21:10:00.000Z',
    'Freight': 18.56,
    'ShipName': 'Tortuga Restaurante',
    'ShipAddress': 'Avda. Azteca 123',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10577,
    'CustomerID': 'TRAIH',
    'OrderDate': '1997-06-23T22:10:00.000Z',
    'ShippedDate': '1997-06-30T23:10:00.000Z',
    'Freight': 25.41,
    'ShipName': 'Trail\'s Head Gourmet Provisioners',
    'ShipAddress': '722 DaVinci Blvd.',
    'ShipCity': 'Kirkland',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10578,
    'CustomerID': 'BSBEV',
    'OrderDate': '1997-06-24T23:10:00.000Z',
    'ShippedDate': '1997-07-25T01:15:00.000Z',
    'Freight': 29.6,
    'ShipName': 'B\'s Beverages',

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        'ShipAddress': 'Fauntleroy Circus',
        'ShipCity': 'London',
        'ShipRegion': null,
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10579,
        'CustomerID': 'LETSS',
        'OrderDate': '1997-06-25T01:30:00.000Z',
        'ShippedDate': '1997-07-04T02:30:00.000Z',
        'Freight': 13.73,
        'ShipName': 'Let\'s Stop N Shop',
        'ShipAddress': '87 Polk St. Suite 5',
        'ShipCity': 'San Francisco',
        'ShipRegion': 'CA',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10580,
        'CustomerID': 'OTTIK',
        'OrderDate': '1997-06-26T03:30:00.000Z',
        'ShippedDate': '1997-07-01T04:30:00.000Z',
        'Freight': 75.89,
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        'ShipAddress': 'Mehrheimerstr. 369',
        'ShipCity': 'Köln',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10581,
        'CustomerID': 'FAMIA',
        'OrderDate': '1997-06-26T05:30:00.000Z',
        'ShippedDate': '1997-07-02T06:30:00.000Z',
        'Freight': 3.01,
        'ShipName': 'Familia Arquibaldo',
        'ShipAddress': 'Rua Orós, 92',
        'ShipCity': 'Sao Paulo',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10582,
        'CustomerID': 'BLAUS',
        'OrderDate': '1997-06-27T07:30:00.000Z',
        'ShippedDate': '1997-07-14T08:30:00.000Z',
        'Freight': 27.71,
        'ShipName': 'Blauer See Delikatessen',
        'ShipAddress': 'Forsterstr. 57',
        'ShipCity': 'Mannheim',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10583,
        'CustomerID': 'WARTH',
        'OrderDate': '1997-06-30T08:30:00.000Z',

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    'ShippedDate': '1997-07-04T09:30:00.000Z',
    'Freight': 7.28,
    'ShipName': 'Wartian Herkku',
    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 10584,
    'CustomerID': 'BLONP',
    'OrderDate': '1997-06-30T10:30:00.000Z',
    'ShippedDate': '1997-07-04T11:30:00.000Z',
    'Freight': 59.14,
    'ShipName': 'Blondel père et fils',
    'ShipAddress': '24, place Kléber',
    'ShipCity': 'Strasbourg',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10585,
    'CustomerID': 'WELLI',
    'OrderDate': '1997-07-01T12:30:00.000Z',
    'ShippedDate': '1997-07-10T13:30:00.000Z',
    'Freight': 13.41,
    'ShipName': 'Wellington Importadora',
    'ShipAddress': 'Rua do Mercado, 12',
    'ShipCity': 'Resende',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10586,
    'CustomerID': 'REGGC',
    'OrderDate': '1997-07-02T14:30:00.000Z',
    'ShippedDate': '1997-07-09T15:30:00.000Z',
    'Freight': 0.48,
    'ShipName': 'Reggiani Caseifici',
    'ShipAddress': 'Strada Provinciale 124',
    'ShipCity': 'Reggio Emilia',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 10587,
    'CustomerID': 'QUEDE',
    'OrderDate': '1997-07-02T16:30:00.000Z',
    'ShippedDate': '1997-07-09T17:30:00.000Z',
    'Freight': 62.52,
    'ShipName': 'Que Delícia',
    'ShipAddress': 'Rua da Panificadora, 12',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  }
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      'OrderDate': '1997-07-03T18:30:00.000Z',
      'ShippedDate': '1997-07-10T19:30:00.000Z',
      'Freight': 194.67,
      'ShipName': 'QUICK-Stop',
      'ShipAddress': 'Taucherstraße 10',
      'ShipCity': 'Cunewalde',
      'ShipRegion': null,
      'ShipCountry': 'Germany'
    },
    {
      'OrderID': 10589,
      'CustomerID': 'GREAL',
      'OrderDate': '1997-07-04T20:30:00.000Z',
      'ShippedDate': '1997-07-14T21:30:00.000Z',
      'Freight': 4.42,
      'ShipName': 'Great Lakes Food Market',
      'ShipAddress': '2732 Baker Blvd.',
      'ShipCity': 'Eugene',
      'ShipRegion': 'OR',
      'ShipCountry': 'USA'
    },
    {
      'OrderID': 10590,
      'CustomerID': 'MEREP',
      'OrderDate': '1997-07-07T22:30:00.000Z',
      'ShippedDate': '1997-07-14T23:30:00.000Z',
      'Freight': 44.77,
      'ShipName': 'Mère Paillarde',
      'ShipAddress': '43 rue St. Laurent',
      'ShipCity': 'Montréal',
      'ShipRegion': 'Québec',
      'ShipCountry': 'Canada'
    },
    {
      'OrderID': 10591,
      'CustomerID': 'VAFFE',
      'OrderDate': '1997-07-07T22:30:00.000Z',
      'ShippedDate': '1997-07-16T01:40:00.000Z',
      'Freight': 55.92,
      'ShipName': 'Vaffeljernet',
      'ShipAddress': 'Smagsloget 45',
      'ShipCity': 'Århus',
      'ShipRegion': null,
      'ShipCountry': 'Denmark'
    },
    {
      'OrderID': 10592,
      'CustomerID': 'LEHMS',
      'OrderDate': '1997-07-08T02:40:00.000Z',
      'ShippedDate': '1997-07-16T03:40:00.000Z',
      'Freight': 32.1,
      'ShipName': 'Lehmanns Marktstand',
      'ShipAddress': 'Magazinweg 7',
      'ShipCity': 'Frankfurt a.M.',
      'ShipRegion': null,

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    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10593,
    'CustomerID': 'LEHMS',
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    'ShippedDate': '1997-08-13T05:40:00.000Z',
    'Freight': 174.2,
    'ShipName': 'Lehmanns Marktstand',
    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10594,
    'CustomerID': 'OLDWO',
    'OrderDate': '1997-07-09T06:40:00.000Z',
    'ShippedDate': '1997-07-16T07:40:00.000Z',
    'Freight': 5.24,
    'ShipName': 'Old World Delicatessen',
    'ShipAddress': '2743 Bering St.',
    'ShipCity': 'Anchorage',
    'ShipRegion': 'AK',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10595,
    'CustomerID': 'ERNSH',
    'OrderDate': '1997-07-10T08:40:00.000Z',
    'ShippedDate': '1997-07-14T09:40:00.000Z',
    'Freight': 96.78,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10596,
    'CustomerID': 'WHITC',
    'OrderDate': '1997-07-11T10:40:00.000Z',
    'ShippedDate': '1997-08-12T11:40:00.000Z',
    'Freight': 16.34,
    'ShipName': 'White Clover Markets',
    'ShipAddress': '1029 - 12th Ave. S.',
    'ShipCity': 'Seattle',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10597,
    'CustomerID': 'PICCO',
    'OrderDate': '1997-07-11T12:40:00.000Z',
    'ShippedDate': '1997-07-18T13:40:00.000Z',
    'Freight': 35.12,
    'ShipName': 'Piccolo und mehr',
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        'ShipAddress': 'Geislweg 14',
        'ShipCity': 'Salzburg',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
        'OrderID': 10598,
        'CustomerID': 'RATTC',
        'OrderDate': '1997-07-14T14:40:00.000Z',
        'ShippedDate': '1997-07-18T15:40:00.000Z',
        'Freight': 44.42,
        'ShipName': 'Rattlesnake Canyon Grocery',
        'ShipAddress': '2817 Milton Dr.',
        'ShipCity': 'Albuquerque',
        'ShipRegion': 'NM',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10599,
        'CustomerID': 'BSBEV',
        'OrderDate': '1997-07-15T16:40:00.000Z',
        'ShippedDate': '1997-07-21T17:40:00.000Z',
        'Freight': 29.98,
        'ShipName': 'B\'s Beverages',
        'ShipAddress': 'Fauntleroy Circus',
        'ShipCity': 'London',
        'ShipRegion': null,
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10600,
        'CustomerID': 'HUNGC',
        'OrderDate': '1997-07-16T18:40:00.000Z',
        'ShippedDate': '1997-07-21T19:40:00.000Z',
        'Freight': 45.13,
        'ShipName': 'Hungry Coyote Import Store',
        'ShipAddress': 'City Center Plaza 516 Main St.',
        'ShipCity': 'Elgin',
        'ShipRegion': 'OR',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10601,
        'CustomerID': 'HILAA',
        'OrderDate': '1997-07-16T20:40:00.000Z',
        'ShippedDate': '1997-07-22T21:40:00.000Z',
        'Freight': 58.3,
        'ShipName': 'HILARION-Abastos',
        'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
        'ShipCity': 'San Cristóbal',
        'ShipRegion': 'Táchira',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 10602,
        'CustomerID': 'VAFFE',
        'OrderDate': '1997-07-17T22:40:00.000Z',

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    'ShippedDate': '1997-07-22T23:40:00.000Z',
    'Freight': 2.92,
    'ShipName': 'Vaffeljernet',
    'ShipAddress': 'Smagsloget 45',
    'ShipCity': 'Århus',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
    'OrderID': 10603,
    'CustomerID': 'SAVEA',
    'OrderDate': '1997-07-18T01:25:00.000Z',
    'ShippedDate': '1997-08-08T02:25:00.000Z',
    'Freight': 48.77,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10604,
    'CustomerID': 'FURIB',
    'OrderDate': '1997-07-18T03:25:00.000Z',
    'ShippedDate': '1997-07-29T03:25:00.000Z',
    'Freight': 7.46,
    'ShipName': 'Furia Bacalhau e Frutos do Mar',
    'ShipAddress': 'Jardim das rosas n. 32',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {
    'OrderID': 10605,
    'CustomerID': 'MEREP',
    'OrderDate': '1997-07-21T04:25:00.000Z',
    'ShippedDate': '1997-07-29T05:25:00.000Z',
    'Freight': 379.13,
    'ShipName': 'Mère Paillarde',
    'ShipAddress': '43 rue St. Laurent',
    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
  },
  {
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    'Freight': 79.4,
    'ShipName': 'Tradiçao Hipermercados',
    'ShipAddress': 'Av. Inês de Castro, 414',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  }
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    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
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    'ShippedDate': '1997-08-01T11:25:00.000Z',
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    'ShipAddress': 'Luisenstr. 48',
    'ShipCity': 'Münster',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
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    'CustomerID': 'DUMON',
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    'ShippedDate': '1997-07-30T13:25:00.000Z',
    'Freight': 1.85,
    'ShipName': 'Du monde entier',
    'ShipAddress': '67, rue des Cinquante Otages',
    'ShipCity': 'Nantes',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
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    'CustomerID': 'LAMAI',
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    'ShippedDate': '1997-08-06T15:25:00.000Z',
    'Freight': 26.78,
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    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
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    'CustomerID': 'WOLZA',
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    'ShippedDate': '1997-08-01T17:25:00.000Z',
    'Freight': 80.65,
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    'ShipAddress': 'ul. Filtrowa 68',
    'ShipCity': 'Warszawa',
    'ShipRegion': null,

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    'Freight': 544.08,
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    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
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    'OrderDate': '1997-07-29T20:25:00.000Z',
    'ShippedDate': '1997-08-01T21:25:00.000Z',
    'Freight': 8.11,
    'ShipName': 'HILARION-Abastos',
    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
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    'CustomerID': 'BLAUS',
    'OrderDate': '1997-07-29T22:25:00.000Z',
    'ShippedDate': '1997-08-01T23:25:00.000Z',
    'Freight': 1.93,
    'ShipName': 'Blauer See Delikatessen',
    'ShipAddress': 'Forsterstr. 57',
    'ShipCity': 'Mannheim',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
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    'CustomerID': 'WILMK',
    'OrderDate': '1997-07-30T01:35:00.000Z',
    'ShippedDate': '1997-08-06T02:35:00.000Z',
    'Freight': 0.75,
    'ShipName': 'Wilman Kala',
    'ShipAddress': 'Keskuskatu 45',
    'ShipCity': 'Helsinki',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
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    'CustomerID': 'GREAL',
    'OrderDate': '1997-07-31T03:35:00.000Z',
    'ShippedDate': '1997-08-05T04:35:00.000Z',
    'Freight': 116.53,
    'ShipName': 'Great Lakes Food Market',

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      'ShipCity': 'Eugene',
      'ShipRegion': 'OR',
      'ShipCountry': 'USA'
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      'Freight': 18.53,
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      'ShipAddress': '2732 Baker Blvd.',
      'ShipCity': 'Eugene',
      'ShipRegion': 'OR',
      'ShipCountry': 'USA'
    },
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      'Freight': 154.68,
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      'ShipAddress': '43 rue St. Laurent',
      'ShipCity': 'Montréal',
      'ShipRegion': 'Québec',
      'ShipCountry': 'Canada'
    },
    {
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      'CustomerID': 'MEREP',
      'OrderDate': '1997-08-04T09:35:00.000Z',
      'ShippedDate': '1997-08-07T10:35:00.000Z',
      'Freight': 91.05,
      'ShipName': 'Mère Paillarde',
      'ShipAddress': '43 rue St. Laurent',
      'ShipCity': 'Montréal',
      'ShipRegion': 'Québec',
      'ShipCountry': 'Canada'
    },
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      'CustomerID': 'LAUGB',
      'OrderDate': '1997-08-05T11:35:00.000Z',
      'ShippedDate': '1997-08-14T12:35:00.000Z',
      'Freight': 0.94,
      'ShipName': 'Laughing Bacchus Wine Cellars',
      'ShipAddress': '2319 Elm St.',
      'ShipCity': 'Vancouver',
      'ShipRegion': 'BC',
      'ShipCountry': 'Canada'
    },
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      'CustomerID': 'ISLAT',
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    'ShipAddress': 'Garden House Crowther Way',
    'ShipCity': 'Cowes',
    'ShipRegion': 'Isle of Wight',
    'ShipCountry': 'UK'
  },
  {
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    'OrderDate': '1997-08-06T15:35:00.000Z',
    'ShippedDate': '1997-08-11T16:35:00.000Z',
    'Freight': 50.97,
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    'ShipAddress': 'Av. Copacabana, 267',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
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    'CustomerID': 'FRANK',
    'OrderDate': '1997-08-07T17:35:00.000Z',
    'ShippedDate': '1997-08-12T18:35:00.000Z',
    'Freight': 97.18,
    'ShipName': 'Frankenversand',
    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10624,
    'CustomerID': 'THECR',
    'OrderDate': '1997-08-07T19:35:00.000Z',
    'ShippedDate': '1997-08-19T20:35:00.000Z',
    'Freight': 94.8,
    'ShipName': 'The Cracker Box',
    'ShipAddress': '55 Grizzly Peak Rd.',
    'ShipCity': 'Butte',
    'ShipRegion': 'MT',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10625,
    'CustomerID': 'ANATR',
    'OrderDate': '1997-08-08T21:35:00.000Z',
    'ShippedDate': '1997-08-14T22:35:00.000Z',
    'Freight': 43.9,
    'ShipName': 'Ana Trujillo Emparedados y helados',
    'ShipAddress': 'Avda. de la Constitución 2222',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
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    'OrderDate': '1997-08-11T23:35:00.000Z',
    'ShippedDate': '1997-08-20T01:50:00.000Z',
    'Freight': 138.69,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10627,
    'CustomerID': 'SAVEA',
    'OrderDate': '1997-08-11T02:50:00.000Z',
    'ShippedDate': '1997-08-21T03:50:00.000Z',
    'Freight': 107.46,
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    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10628,
    'CustomerID': 'BLONP',
    'OrderDate': '1997-08-12T04:50:00.000Z',
    'ShippedDate': '1997-08-20T05:50:00.000Z',
    'Freight': 30.36,
    'ShipName': 'Blondel père et fils',
    'ShipAddress': '24, place Kléber',
    'ShipCity': 'Strasbourg',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10629,
    'CustomerID': 'GODOS',
    'OrderDate': '1997-08-12T06:50:00.000Z',
    'ShippedDate': '1997-08-20T07:50:00.000Z',
    'Freight': 85.46,
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    'ShipAddress': 'C/ Romero, 33',
    'ShipCity': 'Sevilla',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10630,
    'CustomerID': 'KOENE',
    'OrderDate': '1997-08-13T08:50:00.000Z',
    'ShippedDate': '1997-08-19T09:50:00.000Z',
    'Freight': 32.35,
    'ShipName': 'Königlich Essen',
    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,

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    'ShippedDate': '1997-08-15T11:50:00.000Z',
    'Freight': 0.87,
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    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
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    'CustomerID': 'WANDK',
    'OrderDate': '1997-08-14T12:50:00.000Z',
    'ShippedDate': '1997-08-19T13:50:00.000Z',
    'Freight': 41.38,
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    'ShipAddress': 'Adenauerallee 900',
    'ShipCity': 'Stuttgart',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10633,
    'CustomerID': 'ERNSH',
    'OrderDate': '1997-08-15T14:50:00.000Z',
    'ShippedDate': '1997-08-18T15:50:00.000Z',
    'Freight': 477.9,
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    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10634,
    'CustomerID': 'FOLIG',
    'OrderDate': '1997-08-15T16:50:00.000Z',
    'ShippedDate': '1997-08-21T17:50:00.000Z',
    'Freight': 487.38,
    'ShipName': 'Folies gourmandes',
    'ShipAddress': '184, chaussée de Tournai',
    'ShipCity': 'Lille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10635,
    'CustomerID': 'MAGAA',
    'OrderDate': '1997-08-18T18:50:00.000Z',
    'ShippedDate': '1997-08-21T19:50:00.000Z',
    'Freight': 47.46,
    'ShipName': 'Magazzini Alimentari Riuniti',

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        'ShipAddress': 'Via Ludovico il Moro 22',
        'ShipCity': 'Bergamo',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
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        'CustomerID': 'WARTH',
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        'ShippedDate': '1997-08-26T21:50:00.000Z',
        'Freight': 1.15,
        'ShipName': 'Wartian Herkku',
        'ShipAddress': 'Torikatu 38',
        'ShipCity': 'Oulu',
        'ShipRegion': null,
        'ShipCountry': 'Finland'
    },
    {
        'OrderID': 10637,
        'CustomerID': 'QUEEN',
        'OrderDate': '1997-08-19T22:50:00.000Z',
        'ShippedDate': '1997-08-26T23:50:00.000Z',
        'Freight': 201.29,
        'ShipName': 'Queen Cozinha',
        'ShipAddress': 'Alameda dos Canários, 891',
        'ShipCity': 'Sao Paulo',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10638,
        'CustomerID': 'LINOD',
        'OrderDate': '1997-08-20T14:50:00.000Z',
        'ShippedDate': '1997-09-01T15:50:00.000Z',
        'Freight': 158.44,
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        'ShipAddress': 'Ave. 5 de Mayo Porlamar',
        'ShipCity': 'I. de Margarita',
        'ShipRegion': 'Nueva Esparta',
        'ShipCountry': 'Venezuela'
    },
    {
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        'CustomerID': 'SANTG',
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        'Freight': 38.64,
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        'ShipAddress': 'Erling Skakkes gate 78',
        'ShipCity': 'Stavern',
        'ShipRegion': null,
        'ShipCountry': 'Norway'
    },
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        'CustomerID': 'WANDK',
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    'ShipAddress': 'Adenauerallee 900',
    'ShipCity': 'Stuttgart',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
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    'CustomerID': 'HILAA',
    'OrderDate': '1997-08-22T01:55:00.000Z',
    'ShippedDate': '1997-08-26T02:55:00.000Z',
    'Freight': 179.61,
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    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10642,
    'CustomerID': 'SIMOB',
    'OrderDate': '1997-08-22T03:55:00.000Z',
    'ShippedDate': '1997-09-05T04:55:00.000Z',
    'Freight': 41.89,
    'ShipName': 'Simons bistro',
    'ShipAddress': 'Vinbæltet 34',
    'ShipCity': 'Kobenhavn',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
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    'CustomerID': 'ALFKI',
    'OrderDate': '1997-08-25T05:55:00.000Z',
    'ShippedDate': '1997-09-02T06:55:00.000Z',
    'Freight': 29.46,
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    'ShipAddress': 'Obere Str. 57',
    'ShipCity': 'Berlin',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
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    'CustomerID': 'WELLI',
    'OrderDate': '1997-08-25T07:55:00.000Z',
    'ShippedDate': '1997-09-01T08:55:00.000Z',
    'Freight': 0.14,
    'ShipName': 'Wellington Importadora',
    'ShipAddress': 'Rua do Mercado, 12',
    'ShipCity': 'Resende',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  }
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    'Freight': 12.41,
    'ShipName': 'Hanari Carnes',
    'ShipAddress': 'Rua do Paço, 67',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
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    'CustomerID': 'HUNGO',
    'OrderDate': '1997-08-27T11:55:00.000Z',
    'ShippedDate': '1997-09-03T12:55:00.000Z',
    'Freight': 142.33,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10647,
    'CustomerID': 'QUEDE',
    'OrderDate': '1997-08-27T13:55:00.000Z',
    'ShippedDate': '1997-09-03T14:55:00.000Z',
    'Freight': 45.54,
    'ShipName': 'Que Delícia',
    'ShipAddress': 'Rua da Panificadora, 12',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
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    'CustomerID': 'RICAR',
    'OrderDate': '1997-08-28T15:55:00.000Z',
    'ShippedDate': '1997-09-09T16:55:00.000Z',
    'Freight': 14.25,
    'ShipName': 'Ricardo Adocicados',
    'ShipAddress': 'Av. Copacabana, 267',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
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    'CustomerID': 'MAISD',
    'OrderDate': '1997-08-28T17:55:00.000Z',
    'ShippedDate': '1997-08-29T18:55:00.000Z',
    'Freight': 6.2,
    'ShipName': 'Maison Dewey',
    'ShipAddress': 'Rue Joseph-Bens 532',
    'ShipCity': 'Bruxelles',
    'ShipRegion': null,

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  },
  {
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    'CustomerID': 'FAMIA',
    'OrderDate': '1997-08-29T19:55:00.000Z',
    'ShippedDate': '1997-09-03T20:55:00.000Z',
    'Freight': 176.81,
    'ShipName': 'Familia Arquibaldo',
    'ShipAddress': 'Rua Orós, 92',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10651,
    'CustomerID': 'WANDK',
    'OrderDate': '1997-09-01T21:55:00.000Z',
    'ShippedDate': '1997-09-11T22:55:00.000Z',
    'Freight': 20.6,
    'ShipName': 'Die Wandernde Kuh',
    'ShipAddress': 'Adenauerallee 900',
    'ShipCity': 'Stuttgart',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10652,
    'CustomerID': 'GOURL',
    'OrderDate': '1997-09-01T23:55:00.000Z',
    'ShippedDate': '1997-09-08T01:15:00.000Z',
    'Freight': 7.14,
    'ShipName': 'Gourmet Lanchonetes',
    'ShipAddress': 'Av. Brasil, 442',
    'ShipCity': 'Campinas',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10653,
    'CustomerID': 'FRANK',
    'OrderDate': '1997-09-02T02:15:00.000Z',
    'ShippedDate': '1997-09-19T03:15:00.000Z',
    'Freight': 93.25,
    'ShipName': 'Frankenversand',
    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10654,
    'CustomerID': 'BERGS',
    'OrderDate': '1997-09-02T04:15:00.000Z',
    'ShippedDate': '1997-09-11T05:15:00.000Z',
    'Freight': 55.26,
    'ShipName': 'Berglunds snabbköp',
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        'ShipAddress': 'Berguvsvägen 8',
        'ShipCity': 'Luleå',
        'ShipRegion': null,
        'ShipCountry': 'Sweden'
    },
    {
        'OrderID': 10655,
        'CustomerID': 'REGGC',
        'OrderDate': '1997-09-03T06:15:00.000Z',
        'ShippedDate': '1997-09-11T07:15:00.000Z',
        'Freight': 4.41,
        'ShipName': 'Reggiani Caseifici',
        'ShipAddress': 'Strada Provinciale 124',
        'ShipCity': 'Reggio Emilia',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
    {
        'OrderID': 10656,
        'CustomerID': 'GREAL',
        'OrderDate': '1997-09-04T08:15:00.000Z',
        'ShippedDate': '1997-09-10T09:15:00.000Z',
        'Freight': 57.15,
        'ShipName': 'Great Lakes Food Market',
        'ShipAddress': '2732 Baker Blvd.',
        'ShipCity': 'Eugene',
        'ShipRegion': 'OR',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10657,
        'CustomerID': 'SAVEA',
        'OrderDate': '1997-09-04T10:15:00.000Z',
        'ShippedDate': '1997-09-15T11:15:00.000Z',
        'Freight': 352.69,
        'ShipName': 'Save-a-lot Markets',
        'ShipAddress': '187 Suffolk Ln.',
        'ShipCity': 'Boise',
        'ShipRegion': 'ID',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10658,
        'CustomerID': 'QUICK',
        'OrderDate': '1997-09-05T12:15:00.000Z',
        'ShippedDate': '1997-09-08T13:15:00.000Z',
        'Freight': 364.15,
        'ShipName': 'QUICK-Stop',
        'ShipAddress': 'Taucherstraße 10',
        'ShipCity': 'Cunewalde',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10659,
        'CustomerID': 'QUEEN',
        'OrderDate': '1997-09-05T14:15:00.000Z',

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    'ShippedDate': '1997-09-10T15:15:00.000Z',
    'Freight': 105.81,
    'ShipName': 'Queen Cozinha',
    'ShipAddress': 'Alameda dos Canários, 891',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10660,
    'CustomerID': 'HUNGC',
    'OrderDate': '1997-09-08T16:15:00.000Z',
    'ShippedDate': '1997-10-15T17:15:00.000Z',
    'Freight': 111.29,
    'ShipName': 'Hungry Coyote Import Store',
    'ShipAddress': 'City Center Plaza 516 Main St.',
    'ShipCity': 'Elgin',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10661,
    'CustomerID': 'HUNGO',
    'OrderDate': '1997-09-09T18:15:00.000Z',
    'ShippedDate': '1997-09-15T19:15:00.000Z',
    'Freight': 17.55,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10662,
    'CustomerID': 'LONEP',
    'OrderDate': '1997-09-09T20:15:00.000Z',
    'ShippedDate': '1997-09-18T21:15:00.000Z',
    'Freight': 1.28,
    'ShipName': 'Lonesome Pine Restaurant',
    'ShipAddress': '89 Chiaroscuro Rd.',
    'ShipCity': 'Portland',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10663,
    'CustomerID': 'BONAP',
    'OrderDate': '1997-09-10T22:15:00.000Z',
    'ShippedDate': '1997-10-03T23:15:00.000Z',
    'Freight': 113.15,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
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'OrderID': 10664,
'CustomerID': 'FURIB',
'OrderDate': '1997-09-10T01:45:00.000Z',
'ShippedDate': '1997-09-19T02:45:00.000Z',
'Freight': 1.27,
'ShipName': 'Furia Bacalhau e Frutos do Mar',
'ShipAddress': 'Jardim das rosas n. 32',
'ShipCity': 'Lisboa',
'ShipRegion': null,
'ShipCountry': 'Portugal'
},
{
  'OrderID': 10665,
  'CustomerID': 'LONEP',
  'OrderDate': '1997-09-11T03:45:00.000Z',
  'ShippedDate': '1997-09-17T04:45:00.000Z',
  'Freight': 26.31,
  'ShipName': 'Lonesome Pine Restaurant',
  'ShipAddress': '89 Chiaroscuro Rd.',
  'ShipCity': 'Portland',
  'ShipRegion': 'OR',
  'ShipCountry': 'USA'
},
{
  'OrderID': 10666,
  'CustomerID': 'RICSU',
  'OrderDate': '1997-09-12T05:45:00.000Z',
  'ShippedDate': '1997-09-22T06:45:00.000Z',
  'Freight': 232.42,
  'ShipName': 'Richter Supermarkt',
  'ShipAddress': 'Starenweg 5',
  'ShipCity': 'Genève',
  'ShipRegion': null,
  'ShipCountry': 'Switzerland'
},
{
  'OrderID': 10667,
  'CustomerID': 'ERNSH',
  'OrderDate': '1997-09-12T07:45:00.000Z',
  'ShippedDate': '1997-09-19T08:45:00.000Z',
  'Freight': 78.09,
  'ShipName': 'Ernst Handel',
  'ShipAddress': 'Kirchgasse 6',
  'ShipCity': 'Graz',
  'ShipRegion': null,
  'ShipCountry': 'Austria'
},
{
  'OrderID': 10668,
  'CustomerID': 'WANDK',
  'OrderDate': '1997-09-15T09:45:00.000Z',
  'ShippedDate': '1997-09-23T10:45:00.000Z',
  'Freight': 47.22,
  'ShipName': 'Die Wandernde Kuh',
  'ShipAddress': 'Adenauerallee 900',
  'ShipCity': 'Stuttgart',
  'ShipRegion': null,
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    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10669,
    'CustomerID': 'SIMOB',
    'OrderDate': '1997-09-15T11:45:00.000Z',
    'ShippedDate': '1997-09-22T12:45:00.000Z',
    'Freight': 24.39,
    'ShipName': 'Simons bistro',
    'ShipAddress': 'Vinbæltet 34',
    'ShipCity': 'Kobenhavn',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
    'OrderID': 10670,
    'CustomerID': 'FRANK',
    'OrderDate': '1997-09-16T13:45:00.000Z',
    'ShippedDate': '1997-09-18T14:45:00.000Z',
    'Freight': 203.48,
    'ShipName': 'Frankenversand',
    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10671,
    'CustomerID': 'FRANR',
    'OrderDate': '1997-09-17T15:45:00.000Z',
    'ShippedDate': '1997-09-24T16:45:00.000Z',
    'Freight': 30.34,
    'ShipName': 'France restauration',
    'ShipAddress': '54, rue Royale',
    'ShipCity': 'Nantes',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10672,
    'CustomerID': 'BERGS',
    'OrderDate': '1997-09-17T17:45:00.000Z',
    'ShippedDate': '1997-09-26T18:45:00.000Z',
    'Freight': 95.75,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10673,
    'CustomerID': 'WILMK',
    'OrderDate': '1997-09-18T19:45:00.000Z',
    'ShippedDate': '1997-09-19T20:45:00.000Z',
    'Freight': 22.76,
    'ShipName': 'Wilman Kala',
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        'ShipAddress': 'Keskuskatu 45',
        'ShipCity': 'Helsinki',
        'ShipRegion': null,
        'ShipCountry': 'Finland'
    },
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        'CustomerID': 'ISLAT',
        'OrderDate': '1997-09-18T21:45:00.000Z',
        'ShippedDate': '1997-09-30T22:45:00.000Z',
        'Freight': 0.9,
        'ShipName': 'Island Trading',
        'ShipAddress': 'Garden House Crowther Way',
        'ShipCity': 'Cowes',
        'ShipRegion': 'Isle of Wight',
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10675,
        'CustomerID': 'FRANK',
        'OrderDate': '1997-09-19T23:45:00.000Z',
        'ShippedDate': '1997-09-23T01:50:00.000Z',
        'Freight': 31.85,
        'ShipName': 'Frankenversand',
        'ShipAddress': 'Berliner Platz 43',
        'ShipCity': 'München',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10676,
        'CustomerID': 'TORTU',
        'OrderDate': '1997-09-22T02:50:00.000Z',
        'ShippedDate': '1997-09-29T03:50:00.000Z',
        'Freight': 2.01,
        'ShipName': 'Tortuga Restaurante',
        'ShipAddress': 'Avda. Azteca 123',
        'ShipCity': 'México D.F.',
        'ShipRegion': null,
        'ShipCountry': 'Mexico'
    },
    {
        'OrderID': 10677,
        'CustomerID': 'ANTON',
        'OrderDate': '1997-09-22T04:50:00.000Z',
        'ShippedDate': '1997-09-26T05:50:00.000Z',
        'Freight': 4.03,
        'ShipName': 'Antonio Moreno Taquería',
        'ShipAddress': 'Mataderos 2312',
        'ShipCity': 'México D.F.',
        'ShipRegion': null,
        'ShipCountry': 'Mexico'
    },
    {
        'OrderID': 10678,
        'CustomerID': 'SAVEA',
        'OrderDate': '1997-09-23T06:50:00.000Z',

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    'ShippedDate': '1997-10-16T07:50:00.000Z',
    'Freight': 388.98,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10679,
    'CustomerID': 'BLONP',
    'OrderDate': '1997-09-23T08:50:00.000Z',
    'ShippedDate': '1997-09-30T09:50:00.000Z',
    'Freight': 27.94,
    'ShipName': 'Blondel père et fils',
    'ShipAddress': '24, place Kléber',
    'ShipCity': 'Strasbourg',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10680,
    'CustomerID': 'OLDWO',
    'OrderDate': '1997-09-24T10:50:00.000Z',
    'ShippedDate': '1997-09-26T11:50:00.000Z',
    'Freight': 26.61,
    'ShipName': 'Old World Delicatessen',
    'ShipAddress': '2743 Bering St.',
    'ShipCity': 'Anchorage',
    'ShipRegion': 'AK',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10681,
    'CustomerID': 'GREAL',
    'OrderDate': '1997-09-25T12:50:00.000Z',
    'ShippedDate': '1997-09-30T13:50:00.000Z',
    'Freight': 76.13,
    'ShipName': 'Great Lakes Food Market',
    'ShipAddress': '2732 Baker Blvd.',
    'ShipCity': 'Eugene',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10682,
    'CustomerID': 'ANTON',
    'OrderDate': '1997-09-25T14:50:00.000Z',
    'ShippedDate': '1997-10-01T15:50:00.000Z',
    'Freight': 36.13,
    'ShipName': 'Antonio Moreno Taquería',
    'ShipAddress': 'Mataderos 2312',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {

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    'OrderID': 10683,
    'CustomerID': 'DUMON',
    'OrderDate': '1997-09-26T16:50:00.000Z',
    'ShippedDate': '1997-10-01T17:50:00.000Z',
    'Freight': 4.4,
    'ShipName': 'Du monde entier',
    'ShipAddress': '67, rue des Cinquante Otages',
    'ShipCity': 'Nantes',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10684,
    'CustomerID': 'OTTIK',
    'OrderDate': '1997-09-26T18:50:00.000Z',
    'ShippedDate': '1997-09-30T19:50:00.000Z',
    'Freight': 145.63,
    'ShipName': 'Ottilies Käseladen',
    'ShipAddress': 'Mehrheimerstr. 369',
    'ShipCity': 'Köln',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10685,
    'CustomerID': 'GOURL',
    'OrderDate': '1997-09-29T20:50:00.000Z',
    'ShippedDate': '1997-10-03T21:50:00.000Z',
    'Freight': 33.75,
    'ShipName': 'Gourmet Lanchonetes',
    'ShipAddress': 'Av. Brasil, 442',
    'ShipCity': 'Campinas',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10686,
    'CustomerID': 'PICCO',
    'OrderDate': '1997-09-30T22:50:00.000Z',
    'ShippedDate': '1997-10-08T23:50:00.000Z',
    'Freight': 96.5,
    'ShipName': 'Piccolo und mehr',
    'ShipAddress': 'Geislweg 14',
    'ShipCity': 'Salzburg',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10687,
    'CustomerID': 'HUNGO',
    'OrderDate': '1997-09-30T01:15:00.000Z',
    'ShippedDate': '1997-10-30T02:15:00.000Z',
    'Freight': 296.43,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
  }

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    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10688,
    'CustomerID': 'VAFFE',
    'OrderDate': '1997-10-01T03:15:00.000Z',
    'ShippedDate': '1997-10-07T04:15:00.000Z',
    'Freight': 299.09,
    'ShipName': 'Vaffeljernet',
    'ShipAddress': 'Smagsloget 45',
    'ShipCity': 'Århus',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
    'OrderID': 10689,
    'CustomerID': 'BERGS',
    'OrderDate': '1997-10-01T05:15:00.000Z',
    'ShippedDate': '1997-10-07T06:15:00.000Z',
    'Freight': 13.42,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10690,
    'CustomerID': 'HANAR',
    'OrderDate': '1997-10-02T07:15:00.000Z',
    'ShippedDate': '1997-10-03T08:15:00.000Z',
    'Freight': 15.8,
    'ShipName': 'Hanari Carnes',
    'ShipAddress': 'Rua do Paço, 67',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10691,
    'CustomerID': 'QUICK',
    'OrderDate': '1997-10-03T09:15:00.000Z',
    'ShippedDate': '1997-10-22T10:15:00.000Z',
    'Freight': 810.05,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10692,
    'CustomerID': 'ALFKI',
    'OrderDate': '1997-10-03T11:15:00.000Z',
    'ShippedDate': '1997-10-13T12:15:00.000Z',
    'Freight': 61.02,
    'ShipName': 'Alfred\'s Futterkiste',

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        'ShipAddress': 'Obere Str. 57',
        'ShipCity': 'Berlin',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
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        'CustomerID': 'WHITC',
        'OrderDate': '1997-10-06T13:15:00.000Z',
        'ShippedDate': '1997-10-10T14:15:00.000Z',
        'Freight': 139.34,
        'ShipName': 'White Clover Markets',
        'ShipAddress': '1029 - 12th Ave. S.',
        'ShipCity': 'Seattle',
        'ShipRegion': 'WA',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10694,
        'CustomerID': 'QUICK',
        'OrderDate': '1997-10-06T15:15:00.000Z',
        'ShippedDate': '1997-10-09T16:15:00.000Z',
        'Freight': 398.36,
        'ShipName': 'QUICK-Stop',
        'ShipAddress': 'Taucherstraße 10',
        'ShipCity': 'Cunewalde',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10695,
        'CustomerID': 'WILMK',
        'OrderDate': '1997-10-07T17:15:00.000Z',
        'ShippedDate': '1997-10-14T18:15:00.000Z',
        'Freight': 16.72,
        'ShipName': 'Wilman Kala',
        'ShipAddress': 'Keskuskatu 45',
        'ShipCity': 'Helsinki',
        'ShipRegion': null,
        'ShipCountry': 'Finland'
    },
    {
        'OrderID': 10696,
        'CustomerID': 'WHITC',
        'OrderDate': '1997-10-08T19:15:00.000Z',
        'ShippedDate': '1997-10-14T20:15:00.000Z',
        'Freight': 102.55,
        'ShipName': 'White Clover Markets',
        'ShipAddress': '1029 - 12th Ave. S.',
        'ShipCity': 'Seattle',
        'ShipRegion': 'WA',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10697,
        'CustomerID': 'LINOD',
        'OrderDate': '1997-10-08T21:15:00.000Z',

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    'ShippedDate': '1997-10-14T22:15:00.000Z',
    'Freight': 45.52,
    'ShipName': 'LINO-Delicateses',
    'ShipAddress': 'Ave. 5 de Mayo Porlamar',
    'ShipCity': 'I. de Margarita',
    'ShipRegion': 'Nueva Esparta',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10698,
    'CustomerID': 'ERNSH',
    'OrderDate': '1997-10-09T23:15:00.000Z',
    'ShippedDate': '1997-10-17T10:15:00.000Z',
    'Freight': 272.47,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10699,
    'CustomerID': 'MORGK',
    'OrderDate': '1997-10-09T02:40:00.000Z',
    'ShippedDate': '1997-10-13T03:40:00.000Z',
    'Freight': 0.58,
    'ShipName': 'Morgenstern Gesundkost',
    'ShipAddress': 'Heerstr. 22',
    'ShipCity': 'Leipzig',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10700,
    'CustomerID': 'SAVEA',
    'OrderDate': '1997-10-10T03:40:00.000Z',
    'ShippedDate': '1997-10-16T04:40:00.000Z',
    'Freight': 65.1,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10701,
    'CustomerID': 'HUNGO',
    'OrderDate': '1997-10-13T05:40:00.000Z',
    'ShippedDate': '1997-10-15T06:40:00.000Z',
    'Freight': 220.31,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {

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    'OrderID': 10702,
    'CustomerID': 'ALFKI',
    'OrderDate': '1997-10-13T07:40:00.000Z',
    'ShippedDate': '1997-10-21T08:40:00.000Z',
    'Freight': 23.94,
    'ShipName': 'Alfred\'s Futterkiste',
    'ShipAddress': 'Obere Str. 57',
    'ShipCity': 'Berlin',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10703,
    'CustomerID': 'FOLKO',
    'OrderDate': '1997-10-14T09:40:00.000Z',
    'ShippedDate': '1997-10-20T10:40:00.000Z',
    'Freight': 152.3,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10704,
    'CustomerID': 'QUEEN',
    'OrderDate': '1997-10-14T11:40:00.000Z',
    'ShippedDate': '1997-11-07T12:40:00.000Z',
    'Freight': 4.78,
    'ShipName': 'Queen Cozinha',
    'ShipAddress': 'Alameda dos Canários, 891',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10705,
    'CustomerID': 'HILAA',
    'OrderDate': '1997-10-15T13:40:00.000Z',
    'ShippedDate': '1997-11-18T14:40:00.000Z',
    'Freight': 3.52,
    'ShipName': 'HILARION-Abastos',
    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10706,
    'CustomerID': 'OLDWO',
    'OrderDate': '1997-10-16T15:40:00.000Z',
    'ShippedDate': '1997-10-21T16:40:00.000Z',
    'Freight': 135.63,
    'ShipName': 'Old World Delicatessen',
    'ShipAddress': '2743 Bering St.',
    'ShipCity': 'Anchorage',
    'ShipRegion': 'AK',
  }

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    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10707,
    'CustomerID': 'AROUT',
    'OrderDate': '1997-10-16T17:40:00.000Z',
    'ShippedDate': '1997-10-23T18:40:00.000Z',
    'Freight': 21.74,
    'ShipName': 'Around the Horn',
    'ShipAddress': 'Brook Farm Stratford St. Mary',
    'ShipCity': 'Colchester',
    'ShipRegion': 'Essex',
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10708,
    'CustomerID': 'THEBI',
    'OrderDate': '1997-10-17T19:40:00.000Z',
    'ShippedDate': '1997-11-05T20:40:00.000Z',
    'Freight': 2.96,
    'ShipName': 'The Big Cheese',
    'ShipAddress': '89 Jefferson Way Suite 2',
    'ShipCity': 'Portland',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10709,
    'CustomerID': 'GOURL',
    'OrderDate': '1997-10-17T21:40:00.000Z',
    'ShippedDate': '1997-11-20T22:40:00.000Z',
    'Freight': 210.8,
    'ShipName': 'Gourmet Lanchonetes',
    'ShipAddress': 'Av. Brasil, 442',
    'ShipCity': 'Campinas',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10710,
    'CustomerID': 'FRANS',
    'OrderDate': '1997-10-20T23:40:00.000Z',
    'ShippedDate': '1997-10-23T15:40:00.000Z',
    'Freight': 4.98,
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    'ShipAddress': 'Via Monte Bianco 34',
    'ShipCity': 'Torino',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
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    'Freight': 52.41,
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        'ShipRegion': 'ID',
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        'OrderDate': '1997-10-21T03:30:00.000Z',
        'ShippedDate': '1997-10-31T04:30:00.000Z',
        'Freight': 89.93,
        'ShipName': 'Hungry Owl All-Night Grocers',
        'ShipAddress': '8 Johnstown Road',
        'ShipCity': 'Cork',
        'ShipRegion': 'Co. Cork',
        'ShipCountry': 'Ireland'
    },
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        'Freight': 167.05,
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        'ShipAddress': '187 Suffolk Ln.',
        'ShipCity': 'Boise',
        'ShipRegion': 'ID',
        'ShipCountry': 'USA'
    },
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        'OrderDate': '1997-10-22T07:30:00.000Z',
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        'Freight': 24.49,
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        'ShipCity': 'Boise',
        'ShipRegion': 'ID',
        'ShipCountry': 'USA'
    },
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        'CustomerID': 'BONAP',
        'OrderDate': '1997-10-23T09:30:00.000Z',
        'ShippedDate': '1997-10-29T10:30:00.000Z',
        'Freight': 63.2,
        'ShipName': 'Bon app',
        'ShipAddress': '12, rue des Bouchers',
        'ShipCity': 'Marseille',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
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        'CustomerID': 'RANCH',
        'OrderDate': '1997-10-24T11:30:00.000Z',

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    'ShipRegion': null,
    'ShipCountry': 'Argentina'
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    'CustomerID': 'FRANK',
    'OrderDate': '1997-10-24T13:30:00.000Z',
    'ShippedDate': '1997-10-29T14:30:00.000Z',
    'Freight': 59.25,
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    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
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    'ShippedDate': '1997-10-29T18:30:00.000Z',
    'Freight': 170.88,
    'ShipName': 'Königlich Essen',
    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
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    'CustomerID': 'LETSS',
    'OrderDate': '1997-10-27T19:30:00.000Z',
    'ShippedDate': '1997-11-05T20:30:00.000Z',
    'Freight': 51.44,
    'ShipName': 'Let\'s Stop N Shop',
    'ShipAddress': '87 Polk St. Suite 5',
    'ShipCity': 'San Francisco',
    'ShipRegion': 'CA',
    'ShipCountry': 'USA'
  },
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    'CustomerID': 'QUEDE',
    'OrderDate': '1997-10-28T21:30:00.000Z',
    'ShippedDate': '1997-11-05T22:30:00.000Z',
    'Freight': 9.53,
    'ShipName': 'Que Delícia',
    'ShipAddress': 'Rua da Panificadora, 12',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
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    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
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    'CustomerID': 'SAVEA',
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    'ShippedDate': '1997-11-04T03:10:00.000Z',
    'Freight': 74.58,
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    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'WHITC',
    'OrderDate': '1997-10-30T04:10:00.000Z',
    'ShippedDate': '1997-11-25T05:10:00.000Z',
    'Freight': 21.72,
    'ShipName': 'White Clover Markets',
    'ShipAddress': '1029-12th Ave. S.',
    'ShipCity': 'Seattle',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10724,
    'CustomerID': 'MEREP',
    'OrderDate': '1997-10-30T06:10:00.000Z',
    'ShippedDate': '1997-11-05T07:10:00.000Z',
    'Freight': 57.75,
    'ShipName': 'Mère Paillarde',
    'ShipAddress': '43 rue St. Laurent',
    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
  },
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    'CustomerID': 'FAMIA',
    'OrderDate': '1997-10-31T08:10:00.000Z',
    'ShippedDate': '1997-11-05T01:10:00.000Z',
    'Freight': 10.83,
    'ShipName': 'Familia Arquibaldo',
    'ShipAddress': 'Rua Orós, 92',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
  }

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    'Freight': 16.56,
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    'ShipAddress': '35 King George',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
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    'ShipAddress': 'Strada Provinciale 124',
    'ShipCity': 'Reggio Emilia',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
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    'OrderDate': '1997-11-04T06:10:00.000Z',
    'ShippedDate': '1997-11-11T07:10:00.000Z',
    'Freight': 58.33,
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    'ShipAddress': 'Alameda dos Canários, 891',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
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    'OrderDate': '1997-11-04T08:10:00.000Z',
    'ShippedDate': '1997-11-14T09:10:00.000Z',
    'Freight': 141.06,
    'ShipName': 'LINO-Delicateses',
    'ShipAddress': 'Ave. 5 de Mayo Porlamar',
    'ShipCity': 'I. de Margarita',
    'ShipRegion': 'Nueva Esparta',
    'ShipCountry': 'Venezuela'
  },
  {
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    'CustomerID': 'BONAP',
    'OrderDate': '1997-11-05T10:10:00.000Z',
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    'Freight': 20.12,
    'ShipName': 'Bon app',

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        'ShipRegion': null,
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    },
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        'ShippedDate': '1997-11-14T13:10:00.000Z',
        'Freight': 96.65,
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        'ShipAddress': 'Hauptstr. 31',
        'ShipCity': 'Bern',
        'ShipRegion': null,
        'ShipCountry': 'Switzerland'
    },
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        'CustomerID': 'BONAP',
        'OrderDate': '1997-11-06T14:10:00.000Z',
        'ShippedDate': '1997-11-07T15:10:00.000Z',
        'Freight': 16.97,
        'ShipName': 'Bon app',
        'ShipAddress': '12, rue des Bouchers',
        'ShipCity': 'Marseille',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
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        'CustomerID': 'BERGS',
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        'ShippedDate': '1997-11-10T17:10:00.000Z',
        'Freight': 110.11,
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        'ShipAddress': 'Berguvsvägen 8',
        'ShipCity': 'Luleå',
        'ShipRegion': null,
        'ShipCountry': 'Sweden'
    },
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        'CustomerID': 'GOURL',
        'OrderDate': '1997-11-07T18:10:00.000Z',
        'ShippedDate': '1997-11-12T19:10:00.000Z',
        'Freight': 1.63,
        'ShipName': 'Gourmet Lanchonetes',
        'ShipAddress': 'Av. Brasil, 442',
        'ShipCity': 'Campinas',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
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        'CustomerID': 'LETSS',
        'OrderDate': '1997-11-10T20:10:00.000Z',

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    'ShipCity': 'San Francisco',
    'ShipRegion': 'CA',
    'ShipCountry': 'USA'
  },
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    'CustomerID': 'HUNGO',
    'OrderDate': '1997-11-11T22:10:00.000Z',
    'ShippedDate': '1997-11-21T23:10:00.000Z',
    'Freight': 44.1,
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    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
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    'CustomerID': 'VINET',
    'OrderDate': '1997-11-11T01:10:00.000Z',
    'ShippedDate': '1997-11-18T02:10:00.000Z',
    'Freight': 7.79,
    'ShipName': 'Vins et alcools Chevalier',
    'ShipAddress': '59 rue de l\'Abbaye',
    'ShipCity': 'Reims',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
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    'CustomerID': 'SPECB',
    'OrderDate': '1997-11-12T03:10:00.000Z',
    'ShippedDate': '1997-11-18T04:10:00.000Z',
    'Freight': 2.91,
    'ShipName': 'Spécialités du monde',
    'ShipAddress': '25, rue Lauriston',
    'ShipCity': 'Paris',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
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    'CustomerID': 'VINET',
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    'Freight': 11.08,
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    'ShipAddress': '59 rue de l\'Abbaye',
    'ShipCity': 'Reims',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
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      'Freight': 81.88,
      'ShipName': 'White Clover Markets',
      'ShipAddress': '1029 - 12th Ave. S.',
      'ShipCity': 'Seattle',
      'ShipRegion': 'WA',
      'ShipCountry': 'USA'
    },
    {
      'OrderID': 10741,
      'CustomerID': 'AROUT',
      'OrderDate': '1997-11-14T09:10:00.000Z',
      'ShippedDate': '1997-11-18T10:10:00.000Z',
      'Freight': 10.96,
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      'ShipAddress': 'Brook Farm Stratford St. Mary',
      'ShipCity': 'Colchester',
      'ShipRegion': 'Essex',
      'ShipCountry': 'UK'
    },
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      'CustomerID': 'BOTTM',
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      'ShippedDate': '1997-11-18T12:10:00.000Z',
      'Freight': 243.73,
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      'ShipAddress': '23 Tsawassen Blvd.',
      'ShipCity': 'Tsawassen',
      'ShipRegion': 'BC',
      'ShipCountry': 'Canada'
    },
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      'CustomerID': 'AROUT',
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      'Freight': 23.72,
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      'ShipRegion': 'Essex',
      'ShipCountry': 'UK'
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      'Freight': 69.19,
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      'ShipAddress': 'Smagsloget 45',
      'ShipCity': 'Århus',
      'ShipRegion': null,

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    'Freight': 3.52,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
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    'CustomerID': 'CHOPS',
    'OrderDate': '1997-11-19T19:10:00.000Z',
    'ShippedDate': '1997-11-21T20:10:00.000Z',
    'Freight': 31.43,
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    'ShipAddress': 'Hauptstr. 31',
    'ShipCity': 'Bern',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
  {
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    'CustomerID': 'PICCO',
    'OrderDate': '1997-11-19T21:10:00.000Z',
    'ShippedDate': '1997-11-26T22:10:00.000Z',
    'Freight': 117.33,
    'ShipName': 'Piccolo und mehr',
    'ShipAddress': 'Geislweg 14',
    'ShipCity': 'Salzburg',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10748,
    'CustomerID': 'SAVEA',
    'OrderDate': '1997-11-20T23:10:00.000Z',
    'ShippedDate': '1997-11-28T13:10:00.000Z',
    'Freight': 232.55,
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    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'ISLAT',
    'OrderDate': '1997-11-20T02:25:00.000Z',
    'ShippedDate': '1997-12-19T03:25:00.000Z',
    'Freight': 61.53,
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'ShipCity': 'Cowes',
'ShipRegion': 'Isle of Wight',
'ShipCountry': 'UK'
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{
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  'CustomerID': 'WARTH',
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  'ShippedDate': '1997-11-24T05:25:00.000Z',
  'Freight': 79.3,
  'ShipName': 'Wartian Herkku',
  'ShipAddress': 'Torikatu 38',
  'ShipCity': 'Oulu',
  'ShipRegion': null,
  'ShipCountry': 'Finland'
},
{
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  'CustomerID': 'RICSU',
  'OrderDate': '1997-11-24T06:25:00.000Z',
  'ShippedDate': '1997-12-03T07:25:00.000Z',
  'Freight': 130.79,
  'ShipName': 'Richter Supermarkt',
  'ShipAddress': 'Starenweg 5',
  'ShipCity': 'Genève',
  'ShipRegion': null,
  'ShipCountry': 'Switzerland'
},
{
  'OrderID': 10752,
  'CustomerID': 'NORTS',
  'OrderDate': '1997-11-24T08:25:00.000Z',
  'ShippedDate': '1997-11-28T09:25:00.000Z',
  'Freight': 1.39,
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  'ShipAddress': 'South House 300 Queensbridge',
  'ShipCity': 'London',
  'ShipRegion': null,
  'ShipCountry': 'UK'
},
{
  'OrderID': 10753,
  'CustomerID': 'FRANS',
  'OrderDate': '1997-11-25T10:25:00.000Z',
  'ShippedDate': '1997-11-27T11:25:00.000Z',
  'Freight': 7.7,
  'ShipName': 'Franchi S.p.A.',
  'ShipAddress': 'Via Monte Bianco 34',
  'ShipCity': 'Torino',
  'ShipRegion': null,
  'ShipCountry': 'Italy'
},
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  'OrderDate': '1997-11-25T12:25:00.000Z',
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    'ShippedDate': '1997-11-27T13:25:00.000Z',
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    'ShipAddress': 'Via Ludovico il Moro 22',
    'ShipCity': 'Bergamo',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 10755,
    'CustomerID': 'BONAP',
    'OrderDate': '1997-11-26T14:25:00.000Z',
    'ShippedDate': '1997-11-28T15:25:00.000Z',
    'Freight': 16.71,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10756,
    'CustomerID': 'SPLIR',
    'OrderDate': '1997-11-27T16:25:00.000Z',
    'ShippedDate': '1997-12-02T17:25:00.000Z',
    'Freight': 73.21,
    'ShipName': 'Split Rail Beer & Ale',
    'ShipAddress': 'P.O. Box 555',
    'ShipCity': 'Lander',
    'ShipRegion': 'WY',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10757,
    'CustomerID': 'SAVEA',
    'OrderDate': '1997-11-27T18:25:00.000Z',
    'ShippedDate': '1997-12-15T19:25:00.000Z',
    'Freight': 8.19,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'RICSU',
    'OrderDate': '1997-11-28T20:25:00.000Z',
    'ShippedDate': '1997-12-04T21:25:00.000Z',
    'Freight': 138.17,
    'ShipName': 'Richter Supermarkt',
    'ShipAddress': 'Starenweg 5',
    'ShipCity': 'Genève',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
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    'Freight': 11.99,
    'ShipName': 'Ana Trujillo Emparedados y helados',
    'ShipAddress': 'Avda. de la Constitución 2222',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10760,
    'CustomerID': 'MAISD',
    'OrderDate': '1997-12-01T01:40:00.000Z',
    'ShippedDate': '1997-12-10T02:40:00.000Z',
    'Freight': 155.64,
    'ShipName': 'Maison Dewey',
    'ShipAddress': 'Rue Joseph-Bens 532',
    'ShipCity': 'Bruxelles',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
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    'CustomerID': 'RATTC',
    'OrderDate': '1997-12-02T03:40:00.000Z',
    'ShippedDate': '1997-12-08T04:40:00.000Z',
    'Freight': 18.66,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10762,
    'CustomerID': 'FOLKO',
    'OrderDate': '1997-12-02T05:40:00.000Z',
    'ShippedDate': '1997-12-09T06:40:00.000Z',
    'Freight': 328.74,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
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    'ShipCity': 'Lille',
    'ShipRegion': null,

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    'ShipCountry': 'France'
  },
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    'Freight': 145.45,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
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    'OrderDate': '1997-12-04T11:40:00.000Z',
    'ShippedDate': '1997-12-09T12:40:00.000Z',
    'Freight': 42.74,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
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    'OrderDate': '1997-12-05T13:40:00.000Z',
    'ShippedDate': '1997-12-09T14:40:00.000Z',
    'Freight': 157.55,
    'ShipName': 'Ottilies Käseladen',
    'ShipAddress': 'Mehrheimerstr. 369',
    'ShipCity': 'Köln',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10767,
    'CustomerID': 'SUPRD',
    'OrderDate': '1997-12-05T15:40:00.000Z',
    'ShippedDate': '1997-12-15T16:40:00.000Z',
    'Freight': 1.59,
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    'ShipAddress': 'Boulevard Tirou, 255',
    'ShipCity': 'Charleroi',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
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    'CustomerID': 'AROUT',
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    'ShippedDate': '1997-12-15T18:40:00.000Z',
    'Freight': 146.32,
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        'ShipCity': 'Colchester',
        'ShipRegion': 'Essex',
        'ShipCountry': 'UK'
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        'Freight': 65.06,
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        'ShipAddress': 'Smagsloget 45',
        'ShipCity': 'Århus',
        'ShipRegion': null,
        'ShipCountry': 'Denmark'
    },
    {
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        'ShippedDate': '1997-12-17T22:40:00.000Z',
        'Freight': 5.32,
        'ShipName': 'Hanari Carnes',
        'ShipAddress': 'Rua do Paço, 67',
        'ShipCity': 'Rio de Janeiro',
        'ShipRegion': 'RJ',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10771,
        'CustomerID': 'ERNSH',
        'OrderDate': '1997-12-10T23:40:00.000Z',
        'ShippedDate': '1998-01-02T01:50:00.000Z',
        'Freight': 11.19,
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        'ShipAddress': 'Kirchgasse 6',
        'ShipCity': 'Graz',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
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        'CustomerID': 'LEHMS',
        'OrderDate': '1997-12-10T02:50:00.000Z',
        'ShippedDate': '1997-12-19T03:50:00.000Z',
        'Freight': 91.28,
        'ShipName': 'Lehmanns Marktstand',
        'ShipAddress': 'Magazinweg 7',
        'ShipCity': 'Frankfurt a.M.',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10773,
        'CustomerID': 'ERNSH',
        'OrderDate': '1997-12-11T04:50:00.000Z',

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    'ShippedDate': '1997-12-16T04:50:00.000Z',
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    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
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    'OrderDate': '1997-12-11T05:50:00.000Z',
    'ShippedDate': '1997-12-12T06:50:00.000Z',
    'Freight': 48.2,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
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    'CustomerID': 'THECR',
    'OrderDate': '1997-12-12T07:50:00.000Z',
    'ShippedDate': '1997-12-26T08:50:00.000Z',
    'Freight': 20.25,
    'ShipName': 'The Cracker Box',
    'ShipAddress': '55 Grizzly Peak Rd.',
    'ShipCity': 'Butte',
    'ShipRegion': 'MT',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10776,
    'CustomerID': 'ERNSH',
    'OrderDate': '1997-12-15T09:50:00.000Z',
    'ShippedDate': '1997-12-18T10:50:00.000Z',
    'Freight': 351.53,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10777,
    'CustomerID': 'GOURL',
    'OrderDate': '1997-12-15T11:50:00.000Z',
    'ShippedDate': '1998-01-21T12:50:00.000Z',
    'Freight': 3.01,
    'ShipName': 'Gourmet Lanchonetes',
    'ShipAddress': 'Av. Brasil, 442',
    'ShipCity': 'Campinas',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {

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'Freight': 6.79,
'ShipName': 'Berglunds snabbköp',
'ShipAddress': 'Berguvsvägen 8',
'ShipCity': 'Luleå',
'ShipRegion': null,
'ShipCountry': 'Sweden'
},
{
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  'CustomerID': 'MORGK',
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  'Freight': 58.13,
  'ShipName': 'Morgenstern Gesundkost',
  'ShipAddress': 'Heerstr. 22',
  'ShipCity': 'Leipzig',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10780,
  'CustomerID': 'LILAS',
  'OrderDate': '1997-12-16T17:50:00.000Z',
  'ShippedDate': '1997-12-25T18:50:00.000Z',
  'Freight': 42.13,
  'ShipName': 'LILA-Supermercado',
  'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
  'ShipCity': 'Barquisimeto',
  'ShipRegion': 'Lara',
  'ShipCountry': 'Venezuela'
},
{
  'OrderID': 10781,
  'CustomerID': 'WARTH',
  'OrderDate': '1997-12-17T19:50:00.000Z',
  'ShippedDate': '1997-12-19T20:50:00.000Z',
  'Freight': 73.16,
  'ShipName': 'Wartian Herkku',
  'ShipAddress': 'Torikatu 38',
  'ShipCity': 'Oulu',
  'ShipRegion': null,
  'ShipCountry': 'Finland'
},
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  'ShippedDate': '1997-12-22T22:50:00.000Z',
  'Freight': 1.1,
  'ShipName': 'Cactus Comidas para llevar',
  'ShipAddress': 'Cerrito 333',
  'ShipCity': 'Buenos Aires',
  'ShipRegion': null,
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    'CustomerID': 'HANAR',
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    'ShippedDate': '1997-12-19T01:50:00.000Z',
    'Freight': 124.98,
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    'ShipAddress': 'Rua do Paço, 67',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
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    'CustomerID': 'MAGAA',
    'OrderDate': '1997-12-18T02:50:00.000Z',
    'ShippedDate': '1997-12-22T03:50:00.000Z',
    'Freight': 70.09,
    'ShipName': 'Magazzini Alimentari Riuniti',
    'ShipAddress': 'Via Ludovico il Moro 22',
    'ShipCity': 'Bergamo',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 10785,
    'CustomerID': 'GROSR',
    'OrderDate': '1997-12-18T04:50:00.000Z',
    'ShippedDate': '1997-12-24T05:50:00.000Z',
    'Freight': 1.51,
    'ShipName': 'GROSELLA-Restaurante',
    'ShipAddress': '5ª Ave. Los Palos Grandes',
    'ShipCity': 'Caracas',
    'ShipRegion': 'DF',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10786,
    'CustomerID': 'QUEEN',
    'OrderDate': '1997-12-19T06:50:00.000Z',
    'ShippedDate': '1997-12-23T07:50:00.000Z',
    'Freight': 110.87,
    'ShipName': 'Queen Cozinha',
    'ShipAddress': 'Alameda dos Canários, 891',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10787,
    'CustomerID': 'LAMAI',
    'OrderDate': '1997-12-19T08:50:00.000Z',
    'ShippedDate': '1997-12-26T09:50:00.000Z',
    'Freight': 249.93,
    'ShipName': 'La maison d\'Asie',

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'ShipCity': 'Toulouse',
'ShipRegion': null,
'ShipCountry': 'France'
},
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  'OrderID': 10788,
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  'Freight': 42.7,
  'ShipName': 'QUICK-Stop',
  'ShipAddress': 'Taucherstraße 10',
  'ShipCity': 'Cunewalde',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10789,
  'CustomerID': 'FOLIG',
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  'ShippedDate': '1997-12-31T13:50:00.000Z',
  'Freight': 100.6,
  'ShipName': 'Folies gourmandes',
  'ShipAddress': '184, chaussée de Tournai',
  'ShipCity': 'Lille',
  'ShipRegion': null,
  'ShipCountry': 'France'
},
{
  'OrderID': 10790,
  'CustomerID': 'GOURL',
  'OrderDate': '1997-12-22T14:50:00.000Z',
  'ShippedDate': '1997-12-26T15:50:00.000Z',
  'Freight': 28.23,
  'ShipName': 'Gourmet Lanchonetes',
  'ShipAddress': 'Av. Brasil, 442',
  'ShipCity': 'Campinas',
  'ShipRegion': 'SP',
  'ShipCountry': 'Brazil'
},
{
  'OrderID': 10791,
  'CustomerID': 'FRANK',
  'OrderDate': '1997-12-23T16:50:00.000Z',
  'ShippedDate': '1998-01-01T17:50:00.000Z',
  'Freight': 16.85,
  'ShipName': 'Frankenversand',
  'ShipAddress': 'Berliner Platz 43',
  'ShipCity': 'München',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
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  'CustomerID': 'WOLZA',
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        'ShippedDate': '1997-12-31T19:50:00.000Z',
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        'ShipCity': 'Warszawa',
        'ShipRegion': null,
        'ShipCountry': 'Poland'
    },
    {
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        'CustomerID': 'AROUT',
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        'ShippedDate': '1998-01-08T21:50:00.000Z',
        'Freight': 4.52,
        'ShipName': 'Around the Horn',
        'ShipAddress': 'Brook Farm Stratford St. Mary',
        'ShipCity': 'Colchester',
        'ShipRegion': 'Essex',
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10794,
        'CustomerID': 'QUEDE',
        'OrderDate': '1997-12-24T22:50:00.000Z',
        'ShippedDate': '1998-01-02T23:50:00.000Z',
        'Freight': 21.49,
        'ShipName': 'Que Delícia',
        'ShipAddress': 'Rua da Panificadora, 12',
        'ShipCity': 'Rio de Janeiro',
        'ShipRegion': 'RJ',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10795,
        'CustomerID': 'ERNSH',
        'OrderDate': '1997-12-24T01:20:00.000Z',
        'ShippedDate': '1998-01-20T02:20:00.000Z',
        'Freight': 126.66,
        'ShipName': 'Ernst Handel',
        'ShipAddress': 'Kirchgasse 6',
        'ShipCity': 'Graz',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
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        'CustomerID': 'HILAA',
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        'ShippedDate': '1998-01-14T04:20:00.000Z',
        'Freight': 26.52,
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        'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
        'ShipCity': 'San Cristóbal',
        'ShipRegion': 'Táchira',
        'ShipCountry': 'Venezuela'
    },
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    'ShippedDate': '1998-01-05T06:20:00.000Z',
    'Freight': 33.35,
    'ShipName': 'Drachenblut Delikatessen',
    'ShipAddress': 'Walserweg 21',
    'ShipCity': 'Aachen',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10798,
    'CustomerID': 'ISLAT',
    'OrderDate': '1997-12-26T07:20:00.000Z',
    'ShippedDate': '1998-01-05T08:20:00.000Z',
    'Freight': 2.33,
    'ShipName': 'Island Trading',
    'ShipAddress': 'Garden House Crowther Way',
    'ShipCity': 'Cowes',
    'ShipRegion': 'Isle of Wight',
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10799,
    'CustomerID': 'KOENE',
    'OrderDate': '1997-12-26T09:20:00.000Z',
    'ShippedDate': '1998-01-05T10:20:00.000Z',
    'Freight': 30.76,
    'ShipName': 'Königlich Essen',
    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
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    'CustomerID': 'SEVES',
    'OrderDate': '1997-12-26T11:20:00.000Z',
    'ShippedDate': '1998-01-05T12:20:00.000Z',
    'Freight': 137.44,
    'ShipName': 'Seven Seas Imports',
    'ShipAddress': '90 Wadhurst Rd.',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10801,
    'CustomerID': 'BOLID',
    'OrderDate': '1997-12-29T13:20:00.000Z',
    'ShippedDate': '1997-12-31T14:20:00.000Z',
    'Freight': 97.09,
    'ShipName': 'Bólido Comidas preparadas',
    'ShipAddress': 'C/ Araquil, 67',
    'ShipCity': 'Madrid',
    'ShipRegion': null,

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    'ShipCountry': 'Spain'
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  {
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    'CustomerID': 'SIMOB',
    'OrderDate': '1997-12-29T15:20:00.000Z',
    'ShippedDate': '1998-01-02T16:20:00.000Z',
    'Freight': 257.26,
    'ShipName': 'Simons bistro',
    'ShipAddress': 'Vinbæltet 34',
    'ShipCity': 'Kobenhavn',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
    'OrderID': 10803,
    'CustomerID': 'WELLI',
    'OrderDate': '1997-12-30T17:20:00.000Z',
    'ShippedDate': '1998-01-06T18:20:00.000Z',
    'Freight': 55.23,
    'ShipName': 'Wellington Importadora',
    'ShipAddress': 'Rua do Mercado, 12',
    'ShipCity': 'Resende',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10804,
    'CustomerID': 'SEVES',
    'OrderDate': '1997-12-30T19:20:00.000Z',
    'ShippedDate': '1998-01-07T20:20:00.000Z',
    'Freight': 27.33,
    'ShipName': 'Seven Seas Imports',
    'ShipAddress': '90 Wadhurst Rd.',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10805,
    'CustomerID': 'THEBI',
    'OrderDate': '1997-12-30T21:20:00.000Z',
    'ShippedDate': '1998-01-09T22:20:00.000Z',
    'Freight': 237.34,
    'ShipName': 'The Big Cheese',
    'ShipAddress': '89 Jefferson Way Suite 2',
    'ShipCity': 'Portland',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10806,
    'CustomerID': 'VICTE',
    'OrderDate': '1997-12-31T23:20:00.000Z',
    'ShippedDate': '1998-01-05T00:20:00.000Z',
    'Freight': 22.11,
    'ShipName': 'Victuailles en stock',

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        'ShipAddress': '2, rue du Commerce',
        'ShipCity': 'Lyon',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
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        'CustomerID': 'FRANS',
        'OrderDate': '1997-12-31T01:40:00.000Z',
        'ShippedDate': '1998-01-30T02:40:00.000Z',
        'Freight': 1.36,
        'ShipName': 'Franchi S.p.A.',
        'ShipAddress': 'Via Monte Bianco 34',
        'ShipCity': 'Torino',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
    {
        'OrderID': 10808,
        'CustomerID': 'OLDWO',
        'OrderDate': '1998-01-01T03:40:00.000Z',
        'ShippedDate': '1998-01-09T04:40:00.000Z',
        'Freight': 45.53,
        'ShipName': 'Old World Delicatessen',
        'ShipAddress': '2743 Bering St.',
        'ShipCity': 'Anchorage',
        'ShipRegion': 'AK',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10809,
        'CustomerID': 'WELLI',
        'OrderDate': '1998-01-01T05:40:00.000Z',
        'ShippedDate': '1998-01-07T06:40:00.000Z',
        'Freight': 4.87,
        'ShipName': 'Wellington Importadora',
        'ShipAddress': 'Rua do Mercado, 12',
        'ShipCity': 'Resende',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10810,
        'CustomerID': 'LAUGB',
        'OrderDate': '1998-01-01T07:40:00.000Z',
        'ShippedDate': '1998-01-07T08:40:00.000Z',
        'Freight': 4.33,
        'ShipName': 'Laughing Bacchus Wine Cellars',
        'ShipAddress': '2319 Elm St.',
        'ShipCity': 'Vancouver',
        'ShipRegion': 'BC',
        'ShipCountry': 'Canada'
    },
    {
        'OrderID': 10811,
        'CustomerID': 'LINOD',
        'OrderDate': '1998-01-02T09:40:00.000Z',

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    'ShippedDate': '1998-01-08T10:40:00.000Z',
    'Freight': 31.22,
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    'ShipAddress': 'Ave. 5 de Mayo Porlamar',
    'ShipCity': 'I. de Margarita',
    'ShipRegion': 'Nueva Esparta',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10812,
    'CustomerID': 'REGGC',
    'OrderDate': '1998-01-02T11:40:00.000Z',
    'ShippedDate': '1998-01-12T12:40:00.000Z',
    'Freight': 59.78,
    'ShipName': 'Reggiani Caseifici',
    'ShipAddress': 'Strada Provinciale 124',
    'ShipCity': 'Reggio Emilia',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 10813,
    'CustomerID': 'RICAR',
    'OrderDate': '1998-01-05T13:40:00.000Z',
    'ShippedDate': '1998-01-09T14:40:00.000Z',
    'Freight': 47.38,
    'ShipName': 'Ricardo Adocicados',
    'ShipAddress': 'Av. Copacabana, 267',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10814,
    'CustomerID': 'VICTE',
    'OrderDate': '1998-01-05T15:40:00.000Z',
    'ShippedDate': '1998-01-14T16:40:00.000Z',
    'Freight': 130.94,
    'ShipName': 'Victuailles en stock',
    'ShipAddress': '2, rue du Commerce',
    'ShipCity': 'Lyon',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10815,
    'CustomerID': 'SAVEA',
    'OrderDate': '1998-01-05T17:40:00.000Z',
    'ShippedDate': '1998-01-14T18:40:00.000Z',
    'Freight': 14.62,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  }
]

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    'OrderID': 10816,
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    'ShippedDate': '1998-02-04T20:40:00.000Z',
    'Freight': 719.78,
    'ShipName': 'Great Lakes Food Market',
    'ShipAddress': '2732 Baker Blvd.',
    'ShipCity': 'Eugene',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'KOENE',
    'OrderDate': '1998-01-06T21:40:00.000Z',
    'ShippedDate': '1998-01-13T22:40:00.000Z',
    'Freight': 306.07,
    'ShipName': 'Königlich Essen',
    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
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    'CustomerID': 'MAGAA',
    'OrderDate': '1998-01-07T23:40:00.000Z',
    'ShippedDate': '1998-01-12T01:55:00.000Z',
    'Freight': 65.48,
    'ShipName': 'Magazzini Alimentari Riuniti',
    'ShipAddress': 'Via Ludovico il Moro 22',
    'ShipCity': 'Bergamo',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
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    'CustomerID': 'CACTU',
    'OrderDate': '1998-01-07T02:55:00.000Z',
    'ShippedDate': '1998-01-16T03:55:00.000Z',
    'Freight': 19.76,
    'ShipName': 'Cactus Comidas para llevar',
    'ShipAddress': 'Cerrito 333',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },
  {
    'OrderID': 10820,
    'CustomerID': 'RATTC',
    'OrderDate': '1998-01-07T04:55:00.000Z',
    'ShippedDate': '1998-01-13T05:55:00.000Z',
    'Freight': 37.52,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',

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    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'SPLIR',
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    'ShippedDate': '1998-01-15T07:55:00.000Z',
    'Freight': 36.68,
    'ShipName': 'Split Rail Beer & Ale',
    'ShipAddress': 'P.O. Box 555',
    'ShipCity': 'Lander',
    'ShipRegion': 'WY',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'TRAIH',
    'OrderDate': '1998-01-08T09:55:00.000Z',
    'ShippedDate': '1998-01-16T10:55:00.000Z',
    'Freight': 7,
    'ShipName': 'Trail\'s Head Gourmet Provisioners',
    'ShipAddress': '722 DaVinci Blvd.',
    'ShipCity': 'Kirkland',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10823,
    'CustomerID': 'LILAS',
    'OrderDate': '1998-01-09T11:55:00.000Z',
    'ShippedDate': '1998-01-13T12:55:00.000Z',
    'Freight': 163.97,
    'ShipName': 'LILA-Supermercado',
    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10824,
    'CustomerID': 'FOLKO',
    'OrderDate': '1998-01-09T13:55:00.000Z',
    'ShippedDate': '1998-01-30T14:55:00.000Z',
    'Freight': 1.23,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
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    'CustomerID': 'DRACD',
    'OrderDate': '1998-01-09T15:55:00.000Z',
    'ShippedDate': '1998-01-14T16:55:00.000Z',
    'Freight': 79.25,
    'ShipName': 'Drachenblut Delikatessen',

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        'ShipCity': 'Aachen',
        'ShipRegion': null,
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    },
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        'ShippedDate': '1998-02-06T18:55:00.000Z',
        'Freight': 7.09,
        'ShipName': 'Blondel père et fils',
        'ShipAddress': '24, place Kléber',
        'ShipCity': 'Strasbourg',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10827,
        'CustomerID': 'BONAP',
        'OrderDate': '1998-01-12T19:55:00.000Z',
        'ShippedDate': '1998-02-06T20:55:00.000Z',
        'Freight': 63.54,
        'ShipName': 'Bon app',
        'ShipAddress': '12, rue des Bouchers',
        'ShipCity': 'Marseille',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10828,
        'CustomerID': 'RANCH',
        'OrderDate': '1998-01-13T21:55:00.000Z',
        'ShippedDate': '1998-02-04T22:55:00.000Z',
        'Freight': 90.85,
        'ShipName': 'Rancho grande',
        'ShipAddress': 'Av. del Libertador 900',
        'ShipCity': 'Buenos Aires',
        'ShipRegion': null,
        'ShipCountry': 'Argentina'
    },
    {
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        'CustomerID': 'ISLAT',
        'OrderDate': '1998-01-13T23:55:00.000Z',
        'ShippedDate': '1998-01-23T12:55:00.000Z',
        'Freight': 154.72,
        'ShipName': 'Island Trading',
        'ShipAddress': 'Garden House Crowther Way',
        'ShipCity': 'Cowes',
        'ShipRegion': 'Isle of Wight',
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10830,
        'CustomerID': 'TRADH',
        'OrderDate': '1998-01-13T01:15:00.000Z',

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        'ShippedDate': '1998-01-21T02:15:00.000Z',
        'Freight': 81.83,
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        'ShipAddress': 'Av. Inês de Castro, 414',
        'ShipCity': 'Sao Paulo',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10831,
        'CustomerID': 'SANTG',
        'OrderDate': '1998-01-14T03:15:00.000Z',
        'ShippedDate': '1998-01-23T04:15:00.000Z',
        'Freight': 72.19,
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        'ShipAddress': 'Erling Skakkess gate 78',
        'ShipCity': 'Stavern',
        'ShipRegion': null,
        'ShipCountry': 'Norway'
    },
    {
        'OrderID': 10832,
        'CustomerID': 'LAMAI',
        'OrderDate': '1998-01-14T05:15:00.000Z',
        'ShippedDate': '1998-01-19T06:15:00.000Z',
        'Freight': 43.26,
        'ShipName': 'La maison d\'Asie',
        'ShipAddress': '1 rue Alsace-Lorraine',
        'ShipCity': 'Toulouse',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10833,
        'CustomerID': 'OTTIK',
        'OrderDate': '1998-01-15T07:15:00.000Z',
        'ShippedDate': '1998-01-23T08:15:00.000Z',
        'Freight': 71.49,
        'ShipName': 'Ottilies Käseladen',
        'ShipAddress': 'Mehrheimerstr. 369',
        'ShipCity': 'Köln',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10834,
        'CustomerID': 'TRADH',
        'OrderDate': '1998-01-15T09:15:00.000Z',
        'ShippedDate': '1998-01-19T10:15:00.000Z',
        'Freight': 29.78,
        'ShipName': 'Tradiçao Hipermercados',
        'ShipAddress': 'Av. Inês de Castro, 414',
        'ShipCity': 'Sao Paulo',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
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    'OrderDate': '1998-01-15T11:15:00.000Z',
    'ShippedDate': '1998-01-21T12:15:00.000Z',
    'Freight': 69.53,
    'ShipName': 'Alfred\'s Futterkiste',
    'ShipAddress': 'Obere Str. 57',
    'ShipCity': 'Berlin',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10836,
    'CustomerID': 'ERNSH',
    'OrderDate': '1998-01-16T13:15:00.000Z',
    'ShippedDate': '1998-01-21T14:15:00.000Z',
    'Freight': 411.88,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10837,
    'CustomerID': 'BERGS',
    'OrderDate': '1998-01-16T15:15:00.000Z',
    'ShippedDate': '1998-01-23T16:15:00.000Z',
    'Freight': 13.32,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
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    'CustomerID': 'LINOD',
    'OrderDate': '1998-01-19T17:15:00.000Z',
    'ShippedDate': '1998-01-23T18:15:00.000Z',
    'Freight': 59.28,
    'ShipName': 'LINO-Delicateses',
    'ShipAddress': 'Ave. 5 de Mayo Porlamar',
    'ShipCity': 'I. de Margarita',
    'ShipRegion': 'Nueva Esparta',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10839,
    'CustomerID': 'TRADH',
    'OrderDate': '1998-01-19T19:15:00.000Z',
    'ShippedDate': '1998-01-22T20:15:00.000Z',
    'Freight': 35.43,
    'ShipName': 'Tradiçao Hipermercados',
    'ShipAddress': 'Av. Inês de Castro, 414',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
  }

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  },
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    'CustomerID': 'LINOD',
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    'ShippedDate': '1998-02-16T22:15:00.000Z',
    'Freight': 2.71,
    'ShipName': 'LINO-Delicateses',
    'ShipAddress': 'Ave. 5 de Mayo Porlamar',
    'ShipCity': 'I. de Margarita',
    'ShipRegion': 'Nueva Esparta',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10841,
    'CustomerID': 'SUPRD',
    'OrderDate': '1998-01-20T23:15:00.000Z',
    'ShippedDate': '1998-01-29T01:55:00.000Z',
    'Freight': 424.3,
    'ShipName': 'Suprêmes délices',
    'ShipAddress': 'Boulevard Tirou, 255',
    'ShipCity': 'Charleroi',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
    'OrderID': 10842,
    'CustomerID': 'TORTU',
    'OrderDate': '1998-01-20T02:55:00.000Z',
    'ShippedDate': '1998-01-29T03:55:00.000Z',
    'Freight': 54.42,
    'ShipName': 'Tortuga Restaurante',
    'ShipAddress': 'Avda. Azteca 123',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10843,
    'CustomerID': 'VICTE',
    'OrderDate': '1998-01-21T04:55:00.000Z',
    'ShippedDate': '1998-01-26T05:55:00.000Z',
    'Freight': 9.26,
    'ShipName': 'Victuailles en stock',
    'ShipAddress': '2, rue du Commerce',
    'ShipCity': 'Lyon',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10844,
    'CustomerID': 'PICCO',
    'OrderDate': '1998-01-21T06:55:00.000Z',
    'ShippedDate': '1998-01-26T07:55:00.000Z',
    'Freight': 25.22,
    'ShipName': 'Piccolo und mehr',

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'ShipAddress': 'Geislweg 14',
'ShipCity': 'Salzburg',
'ShipRegion': null,
'ShipCountry': 'Austria'
},
{
  'OrderID': 10845,
  'CustomerID': 'QUICK',
  'OrderDate': '1998-01-21T08:55:00.000Z',
  'ShippedDate': '1998-01-30T09:55:00.000Z',
  'Freight': 212.98,
  'ShipName': 'QUICK-Stop',
  'ShipAddress': 'Taucherstraße 10',
  'ShipCity': 'Cunewalde',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10846,
  'CustomerID': 'SUPRD',
  'OrderDate': '1998-01-22T10:55:00.000Z',
  'ShippedDate': '1998-01-23T11:55:00.000Z',
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  'ShipAddress': 'Boulevard Tirou, 255',
  'ShipCity': 'Charleroi',
  'ShipRegion': null,
  'ShipCountry': 'Belgium'
},
{
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  'CustomerID': 'SAVEA',
  'OrderDate': '1998-01-22T12:55:00.000Z',
  'ShippedDate': '1998-02-10T13:55:00.000Z',
  'Freight': 487.57,
  'ShipName': 'Save-a-lot Markets',
  'ShipAddress': '187 Suffolk Ln.',
  'ShipCity': 'Boise',
  'ShipRegion': 'ID',
  'ShipCountry': 'USA'
},
{
  'OrderID': 10848,
  'CustomerID': 'CONSH',
  'OrderDate': '1998-01-23T14:55:00.000Z',
  'ShippedDate': '1998-01-29T15:55:00.000Z',
  'Freight': 38.24,
  'ShipName': 'Consolidated Holdings',
  'ShipAddress': 'Berkeley Gardens 12 Brewery',
  'ShipCity': 'London',
  'ShipRegion': null,
  'ShipCountry': 'UK'
},
{
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  'CustomerID': 'KOENE',
  'OrderDate': '1998-01-23T16:55:00.000Z',
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    'ShippedDate': '1998-01-30T17:55:00.000Z',
    'Freight': 0.56,
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    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10850,
    'CustomerID': 'VICTE',
    'OrderDate': '1998-01-23T19:55:00.000Z',
    'ShippedDate': '1998-01-30T20:55:00.000Z',
    'Freight': 49.19,
    'ShipName': 'Victuailles en stock',
    'ShipAddress': '2, rue du Commerce',
    'ShipCity': 'Lyon',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10851,
    'CustomerID': 'RICAR',
    'OrderDate': '1998-01-26T21:55:00.000Z',
    'ShippedDate': '1998-02-02T22:55:00.000Z',
    'Freight': 160.55,
    'ShipName': 'Ricardo Adocicados',
    'ShipAddress': 'Av. Copacabana, 267',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10852,
    'CustomerID': 'RATTC',
    'OrderDate': '1998-01-26T23:55:00.000Z',
    'ShippedDate': '1998-01-30T01:00.05.000Z',
    'Freight': 174.05,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10853,
    'CustomerID': 'BLAUS',
    'OrderDate': '1998-01-27T02:00.05.000Z',
    'ShippedDate': '1998-02-03T03:00.05.000Z',
    'Freight': 53.83,
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    'ShipAddress': 'Forsterstr. 57',
    'ShipCity': 'Mannheim',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {

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    'OrderID': 10854,
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    'OrderDate': '1998-01-27T04:00.05.000Z',
    'ShippedDate': '1998-02-05T05:00.05.000Z',
    'Freight': 100.22,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10855,
    'CustomerID': 'OLDWO',
    'OrderDate': '1998-01-27T06:00.05.000Z',
    'ShippedDate': '1998-02-04T07:00.05.000Z',
    'Freight': 170.97,
    'ShipName': 'Old World Delicatessen',
    'ShipAddress': '2743 Bering St.',
    'ShipCity': 'Anchorage',
    'ShipRegion': 'AK',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10856,
    'CustomerID': 'ANTON',
    'OrderDate': '1998-01-28T08:00.05.000Z',
    'ShippedDate': '1998-02-10T09:00.05.000Z',
    'Freight': 58.43,
    'ShipName': 'Antonio Moreno Taquería',
    'ShipAddress': 'Mataderos 2312',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10857,
    'CustomerID': 'BERGS',
    'OrderDate': '1998-01-28T11:00.05.000Z',
    'ShippedDate': '1998-02-06T12:00.05.000Z',
    'Freight': 188.85,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10858,
    'CustomerID': 'LACOR',
    'OrderDate': '1998-01-29T13:00.05.000Z',
    'ShippedDate': '1998-02-03T14:00.05.000Z',
    'Freight': 52.51,
    'ShipName': 'La corne d\'abondance',
    'ShipAddress': '67, avenue de l\'Europe',
    'ShipCity': 'Versailles',
    'ShipRegion': null,

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    'ShipCountry': 'France'
  },
  {
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    'CustomerID': 'FRANK',
    'OrderDate': '1998-01-29T15:00.05.000Z',
    'ShippedDate': '1998-02-02T16:00.05.000Z',
    'Freight': 76.1,
    'ShipName': 'Frankenversand',
    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10860,
    'CustomerID': 'FRANR',
    'OrderDate': '1998-01-29T17:00.05.000Z',
    'ShippedDate': '1998-02-04T18:00.05.000Z',
    'Freight': 19.26,
    'ShipName': 'France restauration',
    'ShipAddress': '54, rue Royale',
    'ShipCity': 'Nantes',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10861,
    'CustomerID': 'WHITC',
    'OrderDate': '1998-01-30T19:00.05.000Z',
    'ShippedDate': '1998-02-17T20:00.05.000Z',
    'Freight': 14.93,
    'ShipName': 'White Clover Markets',
    'ShipAddress': '1029 - 12th Ave. S.',
    'ShipCity': 'Seattle',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10862,
    'CustomerID': 'LEHMS',
    'OrderDate': '1998-01-30T21:00.05.000Z',
    'ShippedDate': '1998-02-02T22:00.05.000Z',
    'Freight': 53.23,
    'ShipName': 'Lehmanns Marktstand',
    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10863,
    'CustomerID': 'HILAA',
    'OrderDate': '1998-02-02T23:00.05.000Z',
    'ShippedDate': '1998-02-17T01:15:00.000Z',
    'Freight': 30.26,
    'ShipName': 'HILARION-Abastos',

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    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10864,
    'CustomerID': 'AROUT',
    'OrderDate': '1998-02-02T02:15:00.000Z',
    'ShippedDate': '1998-02-09T03:15:00.000Z',
    'Freight': 3.04,
    'ShipName': 'Around the Horn',
    'ShipAddress': 'Brook Farm Stratford St. Mary',
    'ShipCity': 'Colchester',
    'ShipRegion': 'Essex',
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10865,
    'CustomerID': 'QUICK',
    'OrderDate': '1998-02-02T04:15:00.000Z',
    'ShippedDate': '1998-02-12T05:15:00.000Z',
    'Freight': 348.14,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10866,
    'CustomerID': 'BERGS',
    'OrderDate': '1998-02-03T06:15:00.000Z',
    'ShippedDate': '1998-02-12T07:15:00.000Z',
    'Freight': 109.11,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10867,
    'CustomerID': 'LONEP',
    'OrderDate': '1998-02-03T08:15:00.000Z',
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    'Freight': 1.93,
    'ShipName': 'Lonesome Pine Restaurant',
    'ShipAddress': '89 Chiaroscuro Rd.',
    'ShipCity': 'Portland',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'QUEEN',
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    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
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    'OrderDate': '1998-02-04T12:15:00.000Z',
    'ShippedDate': '1998-02-09T13:15:00.000Z',
    'Freight': 143.28,
    'ShipName': 'Seven Seas Imports',
    'ShipAddress': '90 Wadhurst Rd.',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
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    'ShippedDate': '1998-02-13T15:15:00.000Z',
    'Freight': 12.04,
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    'ShipAddress': 'ul. Filtrowa 68',
    'ShipCity': 'Warszawa',
    'ShipRegion': null,
    'ShipCountry': 'Poland'
  },
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    'CustomerID': 'BONAP',
    'OrderDate': '1998-02-05T16:15:00.000Z',
    'ShippedDate': '1998-02-10T17:15:00.000Z',
    'Freight': 112.27,
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    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
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    'OrderID': 10872,
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    'OrderDate': '1998-02-05T18:15:00.000Z',
    'ShippedDate': '1998-02-09T19:15:00.000Z',
    'Freight': 175.32,
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    'ShipAddress': 'C/ Romero, 33',
    'ShipCity': 'Sevilla',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
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    'ShippedDate': '1998-02-09T21:15:00.000Z',
    'Freight': 0.82,
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    'ShipAddress': 'Keskuskatu 45',
    'ShipCity': 'Helsinki',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
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    'Freight': 19.58,
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    'ShipAddress': 'C/ Romero, 33',
    'ShipCity': 'Sevilla',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
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    'CustomerID': 'BERGS',
    'OrderDate': '1998-02-06T01:30:00.000Z',
    'ShippedDate': '1998-03-03T02:30:00.000Z',
    'Freight': 32.37,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
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    'CustomerID': 'BONAP',
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    'ShippedDate': '1998-02-12T04:30:00.000Z',
    'Freight': 60.42,
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    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
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    'OrderDate': '1998-02-09T05:30:00.000Z',
    'ShippedDate': '1998-02-19T06:30:00.000Z',
    'Freight': 38.06,
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    'ShipAddress': 'Av. Copacabana, 267',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',

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    'ShippedDate': '1998-02-12T08:30:00.000Z',
    'Freight': 46.69,
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    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
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  },
  {
    'OrderID': 10879,
    'CustomerID': 'WILMK',
    'OrderDate': '1998-02-10T09:30:00.000Z',
    'ShippedDate': '1998-02-12T10:30:00.000Z',
    'Freight': 8.5,
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    'ShipAddress': 'Keskuskatu 45',
    'ShipCity': 'Helsinki',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
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    'CustomerID': 'FOLKO',
    'OrderDate': '1998-02-10T11:30:00.000Z',
    'ShippedDate': '1998-02-18T12:30:00.000Z',
    'Freight': 88.01,
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    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
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    'CustomerID': 'CACTU',
    'OrderDate': '1998-02-11T13:30:00.000Z',
    'ShippedDate': '1998-02-18T14:30:00.000Z',
    'Freight': 2.84,
    'ShipName': 'Cactus Comidas para llevar',
    'ShipAddress': 'Cerrito 333',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },
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    'OrderID': 10882,
    'CustomerID': 'SAVEA',
    'OrderDate': '1998-02-11T15:30:00.000Z',
    'ShippedDate': '1998-02-20T16:30:00.000Z',
    'Freight': 23.1,
    'ShipName': 'Save-a-lot Markets',
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        'ShipCity': 'Boise',
        'ShipRegion': 'ID',
        'ShipCountry': 'USA'
    },
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        'Freight': 0.53,
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        'ShipAddress': '89 Chiaroscuro Rd.',
        'ShipCity': 'Portland',
        'ShipRegion': 'OR',
        'ShipCountry': 'USA'
    },
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        'ShippedDate': '1998-02-13T20:30:00.000Z',
        'Freight': 90.97,
        'ShipName': 'Let\'s Stop N Shop',
        'ShipAddress': '87 Polk St. Suite 5',
        'ShipCity': 'San Francisco',
        'ShipRegion': 'CA',
        'ShipCountry': 'USA'
    },
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        'CustomerID': 'SUPRD',
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        'Freight': 5.64,
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        'ShipAddress': 'Boulevard Tirou, 255',
        'ShipCity': 'Charleroi',
        'ShipRegion': null,
        'ShipCountry': 'Belgium'
    },
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        'CustomerID': 'HANAR',
        'OrderDate': '1998-02-13T23:30:00.000Z',
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        'Freight': 4.99,
        'ShipName': 'Hanari Carnes',
        'ShipAddress': 'Rua do Paço, 67',
        'ShipCity': 'Rio de Janeiro',
        'ShipRegion': 'RJ',
        'ShipCountry': 'Brazil'
    },
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        'CustomerID': 'GALED',
        'OrderDate': '1998-02-13T02:20:00.000Z',

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    'ShipAddress': 'Rambla de Cataluña, 23',
    'ShipCity': 'Barcelona',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10888,
    'CustomerID': 'GODOS',
    'OrderDate': '1998-02-16T04:20:00.000Z',
    'ShippedDate': '1998-02-23T05:20:00.000Z',
    'Freight': 51.87,
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    'ShipAddress': 'C/ Romero, 33',
    'ShipCity': 'Sevilla',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
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    'CustomerID': 'RATTC',
    'OrderDate': '1998-02-16T06:20:00.000Z',
    'ShippedDate': '1998-02-23T07:20:00.000Z',
    'Freight': 280.61,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
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    'OrderID': 10890,
    'CustomerID': 'DUMON',
    'OrderDate': '1998-02-16T08:20:00.000Z',
    'ShippedDate': '1998-02-18T09:20:00.000Z',
    'Freight': 32.76,
    'ShipName': 'Du monde entier',
    'ShipAddress': '67, rue des Cinquante Otages',
    'ShipCity': 'Nantes',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
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    'CustomerID': 'LEHMS',
    'OrderDate': '1998-02-17T10:20:00.000Z',
    'ShippedDate': '1998-02-19T11:20:00.000Z',
    'Freight': 20.37,
    'ShipName': 'Lehmanns Marktstand',
    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
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    'ShippedDate': '1998-02-19T13:20:00.000Z',
    'Freight': 120.27,
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    'ShipAddress': 'Rue Joseph-Bens 532',
    'ShipCity': 'Bruxelles',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
    'OrderID': 10893,
    'CustomerID': 'KOENE',
    'OrderDate': '1998-02-18T14:20:00.000Z',
    'ShippedDate': '1998-02-20T15:20:00.000Z',
    'Freight': 77.78,
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    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
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    'CustomerID': 'SAVEA',
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    'ShippedDate': '1998-02-20T17:20:00.000Z',
    'Freight': 116.13,
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    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
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    'CustomerID': 'ERNSH',
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    'ShippedDate': '1998-02-23T19:20:00.000Z',
    'Freight': 162.75,
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    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
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    'CustomerID': 'MAISD',
    'OrderDate': '1998-02-19T20:20:00.000Z',
    'ShippedDate': '1998-02-27T21:20:00.000Z',
    'Freight': 32.45,
    'ShipName': 'Maison Dewey',
    'ShipAddress': 'Rue Joseph-Bens 532',
    'ShipCity': 'Bruxelles',
    'ShipRegion': null,

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    'ShipCountry': 'Belgium'
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    'OrderDate': '1998-02-19T22:20:00.000Z',
    'ShippedDate': '1998-02-25T23:20:00.000Z',
    'Freight': 603.54,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10898,
    'CustomerID': 'OCEAN',
    'OrderDate': '1998-02-20T01:55:00.000Z',
    'ShippedDate': '1998-03-06T02:55:00.000Z',
    'Freight': 1.27,
    'ShipName': 'Océano Atlántico Ltda.',
    'ShipAddress': 'Ing. Gustavo Moncada 8585 Piso 20-A',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },
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    'CustomerID': 'LILAS',
    'OrderDate': '1998-02-20T03:55:00.000Z',
    'ShippedDate': '1998-02-26T04:55:00.000Z',
    'Freight': 1.21,
    'ShipName': 'LILA-Supermercado',
    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },
  {
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    'CustomerID': 'WELLI',
    'OrderDate': '1998-02-20T05:55:00.000Z',
    'ShippedDate': '1998-03-04T06:55:00.000Z',
    'Freight': 1.66,
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    'ShipAddress': 'Rua do Mercado, 12',
    'ShipCity': 'Resende',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10901,
    'CustomerID': 'HILAA',
    'OrderDate': '1998-02-23T07:55:00.000Z',
    'ShippedDate': '1998-02-26T08:55:00.000Z',
    'Freight': 62.09,
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    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
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    'ShipCountry': 'Venezuela'
  },
  {
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    'CustomerID': 'FOLKO',
    'OrderDate': '1998-02-23T09:55:00.000Z',
    'ShippedDate': '1998-03-03T10:55:00.000Z',
    'Freight': 44.15,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10903,
    'CustomerID': 'HANAR',
    'OrderDate': '1998-02-24T11:55:00.000Z',
    'ShippedDate': '1998-03-04T12:55:00.000Z',
    'Freight': 36.71,
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    'ShipAddress': 'Rua do Paço, 67',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10904,
    'CustomerID': 'WHITC',
    'OrderDate': '1998-02-24T13:55:00.000Z',
    'ShippedDate': '1998-02-27T14:55:00.000Z',
    'Freight': 162.95,
    'ShipName': 'White Clover Markets',
    'ShipAddress': '1029 - 12th Ave. S.',
    'ShipCity': 'Seattle',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10905,
    'CustomerID': 'WELLI',
    'OrderDate': '1998-02-24T15:55:00.000Z',
    'ShippedDate': '1998-03-06T16:55:00.000Z',
    'Freight': 13.72,
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    'ShipAddress': 'Rua do Mercado, 12',
    'ShipCity': 'Resende',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
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    'CustomerID': 'WOLZA',
    'OrderDate': '1998-02-25T17:55:00.000Z',

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    'ShippedDate': '1998-03-03T18:55:00.000Z',
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    'ShipAddress': 'ul. Filtrowa 68',
    'ShipCity': 'Warszawa',
    'ShipRegion': null,
    'ShipCountry': 'Poland'
  },
  {
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    'CustomerID': 'SPECB',
    'OrderDate': '1998-02-25T19:55:00.000Z',
    'ShippedDate': '1998-02-27T20:55:00.000Z',
    'Freight': 9.19,
    'ShipName': 'Spécialités du monde',
    'ShipAddress': '25, rue Lauriston',
    'ShipCity': 'Paris',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10908,
    'CustomerID': 'REGGC',
    'OrderDate': '1998-02-26T21:55:00.000Z',
    'ShippedDate': '1998-03-06T22:55:00.000Z',
    'Freight': 32.96,
    'ShipName': 'Reggiani Caseifici',
    'ShipAddress': 'Strada Provinciale 124',
    'ShipCity': 'Reggio Emilia',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
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    'CustomerID': 'SANTG',
    'OrderDate': '1998-02-26T23:55:00.000Z',
    'ShippedDate': '1998-03-10T01:40:00.000Z',
    'Freight': 53.05,
    'ShipName': 'Santé Gourmet',
    'ShipAddress': 'Erling Skakkes gate 78',
    'ShipCity': 'Stavern',
    'ShipRegion': null,
    'ShipCountry': 'Norway'
  },
  {
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    'CustomerID': 'WILMK',
    'OrderDate': '1998-02-26T02:40:00.000Z',
    'ShippedDate': '1998-03-04T03:40:00.000Z',
    'Freight': 38.11,
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    'ShipAddress': 'Keskuskatu 45',
    'ShipCity': 'Helsinki',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
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      'Freight': 38.19,
      'ShipName': 'Godos Cocina Típica',
      'ShipAddress': 'C/ Romero, 33',
      'ShipCity': 'Sevilla',
      'ShipRegion': null,
      'ShipCountry': 'Spain'
    },
    {
      'OrderID': 10912,
      'CustomerID': 'HUNGO',
      'OrderDate': '1998-02-26T06:40:00.000Z',
      'ShippedDate': '1998-03-18T07:40:00.000Z',
      'Freight': 580.91,
      'ShipName': 'Hungry Owl All-Night Grocers',
      'ShipAddress': '8 Johnstown Road',
      'ShipCity': 'Cork',
      'ShipRegion': 'Co. Cork',
      'ShipCountry': 'Ireland'
    },
    {
      'OrderID': 10913,
      'CustomerID': 'QUEEN',
      'OrderDate': '1998-02-26T08:40:00.000Z',
      'ShippedDate': '1998-03-04T09:40:00.000Z',
      'Freight': 33.05,
      'ShipName': 'Queen Cozinha',
      'ShipAddress': 'Alameda dos Canários, 891',
      'ShipCity': 'Sao Paulo',
      'ShipRegion': 'SP',
      'ShipCountry': 'Brazil'
    },
    {
      'OrderID': 10914,
      'CustomerID': 'QUEEN',
      'OrderDate': '1998-02-27T10:40:00.000Z',
      'ShippedDate': '1998-03-02T11:40:00.000Z',
      'Freight': 21.19,
      'ShipName': 'Queen Cozinha',
      'ShipAddress': 'Alameda dos Canários, 891',
      'ShipCity': 'Sao Paulo',
      'ShipRegion': 'SP',
      'ShipCountry': 'Brazil'
    },
    {
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      'CustomerID': 'TORTU',
      'OrderDate': '1998-02-27T12:40:00.000Z',
      'ShippedDate': '1998-03-02T13:40:00.000Z',
      'Freight': 3.51,
      'ShipName': 'Tortuga Restaurante',
      'ShipAddress': 'Avda. Azteca 123',
      'ShipCity': 'México D.F.',
      'ShipRegion': null,

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  },
  {
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    'OrderDate': '1998-02-27T14:40:00.000Z',
    'ShippedDate': '1998-03-09T15:40:00.000Z',
    'Freight': 63.77,
    'ShipName': 'Rancho grande',
    'ShipAddress': 'Av. del Libertador 900',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },
  {
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    'CustomerID': 'ROMEY',
    'OrderDate': '1998-03-02T16:40:00.000Z',
    'ShippedDate': '1998-03-11T17:40:00.000Z',
    'Freight': 8.29,
    'ShipName': 'Romero y tomillo',
    'ShipAddress': 'Gran Vía, 1',
    'ShipCity': 'Madrid',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10918,
    'CustomerID': 'BOTTM',
    'OrderDate': '1998-03-02T18:40:00.000Z',
    'ShippedDate': '1998-03-11T19:40:00.000Z',
    'Freight': 48.83,
    'ShipName': 'Bottom-Dollar Markets',
    'ShipAddress': '23 Tsawassen Blvd.',
    'ShipCity': 'Tsawassen',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10919,
    'CustomerID': 'LINOD',
    'OrderDate': '1998-03-02T20:40:00.000Z',
    'ShippedDate': '1998-03-04T21:40:00.000Z',
    'Freight': 19.8,
    'ShipName': 'LINO-Delicateses',
    'ShipAddress': 'Ave. 5 de Mayo Porlamar',
    'ShipCity': 'I. de Margarita',
    'ShipRegion': 'Nueva Esparta',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10920,
    'CustomerID': 'AROUT',
    'OrderDate': '1998-03-03T22:40:00.000Z',
    'ShippedDate': '1998-03-09T01:50:00.000Z',
    'Freight': 29.61,
    'ShipName': 'Around the Horn',
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    'ShipAddress': 'Brook Farm Stratford St. Mary',
    'ShipCity': 'Colchester',
    'ShipRegion': 'Essex',
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10921,
    'CustomerID': 'VAFFE',
    'OrderDate': '1998-03-03T02:50:00.000Z',
    'ShippedDate': '1998-03-09T03:50:00.000Z',
    'Freight': 176.48,
    'ShipName': 'Vaffeljernet',
    'ShipAddress': 'Smagsloget 45',
    'ShipCity': 'Århus',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
    'OrderID': 10922,
    'CustomerID': 'HANAR',
    'OrderDate': '1998-03-03T04:50:00.000Z',
    'ShippedDate': '1998-03-05T05:50:00.000Z',
    'Freight': 62.74,
    'ShipName': 'Hanari Carnes',
    'ShipAddress': 'Rua do Paço, 67',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10923,
    'CustomerID': 'LAMAI',
    'OrderDate': '1998-03-03T06:50:00.000Z',
    'ShippedDate': '1998-03-13T06:50:00.000Z',
    'Freight': 68.26,
    'ShipName': 'La maison d\'Asie',
    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10924,
    'CustomerID': 'BERGS',
    'OrderDate': '1998-03-04T07:50:00.000Z',
    'ShippedDate': '1998-04-08T08:50:00.000Z',
    'Freight': 151.52,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10925,
    'CustomerID': 'HANAR',
    'OrderDate': '1998-03-04T09:50:00.000Z',

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        'ShippedDate': '1998-03-13T10:50:00.000Z',
        'Freight': 2.27,
        'ShipName': 'Hanari Carnes',
        'ShipAddress': 'Rua do Paço, 67',
        'ShipCity': 'Rio de Janeiro',
        'ShipRegion': 'RJ',
        'ShipCountry': 'Brazil'
    },
    {
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        'CustomerID': 'ANATR',
        'OrderDate': '1998-03-04T11:50:00.000Z',
        'ShippedDate': '1998-03-11T12:50:00.000Z',
        'Freight': 39.92,
        'ShipName': 'Ana Trujillo Emparedados y helados',
        'ShipAddress': 'Avda. de la Constitución 2222',
        'ShipCity': 'México D.F.',
        'ShipRegion': null,
        'ShipCountry': 'Mexico'
    },
    {
        'OrderID': 10927,
        'CustomerID': 'LACOR',
        'OrderDate': '1998-03-05T13:50:00.000Z',
        'ShippedDate': '1998-04-08T14:50:00.000Z',
        'Freight': 19.79,
        'ShipName': 'La corne d\'abondance',
        'ShipAddress': '67, avenue de l\'Europe',
        'ShipCity': 'Versailles',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10928,
        'CustomerID': 'GALED',
        'OrderDate': '1998-03-05T15:50:00.000Z',
        'ShippedDate': '1998-03-18T16:50:00.000Z',
        'Freight': 1.36,
        'ShipName': 'Galería del gastronómo',
        'ShipAddress': 'Rambla de Cataluña, 23',
        'ShipCity': 'Barcelona',
        'ShipRegion': null,
        'ShipCountry': 'Spain'
    },
    {
        'OrderID': 10929,
        'CustomerID': 'FRANK',
        'OrderDate': '1998-03-05T17:50:00.000Z',
        'ShippedDate': '1998-03-12T18:50:00.000Z',
        'Freight': 33.93,
        'ShipName': 'Frankenversand',
        'ShipAddress': 'Berliner Platz 43',
        'ShipCity': 'München',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
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    'OrderID': 10930,
    'CustomerID': 'SUPRD',
    'OrderDate': '1998-03-06T19:50:00.000Z',
    'ShippedDate': '1998-03-18T20:50:00.000Z',
    'Freight': 15.55,
    'ShipName': 'Suprêmes délices',
    'ShipAddress': 'Boulevard Tirou, 255',
    'ShipCity': 'Charleroi',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
    'OrderID': 10931,
    'CustomerID': 'RICSU',
    'OrderDate': '1998-03-06T21:50:00.000Z',
    'ShippedDate': '1998-03-19T22:50:00.000Z',
    'Freight': 13.6,
    'ShipName': 'Richter Supermarkt',
    'ShipAddress': 'Starenweg 5',
    'ShipCity': 'Genève',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
  {
    'OrderID': 10932,
    'CustomerID': 'BONAP',
    'OrderDate': '1998-03-06T23:50:00.000Z',
    'ShippedDate': '1998-03-24T01:50:00.000Z',
    'Freight': 134.64,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10933,
    'CustomerID': 'ISLAT',
    'OrderDate': '1998-03-06T02:20:00.000Z',
    'ShippedDate': '1998-03-16T03:20:00.000Z',
    'Freight': 54.15,
    'ShipName': 'Island Trading',
    'ShipAddress': 'Garden House Crowther Way',
    'ShipCity': 'Cowes',
    'ShipRegion': 'Isle of Wight',
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10934,
    'CustomerID': 'LEHMS',
    'OrderDate': '1998-03-09T04:20:00.000Z',
    'ShippedDate': '1998-03-12T05:20:00.000Z',
    'Freight': 32.01,
    'ShipName': 'Lehmanns Marktstand',
    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,

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    'ShipCountry': 'Germany'
  },
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    'CustomerID': 'WELLI',
    'OrderDate': '1998-03-09T06:20:00.000Z',
    'ShippedDate': '1998-03-18T07:20:00.000Z',
    'Freight': 47.59,
    'ShipName': 'Wellington Importadora',
    'ShipAddress': 'Rua do Mercado, 12',
    'ShipCity': 'Resende',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10936,
    'CustomerID': 'GREAL',
    'OrderDate': '1998-03-09T08:20:00.000Z',
    'ShippedDate': '1998-03-18T09:20:00.000Z',
    'Freight': 33.68,
    'ShipName': 'Great Lakes Food Market',
    'ShipAddress': '2732 Baker Blvd.',
    'ShipCity': 'Eugene',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10937,
    'CustomerID': 'CACTU',
    'OrderDate': '1998-03-10T10:20:00.000Z',
    'ShippedDate': '1998-03-13T11:20:00.000Z',
    'Freight': 31.51,
    'ShipName': 'Cactus Comidas para llevar',
    'ShipAddress': 'Cerrito 333',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },
  {
    'OrderID': 10938,
    'CustomerID': 'QUICK',
    'OrderDate': '1998-03-10T12:20:00.000Z',
    'ShippedDate': '1998-03-16T14:20:00.000Z',
    'Freight': 31.89,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10939,
    'CustomerID': 'MAGAA',
    'OrderDate': '1998-03-10T13:20:00.000Z',
    'ShippedDate': '1998-03-13T15:20:00.000Z',
    'Freight': 76.33,
    'ShipName': 'Magazzini Alimentari Riuniti',

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        'ShipAddress': 'Via Ludovico il Moro 22',
        'ShipCity': 'Bergamo',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
    {
        'OrderID': 10940,
        'CustomerID': 'BONAP',
        'OrderDate': '1998-03-11T16:20:00.000Z',
        'ShippedDate': '1998-03-23T17:20:00.000Z',
        'Freight': 19.77,
        'ShipName': 'Bon app',
        'ShipAddress': '12, rue des Bouchers',
        'ShipCity': 'Marseille',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10941,
        'CustomerID': 'SAVEA',
        'OrderDate': '1998-03-11T18:20:00.000Z',
        'ShippedDate': '1998-03-20T19:20:00.000Z',
        'Freight': 400.81,
        'ShipName': 'Save-a-lot Markets',
        'ShipAddress': '187 Suffolk Ln.',
        'ShipCity': 'Boise',
        'ShipRegion': 'ID',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10942,
        'CustomerID': 'REGGC',
        'OrderDate': '1998-03-11T20:20:00.000Z',
        'ShippedDate': '1998-03-18T21:20:00.000Z',
        'Freight': 17.95,
        'ShipName': 'Reggiani Caseifici',
        'ShipAddress': 'Strada Provinciale 124',
        'ShipCity': 'Reggio Emilia',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
    {
        'OrderID': 10943,
        'CustomerID': 'BSBEV',
        'OrderDate': '1998-03-11T22:20:00.000Z',
        'ShippedDate': '1998-03-19T23:20:00.000Z',
        'Freight': 2.17,
        'ShipName': 'B\'s Beverages',
        'ShipAddress': 'Fauntleroy Circus',
        'ShipCity': 'London',
        'ShipRegion': null,
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10944,
        'CustomerID': 'BOTTM',
        'OrderDate': '1998-03-12T01:20:00.000Z',

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    'ShippedDate': '1998-03-13T02:20:00.000Z',
    'Freight': 52.92,
    'ShipName': 'Bottom-Dollar Markets',
    'ShipAddress': '23 Tsawassen Blvd.',
    'ShipCity': 'Tsawassen',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10945,
    'CustomerID': 'MORGK',
    'OrderDate': '1998-03-12T03:20:00.000Z',
    'ShippedDate': '1998-03-18T04:20:00.000Z',
    'Freight': 10.22,
    'ShipName': 'Morgenstern Gesundkost',
    'ShipAddress': 'Heerstr. 22',
    'ShipCity': 'Leipzig',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10946,
    'CustomerID': 'VAFFE',
    'OrderDate': '1998-03-12T05:20:00.000Z',
    'ShippedDate': '1998-03-19T06:20:00.000Z',
    'Freight': 27.2,
    'ShipName': 'Vaffeljernet',
    'ShipAddress': 'Smagsloget 45',
    'ShipCity': 'Århus',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
    'OrderID': 10947,
    'CustomerID': 'BSBEV',
    'OrderDate': '1998-03-13T07:20:00.000Z',
    'ShippedDate': '1998-03-16T08:20:00.000Z',
    'Freight': 3.26,
    'ShipName': 'B\'s Beverages',
    'ShipAddress': 'Fauntleroy Circus',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10948,
    'CustomerID': 'GODOS',
    'OrderDate': '1998-03-13T09:20:00.000Z',
    'ShippedDate': '1998-03-19T10:20:00.000Z',
    'Freight': 23.39,
    'ShipName': 'Godos Cocina Típica',
    'ShipAddress': 'C/ Romero, 33',
    'ShipCity': 'Sevilla',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {

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    'OrderID': 10949,
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    'OrderDate': '1998-03-13T11:20:00.000Z',
    'ShippedDate': '1998-03-17T12:20:00.000Z',
    'Freight': 74.44,
    'ShipName': 'Bottom-Dollar Markets',
    'ShipAddress': '23 Tsawassen Blvd.',
    'ShipCity': 'Tsawassen',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10950,
    'CustomerID': 'MAGAA',
    'OrderDate': '1998-03-16T13:20:00.000Z',
    'ShippedDate': '1998-03-23T14:20:00.000Z',
    'Freight': 2.5,
    'ShipName': 'Magazzini Alimentari Riuniti',
    'ShipAddress': 'Via Ludovico il Moro 22',
    'ShipCity': 'Bergamo',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 10951,
    'CustomerID': 'RICSU',
    'OrderDate': '1998-03-16T15:20:00.000Z',
    'ShippedDate': '1998-04-07T16:20:00.000Z',
    'Freight': 30.85,
    'ShipName': 'Richter Supermarkt',
    'ShipAddress': 'Starenweg 5',
    'ShipCity': 'Genève',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
  {
    'OrderID': 10952,
    'CustomerID': 'ALFKI',
    'OrderDate': '1998-03-16T17:20:00.000Z',
    'ShippedDate': '1998-03-24T18:20:00.000Z',
    'Freight': 40.42,
    'ShipName': 'Alfred's Futterkiste',
    'ShipAddress': 'Obere Str. 57',
    'ShipCity': 'Berlin',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10953,
    'CustomerID': 'AROUT',
    'OrderDate': '1998-03-16T19:20:00.000Z',
    'ShippedDate': '1998-03-25T20:20:00.000Z',
    'Freight': 23.72,
    'ShipName': 'Around the Horn',
    'ShipAddress': 'Brook Farm Stratford St. Mary',
    'ShipCity': 'Colchester',
    'ShipRegion': 'Essex',
  }

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    'ShipCountry': 'UK'
  },
  {
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    'CustomerID': 'LINOD',
    'OrderDate': '1998-03-17T21:20:00.000Z',
    'ShippedDate': '1998-03-20T22:20:00.000Z',
    'Freight': 27.91,
    'ShipName': 'LINO-Delicateses',
    'ShipAddress': 'Ave. 5 de Mayo Porlamar',
    'ShipCity': 'I. de Margarita',
    'ShipRegion': 'Nueva Esparta',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10955,
    'CustomerID': 'FOLKO',
    'OrderDate': '1998-03-17T23:20:00.000Z',
    'ShippedDate': '1998-03-20T01:20:00.000Z',
    'Freight': 3.26,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10956,
    'CustomerID': 'BLAUS',
    'OrderDate': '1998-03-17T01:55:00.000Z',
    'ShippedDate': '1998-03-20T02:55:00.000Z',
    'Freight': 44.65,
    'ShipName': 'Blauer See Delikatessen',
    'ShipAddress': 'Forsterstr. 57',
    'ShipCity': 'Mannheim',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10957,
    'CustomerID': 'HILAA',
    'OrderDate': '1998-03-18T03:55:00.000Z',
    'ShippedDate': '1998-03-27T04:55:00.000Z',
    'Freight': 105.36,
    'ShipName': 'HILARION-Abastos',
    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10958,
    'CustomerID': 'OCEAN',
    'OrderDate': '1998-03-18T05:55:00.000Z',
    'ShippedDate': '1998-03-27T06:55:00.000Z',
    'Freight': 49.56,
    'ShipName': 'Océano Atlántico Ltda.',

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    'ShipAddress': 'Ing. Gustavo Moncada 8585 Piso 20-A',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },
  {
    'OrderID': 10959,
    'CustomerID': 'GOURL',
    'OrderDate': '1998-03-18T07:55:00.000Z',
    'ShippedDate': '1998-03-23T08:55:00.000Z',
    'Freight': 4.98,
    'ShipName': 'Gourmet Lanchonetes',
    'ShipAddress': 'Av. Brasil, 442',
    'ShipCity': 'Campinas',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10960,
    'CustomerID': 'HILAA',
    'OrderDate': '1998-03-19T09:55:00.000Z',
    'ShippedDate': '1998-04-08T10:55:00.000Z',
    'Freight': 2.08,
    'ShipName': 'HILARION-Abastos',
    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10961,
    'CustomerID': 'QUEEN',
    'OrderDate': '1998-03-19T11:55:00.000Z',
    'ShippedDate': '1998-03-30T12:55:00.000Z',
    'Freight': 104.47,
    'ShipName': 'Queen Cozinha',
    'ShipAddress': 'Alameda dos Canários, 891',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10962,
    'CustomerID': 'QUICK',
    'OrderDate': '1998-03-19T13:55:00.000Z',
    'ShippedDate': '1998-03-23T14:55:00.000Z',
    'Freight': 275.79,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10963,
    'CustomerID': 'FURIB',
    'OrderDate': '1998-03-19T15:55:00.000Z',

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    'ShippedDate': '1998-03-26T16:55:00.000Z',
    'Freight': 2.7,
    'ShipName': 'Furia Bacalhau e Frutos do Mar',
    'ShipAddress': 'Jardim das rosas n. 32',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {
    'OrderID': 10964,
    'CustomerID': 'SPECB',
    'OrderDate': '1998-03-20T17:55:00.000Z',
    'ShippedDate': '1998-03-24T18:55:00.000Z',
    'Freight': 87.38,
    'ShipName': 'Spécialités du monde',
    'ShipAddress': '25, rue Lauriston',
    'ShipCity': 'Paris',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10965,
    'CustomerID': 'OLDWO',
    'OrderDate': '1998-03-20T19:55:00.000Z',
    'ShippedDate': '1998-03-30T20:55:00.000Z',
    'Freight': 144.38,
    'ShipName': 'Old World Delicatessen',
    'ShipAddress': '2743 Bering St.',
    'ShipCity': 'Anchorage',
    'ShipRegion': 'AK',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10966,
    'CustomerID': 'CHOPS',
    'OrderDate': '1998-03-20T21:55:00.000Z',
    'ShippedDate': '1998-04-08T22:55:00.000Z',
    'Freight': 27.19,
    'ShipName': 'Chop-suey Chinese',
    'ShipAddress': 'Hauptstr. 31',
    'ShipCity': 'Bern',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
  {
    'OrderID': 10967,
    'CustomerID': 'TOMSP',
    'OrderDate': '1998-03-23T23:55:00.000Z',
    'ShippedDate': '1998-04-02T12:55:00.000Z',
    'Freight': 62.22,
    'ShipName': 'Toms Spezialitäten',
    'ShipAddress': 'Luisenstr. 48',
    'ShipCity': 'Münster',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {

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    'OrderID': 10968,
    'CustomerID': 'ERNSH',
    'OrderDate': '1998-03-23T01:00.05.000Z',
    'ShippedDate': '1998-04-01T02:00.05.000Z',
    'Freight': 74.6,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10969,
    'CustomerID': 'COMMI',
    'OrderDate': '1998-03-23T03:00.05.000Z',
    'ShippedDate': '1998-03-30T04:00.05.000Z',
    'Freight': 0.21,
    'ShipName': 'Comércio Mineiro',
    'ShipAddress': 'Av. dos Lusíadas, 23',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10970,
    'CustomerID': 'BOLID',
    'OrderDate': '1998-03-24T05:00.05.000Z',
    'ShippedDate': '1998-04-24T06:00.05.000Z',
    'Freight': 16.16,
    'ShipName': 'Bólido Comidas preparadas',
    'ShipAddress': 'C/ Araquil, 67',
    'ShipCity': 'Madrid',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10971,
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    'Freight': 121.82,
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    'ShipAddress': '54, rue Royale',
    'ShipCity': 'Nantes',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
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    'OrderDate': '1998-03-24T09:00.05.000Z',
    'ShippedDate': '1998-03-26T10:00.05.000Z',
    'Freight': 0.02,
    'ShipName': 'La corne d\'abondance',
    'ShipAddress': '67, avenue de l\'Europe',
    'ShipCity': 'Versailles',
    'ShipRegion': null,

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    'ShipCountry': 'France'
  },
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    'CustomerID': 'LACOR',
    'OrderDate': '1998-03-24T11:00.05.000Z',
    'ShippedDate': '1998-03-27T12:00.05.000Z',
    'Freight': 15.17,
    'ShipName': 'La corne d\'abondance',
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    'ShipCity': 'Versailles',
    'ShipRegion': null,
    'ShipCountry': 'France'
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    'ShippedDate': '1998-04-03T14:00.05.000Z',
    'Freight': 12.96,
    'ShipName': 'Split Rail Beer & Ale',
    'ShipAddress': 'P.O. Box 555',
    'ShipCity': 'Lander',
    'ShipRegion': 'WY',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10975,
    'CustomerID': 'BOTTM',
    'OrderDate': '1998-03-25T15:00.05.000Z',
    'ShippedDate': '1998-03-27T16:00.05.000Z',
    'Freight': 32.27,
    'ShipName': 'Bottom-Dollar Markets',
    'ShipAddress': '23 Tsawassen Blvd.',
    'ShipCity': 'Tsawassen',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
  {
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    'CustomerID': 'HILAA',
    'OrderDate': '1998-03-25T17:00.05.000Z',
    'ShippedDate': '1998-04-03T18:00.05.000Z',
    'Freight': 37.97,
    'ShipName': 'HILARION-Abastos',
    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
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    'CustomerID': 'FOLKO',
    'OrderDate': '1998-03-26T19:00.05.000Z',
    'ShippedDate': '1998-04-10T10:00.05.000Z',
    'Freight': 208.5,
    'ShipName': 'Folk och fä HB',

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        'ShipCity': 'Bräcke',
        'ShipRegion': null,
        'ShipCountry': 'Sweden'
    },
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        'ShippedDate': '1998-04-23T12:00.05.000Z',
        'Freight': 32.82,
        'ShipName': 'Maison Dewey',
        'ShipAddress': 'Rue Joseph-Bens 532',
        'ShipCity': 'Bruxelles',
        'ShipRegion': null,
        'ShipCountry': 'Belgium'
    },
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        'OrderID': 10979,
        'CustomerID': 'ERNSH',
        'OrderDate': '1998-03-26T13:00.05.000Z',
        'ShippedDate': '1998-03-31T14:00.05.000Z',
        'Freight': 353.07,
        'ShipName': 'Ernst Handel',
        'ShipAddress': 'Kirchgasse 6',
        'ShipCity': 'Graz',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
        'OrderID': 10980,
        'CustomerID': 'FOLKO',
        'OrderDate': '1998-03-27T15:00.05.000Z',
        'ShippedDate': '1998-04-17T16:00.05.000Z',
        'Freight': 1.26,
        'ShipName': 'Folk och fä HB',
        'ShipAddress': 'Åkergatan 24',
        'ShipCity': 'Bräcke',
        'ShipRegion': null,
        'ShipCountry': 'Sweden'
    },
    {
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        'CustomerID': 'HANAR',
        'OrderDate': '1998-03-27T17:00.05.000Z',
        'ShippedDate': '1998-04-02T18:00.05.000Z',
        'Freight': 193.37,
        'ShipName': 'Hanari Carnes',
        'ShipAddress': 'Rua do Paço, 67',
        'ShipCity': 'Rio de Janeiro',
        'ShipRegion': 'RJ',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10982,
        'CustomerID': 'BOTTM',
        'OrderDate': '1998-03-27T19:00.05.000Z',

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    'ShippedDate': '1998-04-08T20:00.05.000Z',
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    'ShipCity': 'Tsawassen',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10983,
    'CustomerID': 'SAVEA',
    'OrderDate': '1998-03-27T21:00.05.000Z',
    'ShippedDate': '1998-04-06T22:00.05.000Z',
    'Freight': 657.54,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10984,
    'CustomerID': 'SAVEA',
    'OrderDate': '1998-03-30T23:00.05.000Z',
    'ShippedDate': '1998-04-03T13:00.05.000Z',
    'Freight': 211.22,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'HUNGO',
    'OrderDate': '1998-03-30T01:25:00.000Z',
    'ShippedDate': '1998-04-02T02:25:00.000Z',
    'Freight': 91.51,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10986,
    'CustomerID': 'OCEAN',
    'OrderDate': '1998-03-30T03:25:00.000Z',
    'ShippedDate': '1998-04-21T04:25:00.000Z',
    'Freight': 217.86,
    'ShipName': 'Océano Atlántico Ltda.',
    'ShipAddress': 'Ing. Gustavo Moncada 8585 Piso 20-A',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },
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    'Freight': 185.48,
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    'ShipAddress': '35 King George',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10988,
    'CustomerID': 'RATTC',
    'OrderDate': '1998-03-31T07:25:00.000Z',
    'ShippedDate': '1998-04-10T08:25:00.000Z',
    'Freight': 61.14,
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    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10989,
    'CustomerID': 'QUEDE',
    'OrderDate': '1998-03-31T09:25:00.000Z',
    'ShippedDate': '1998-04-02T10:25:00.000Z',
    'Freight': 34.76,
    'ShipName': 'Que Delícia',
    'ShipAddress': 'Rua da Panificadora, 12',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10990,
    'CustomerID': 'ERNSH',
    'OrderDate': '1998-04-01T11:25:00.000Z',
    'ShippedDate': '1998-04-07T12:25:00.000Z',
    'Freight': 117.61,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10991,
    'CustomerID': 'QUICK',
    'OrderDate': '1998-04-01T13:25:00.000Z',
    'ShippedDate': '1998-04-07T14:25:00.000Z',
    'Freight': 38.51,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,

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    'ShipCountry': 'Germany'
  },
  {
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    'CustomerID': 'THEBI',
    'OrderDate': '1998-04-01T15:25:00.000Z',
    'ShippedDate': '1998-04-03T16:25:00.000Z',
    'Freight': 4.27,
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    'ShipAddress': '89 Jefferson Way Suite 2',
    'ShipCity': 'Portland',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10993,
    'CustomerID': 'FOLKO',
    'OrderDate': '1998-04-01T17:25:00.000Z',
    'ShippedDate': '1998-04-10T18:25:00.000Z',
    'Freight': 8.81,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10994,
    'CustomerID': 'VAFPE',
    'OrderDate': '1998-04-02T19:25:00.000Z',
    'ShippedDate': '1998-04-09T20:25:00.000Z',
    'Freight': 65.53,
    'ShipName': 'Vaffeljernet',
    'ShipAddress': 'Smagsloget 45',
    'ShipCity': 'Århus',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
    'OrderID': 10995,
    'CustomerID': 'PERIC',
    'OrderDate': '1998-04-02T21:25:00.000Z',
    'ShippedDate': '1998-04-06T22:25:00.000Z',
    'Freight': 46,
    'ShipName': 'Pericles Comidas clásicas',
    'ShipAddress': 'Calle Dr. Jorge Cash 321',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10996,
    'CustomerID': 'QUICK',
    'OrderDate': '1998-04-02T23:25:00.000Z',
    'ShippedDate': '1998-04-10T13:25:00.000Z',
    'Freight': 1.12,
    'ShipName': 'QUICK-Stop',

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        'ShipCity': 'Cunewalde',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
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        'CustomerID': 'LILAS',
        'OrderDate': '1998-04-03T14:25:00.000Z',
        'ShippedDate': '1998-04-13T01:25:00.000Z',
        'Freight': 73.91,
        'ShipName': 'LILA-Supermercado',
        'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
        'ShipCity': 'Barquisimeto',
        'ShipRegion': 'Lara',
        'ShipCountry': 'Venezuela'
    },
    {
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        'CustomerID': 'WOLZA',
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        'ShippedDate': '1998-04-17T03:25:00.000Z',
        'Freight': 20.31,
        'ShipName': 'Wolski Zajazd',
        'ShipAddress': 'ul. Filtrowa 68',
        'ShipCity': 'Warszawa',
        'ShipRegion': null,
        'ShipCountry': 'Poland'
    },
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        'CustomerID': 'OTTIK',
        'OrderDate': '1998-04-03T04:25:00.000Z',
        'ShippedDate': '1998-04-10T05:25:00.000Z',
        'Freight': 96.35,
        'ShipName': 'Ottilies Käseladen',
        'ShipAddress': 'Mehrheimerstr. 369',
        'ShipCity': 'Köln',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 11000,
        'CustomerID': 'RATTC',
        'OrderDate': '1998-04-06T06:25:00.000Z',
        'ShippedDate': '1998-04-14T07:25:00.000Z',
        'Freight': 55.12,
        'ShipName': 'Rattlesnake Canyon Grocery',
        'ShipAddress': '2817 Milton Dr.',
        'ShipCity': 'Albuquerque',
        'ShipRegion': 'NM',
        'ShipCountry': 'USA'
    },
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        'OrderID': 11001,
        'CustomerID': 'FOLKO',
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    'Freight': 197.3,
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    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
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    'CustomerID': 'SAVEA',
    'OrderDate': '1998-04-06T10:25:00.000Z',
    'ShippedDate': '1998-04-16T11:25:00.000Z',
    'Freight': 141.16,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 11003,
    'CustomerID': 'THECR',
    'OrderDate': '1998-04-06T12:25:00.000Z',
    'ShippedDate': '1998-04-08T13:25:00.000Z',
    'Freight': 14.91,
    'ShipName': 'The Cracker Box',
    'ShipAddress': '55 Grizzly Peak Rd.',
    'ShipCity': 'Butte',
    'ShipRegion': 'MT',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 11004,
    'CustomerID': 'MAISD',
    'OrderDate': '1998-04-07T14:25:00.000Z',
    'ShippedDate': '1998-04-20T15:25:00.000Z',
    'Freight': 44.84,
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    'ShipAddress': 'Rue Joseph-Bens 532',
    'ShipCity': 'Bruxelles',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
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    'CustomerID': 'WILMK',
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    'ShippedDate': '1998-04-10T17:25:00.000Z',
    'Freight': 0.75,
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    'ShipAddress': 'Keskuskatu 45',
    'ShipCity': 'Helsinki',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
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    'ShippedDate': '1998-04-15T19:25:00.000Z',
    'Freight': 25.19,
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    'ShipAddress': '2732 Baker Blvd.',
    'ShipCity': 'Eugene',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 11007,
    'CustomerID': 'PRINI',
    'OrderDate': '1998-04-08T20:25:00.000Z',
    'ShippedDate': '1998-04-13T21:25:00.000Z',
    'Freight': 202.24,
    'ShipName': 'Princesa Isabel Vinhos',
    'ShipAddress': 'Estrada da saúde n. 58',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {
    'OrderID': 11008,
    'CustomerID': 'ERNSH',
    'OrderDate': '1998-04-08T22:25:00.000Z',
    'ShippedDate': null,
    'Freight': 79.46,
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    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 11009,
    'CustomerID': 'GODOS',
    'OrderDate': '1998-04-08T23:25:00.000Z',
    'ShippedDate': '1998-04-10T01:25:00.000Z',
    'Freight': 59.11,
    'ShipName': 'Godos Cocina Típica',
    'ShipAddress': 'C/ Romero, 33',
    'ShipCity': 'Sevilla',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 11010,
    'CustomerID': 'REGGC',
    'OrderDate': '1998-04-09T02:55:00.000Z',
    'ShippedDate': '1998-04-21T03:55:00.000Z',
    'Freight': 28.71,
    'ShipName': 'Reggiani Caseifici',
    'ShipAddress': 'Strada Provinciale 124',
    'ShipCity': 'Reggio Emilia',
    'ShipRegion': null,

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    'ShipCountry': 'Italy'
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    'CustomerID': 'ALFKI',
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    'ShippedDate': '1998-04-13T05:55:00.000Z',
    'Freight': 1.21,
    'ShipName': 'Alfred\'s Futterkiste',
    'ShipAddress': 'Obere Str. 57',
    'ShipCity': 'Berlin',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 11012,
    'CustomerID': 'FRANK',
    'OrderDate': '1998-04-09T06:55:00.000Z',
    'ShippedDate': '1998-04-17T07:55:00.000Z',
    'Freight': 242.95,
    'ShipName': 'Frankenversand',
    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 11013,
    'CustomerID': 'ROMEY',
    'OrderDate': '1998-04-09T08:55:00.000Z',
    'ShippedDate': '1998-04-10T09:55:00.000Z',
    'Freight': 32.99,
    'ShipName': 'Romero y tomillo',
    'ShipAddress': 'Gran Vía, 1',
    'ShipCity': 'Madrid',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 11014,
    'CustomerID': 'LINOD',
    'OrderDate': '1998-04-10T10:55:00.000Z',
    'ShippedDate': '1998-04-15T11:55:00.000Z',
    'Freight': 23.6,
    'ShipName': 'LINO-Delicateses',
    'ShipAddress': 'Ave. 5 de Mayo Porlamar',
    'ShipCity': 'I. de Margarita',
    'ShipRegion': 'Nueva Esparta',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 11015,
    'CustomerID': 'SANTG',
    'OrderDate': '1998-04-10T12:55:00.000Z',
    'ShippedDate': '1998-04-20T13:55:00.000Z',
    'Freight': 4.62,
    'ShipName': 'Santé Gourmet',

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'ShipAddress': 'Erling Skakkess gate 78',
'ShipCity': 'Stavern',
'ShipRegion': null,
'ShipCountry': 'Norway'
},
{
  'OrderID': 11016,
  'CustomerID': 'AROUT',
  'OrderDate': '1998-04-10T14:55:00.000Z',
  'ShippedDate': '1998-04-13T15:55:00.000Z',
  'Freight': 33.8,
  'ShipName': 'Around the Horn',
  'ShipAddress': 'Brook Farm Stratford St. Mary',
  'ShipCity': 'Colchester',
  'ShipRegion': 'Essex',
  'ShipCountry': 'UK'
},
{
  'OrderID': 11017,
  'CustomerID': 'ERNSH',
  'OrderDate': '1998-04-13T16:55:00.000Z',
  'ShippedDate': '1998-04-20T17:55:00.000Z',
  'Freight': 754.26,
  'ShipName': 'Ernst Handel',
  'ShipAddress': 'Kirchgasse 6',
  'ShipCity': 'Graz',
  'ShipRegion': null,
  'ShipCountry': 'Austria'
},
{
  'OrderID': 11018,
  'CustomerID': 'LONEP',
  'OrderDate': '1998-04-13T18:55:00.000Z',
  'ShippedDate': '1998-04-16T19:55:00.000Z',
  'Freight': 11.65,
  'ShipName': 'Lonesome Pine Restaurant',
  'ShipAddress': '89 Chiaroscuro Rd.',
  'ShipCity': 'Portland',
  'ShipRegion': 'OR',
  'ShipCountry': 'USA'
},
{
  'OrderID': 11019,
  'CustomerID': 'RANCH',
  'OrderDate': '1998-04-13T20:55:00.000Z',
  'ShippedDate': null,
  'Freight': 3.17,
  'ShipName': 'Rancho grande',
  'ShipAddress': 'Av. del Libertador 900',
  'ShipCity': 'Buenos Aires',
  'ShipRegion': null,
  'ShipCountry': 'Argentina'
},
{
  'OrderID': 11020,
  'CustomerID': 'OTTIK',
  'OrderDate': '1998-04-14T21:55:00.000Z',
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    'ShippedDate': '1998-04-16T22:55:00.000Z',
    'Freight': 43.3,
    'ShipName': 'Ottilies Käseladen',
    'ShipAddress': 'Mehrheimerstr. 369',
    'ShipCity': 'Köln',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 11021,
    'CustomerID': 'QUICK',
    'OrderDate': '1998-04-14T23:55:00.000Z',
    'ShippedDate': '1998-04-21T13:50:00.000Z',
    'Freight': 297.18,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 11022,
    'CustomerID': 'HANAR',
    'OrderDate': '1998-04-14T03:50:00.000Z',
    'ShippedDate': '1998-05-04T01:50:00.000Z',
    'Freight': 6.27,
    'ShipName': 'Hanari Carnes',
    'ShipAddress': 'Rua do Paço, 67',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 11023,
    'CustomerID': 'BSBEV',
    'OrderDate': '1998-04-14T02:50:00.000Z',
    'ShippedDate': '1998-04-24T03:50:00.000Z',
    'Freight': 123.83,
    'ShipName': 'B\'s Beverages',
    'ShipAddress': 'Fauntleroy Circus',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 11024,
    'CustomerID': 'EASTC',
    'OrderDate': '1998-04-15T04:50:00.000Z',
    'ShippedDate': '1998-04-20T05:50:00.000Z',
    'Freight': 74.36,
    'ShipName': 'Eastern Connection',
    'ShipAddress': '35 King George',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  }
]

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    'OrderID': 11025,
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    'OrderDate': '1998-04-15T06:50:00.000Z',
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    'Freight': 29.17,
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    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 11026,
    'CustomerID': 'FRANS',
    'OrderDate': '1998-04-15T08:50:00.000Z',
    'ShippedDate': '1998-04-28T09:50:00.000Z',
    'Freight': 47.09,
    'ShipName': 'Franchi S.p.A.',
    'ShipAddress': 'Via Monte Bianco 34',
    'ShipCity': 'Torino',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 11027,
    'CustomerID': 'BOTTM',
    'OrderDate': '1998-04-16T10:50:00.000Z',
    'ShippedDate': '1998-04-20T11:50:00.000Z',
    'Freight': 52.52,
    'ShipName': 'Bottom-Dollar Markets',
    'ShipAddress': '23 Tsawassen Blvd.',
    'ShipCity': 'Tsawassen',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 11028,
    'CustomerID': 'KOENE',
    'OrderDate': '1998-04-16T12:50:00.000Z',
    'ShippedDate': '1998-04-22T13:50:00.000Z',
    'Freight': 29.59,
    'ShipName': 'Königlich Essen',
    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 11029,
    'CustomerID': 'CHOPS',
    'OrderDate': '1998-04-16T14:50:00.000Z',
    'ShippedDate': '1998-04-27T15:50:00.000Z',
    'Freight': 47.84,
    'ShipName': 'Chop-suey Chinese',
    'ShipAddress': 'Hauptstr. 31',
    'ShipCity': 'Bern',
    'ShipRegion': null,

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        'ShipCountry': 'Switzerland'
    },
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        'CustomerID': 'SAVEA',
        'OrderDate': '1998-04-17T16:50:00.000Z',
        'ShippedDate': '1998-04-27T17:50:00.000Z',
        'Freight': 830.75,
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        'ShipAddress': '187 Suffolk Ln.',
        'ShipCity': 'Boise',
        'ShipRegion': 'ID',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 11031,
        'CustomerID': 'SAVEA',
        'OrderDate': '1998-04-17T18:50:00.000Z',
        'ShippedDate': '1998-04-24T19:50:00.000Z',
        'Freight': 227.22,
        'ShipName': 'Save-a-lot Markets',
        'ShipAddress': '187 Suffolk Ln.',
        'ShipCity': 'Boise',
        'ShipRegion': 'ID',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 11032,
        'CustomerID': 'WHITC',
        'OrderDate': '1998-04-17T20:50:00.000Z',
        'ShippedDate': '1998-04-23T21:50:00.000Z',
        'Freight': 606.19,
        'ShipName': 'White Clover Markets',
        'ShipAddress': '1029 - 12th Ave. S.',
        'ShipCity': 'Seattle',
        'ShipRegion': 'WA',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 11033,
        'CustomerID': 'RICSU',
        'OrderDate': '1998-04-17T22:50:00.000Z',
        'ShippedDate': '1998-04-23T23:50:00.000Z',
        'Freight': 84.74,
        'ShipName': 'Richter Supermarkt',
        'ShipAddress': 'Starenweg 5',
        'ShipCity': 'Genève',
        'ShipRegion': null,
        'ShipCountry': 'Switzerland'
    },
    {
        'OrderID': 11034,
        'CustomerID': 'OLDWO',
        'OrderDate': '1998-04-20T01:05:00.000Z',
        'ShippedDate': '1998-04-27T02:05:00.000Z',
        'Freight': 40.32,
        'ShipName': 'Old World Delicatessen',

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        'ShipAddress': '2743 Bering St.',
        'ShipCity': 'Anchorage',
        'ShipRegion': 'AK',
        'ShipCountry': 'USA'
    },
    {
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        'CustomerID': 'SUPRD',
        'OrderDate': '1998-04-20T03:05:00.000Z',
        'ShippedDate': '1998-04-24T04:05:00.000Z',
        'Freight': 0.17,
        'ShipName': 'Suprêmes délices',
        'ShipAddress': 'Boulevard Tirou, 255',
        'ShipCity': 'Charleroi',
        'ShipRegion': null,
        'ShipCountry': 'Belgium'
    },
    {
        'OrderID': 11036,
        'CustomerID': 'DRACD',
        'OrderDate': '1998-04-20T05:05:00.000Z',
        'ShippedDate': '1998-04-22T06:05:00.000Z',
        'Freight': 149.47,
        'ShipName': 'Drachenblut Delikatessen',
        'ShipAddress': 'Walserweg 21',
        'ShipCity': 'Aachen',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 11037,
        'CustomerID': 'GODOS',
        'OrderDate': '1998-04-21T07:05:00.000Z',
        'ShippedDate': '1998-04-27T08:05:00.000Z',
        'Freight': 3.2,
        'ShipName': 'Godos Cocina Típica',
        'ShipAddress': 'C/ Romero, 33',
        'ShipCity': 'Sevilla',
        'ShipRegion': null,
        'ShipCountry': 'Spain'
    },
    {
        'OrderID': 11038,
        'CustomerID': 'SUPRD',
        'OrderDate': '1998-04-21T09:05:00.000Z',
        'ShippedDate': '1998-04-30T10:05:00.000Z',
        'Freight': 29.59,
        'ShipName': 'Suprêmes délices',
        'ShipAddress': 'Boulevard Tirou, 255',
        'ShipCity': 'Charleroi',
        'ShipRegion': null,
        'ShipCountry': 'Belgium'
    },
    {
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        'CustomerID': 'LINOD',
        'OrderDate': '1998-04-21T11:05:00.000Z',

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        'Freight': 65,
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        'ShipAddress': 'Ave. 5 de Mayo Porlamar',
        'ShipCity': 'I. de Margarita',
        'ShipRegion': 'Nueva Esparta',
        'ShipCountry': 'Venezuela'
    },
    {
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        'CustomerID': 'GREAL',
        'OrderDate': '1998-04-22T12:05:00.000Z',
        'ShippedDate': null,
        'Freight': 18.84,
        'ShipName': 'Great Lakes Food Market',
        'ShipAddress': '2732 Baker Blvd.',
        'ShipCity': 'Eugene',
        'ShipRegion': 'OR',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 11041,
        'CustomerID': 'CHOPS',
        'OrderDate': '1998-04-22T13:05:00.000Z',
        'ShippedDate': '1998-04-28T14:05:00.000Z',
        'Freight': 48.22,
        'ShipName': 'Chop-suey Chinese',
        'ShipAddress': 'Hauptstr. 31',
        'ShipCity': 'Bern',
        'ShipRegion': null,
        'ShipCountry': 'Switzerland'
    },
    {
        'OrderID': 11042,
        'CustomerID': 'COMMI',
        'OrderDate': '1998-04-22T15:05:00.000Z',
        'ShippedDate': '1998-05-01T16:05:00.000Z',
        'Freight': 29.99,
        'ShipName': 'Comércio Mineiro',
        'ShipAddress': 'Av. dos Lusíadas, 23',
        'ShipCity': 'Sao Paulo',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
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        'CustomerID': 'SPECB',
        'OrderDate': '1998-04-22T17:05:00.000Z',
        'ShippedDate': '1998-04-29T18:05:00.000Z',
        'Freight': 8.8,
        'ShipName': 'Spécialités du monde',
        'ShipAddress': '25, rue Lauriston',
        'ShipCity': 'Paris',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {

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    'OrderID': 11044,
    'CustomerID': 'WOLZA',
    'OrderDate': '1998-04-23T19:05:00.000Z',
    'ShippedDate': '1998-05-01T20:05:00.000Z',
    'Freight': 8.72,
    'ShipName': 'Wolski Zajazd',
    'ShipAddress': 'ul. Filtrowa 68',
    'ShipCity': 'Warszawa',
    'ShipRegion': null,
    'ShipCountry': 'Poland'
  },
  {
    'OrderID': 11045,
    'CustomerID': 'BOTTM',
    'OrderDate': '1998-04-23T21:05:00.000Z',
    'ShippedDate': null,
    'Freight': 70.58,
    'ShipName': 'Bottom-Dollar Markets',
    'ShipAddress': '23 Tsawassen Blvd.',
    'ShipCity': 'Tsawassen',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 11046,
    'CustomerID': 'WANDK',
    'OrderDate': '1998-04-23T22:05:00.000Z',
    'ShippedDate': '1998-04-24T23:05:00.000Z',
    'Freight': 71.64,
    'ShipName': 'Die Wandernde Kuh',
    'ShipAddress': 'Adenauerallee 900',
    'ShipCity': 'Stuttgart',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 11047,
    'CustomerID': 'EASTC',
    'OrderDate': '1998-04-24T01:30:00.000Z',
    'ShippedDate': '1998-05-01T02:30:00.000Z',
    'Freight': 46.62,
    'ShipName': 'Eastern Connection',
    'ShipAddress': '35 King George',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 11048,
    'CustomerID': 'BOTTM',
    'OrderDate': '1998-04-24T03:30:00.000Z',
    'ShippedDate': '1998-04-30T04:30:00.000Z',
    'Freight': 24.12,
    'ShipName': 'Bottom-Dollar Markets',
    'ShipAddress': '23 Tsawassen Blvd.',
    'ShipCity': 'Tsawassen',
    'ShipRegion': 'BC',

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    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 11049,
    'CustomerID': 'GOURL',
    'OrderDate': '1998-04-24T05:30:00.000Z',
    'ShippedDate': '1998-05-04T06:30:00.000Z',
    'Freight': 8.34,
    'ShipName': 'Gourmet Lanchonetes',
    'ShipAddress': 'Av. Brasil, 442',
    'ShipCity': 'Campinas',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 11050,
    'CustomerID': 'FOLKO',
    'OrderDate': '1998-04-27T07:30:00.000Z',
    'ShippedDate': '1998-05-05T08:30:00.000Z',
    'Freight': 59.41,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 11051,
    'CustomerID': 'LAMAI',
    'OrderDate': '1998-04-27T09:30:00.000Z',
    'ShippedDate': null,
    'Freight': 2.79,
    'ShipName': 'La maison d\'Asie',
    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 11052,
    'CustomerID': 'HANAR',
    'OrderDate': '1998-04-27T10:30:00.000Z',
    'ShippedDate': '1998-05-01T11:30:00.000Z',
    'Freight': 67.26,
    'ShipName': 'Hanari Carnes',
    'ShipAddress': 'Rua do Paço, 67',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 11053,
    'CustomerID': 'PICCO',
    'OrderDate': '1998-04-27T12:30:00.000Z',
    'ShippedDate': '1998-04-29T13:30:00.000Z',
    'Freight': 53.05,
    'ShipName': 'Piccolo und mehr',

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        'ShipAddress': 'Geislweg 14',
        'ShipCity': 'Salzburg',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
        'OrderID': 11054,
        'CustomerID': 'CACTU',
        'OrderDate': '1998-04-28T14:30:00.000Z',
        'ShippedDate': '1998-04-29T15:30:00.000Z',
        'Freight': 0.33,
        'ShipName': 'Cactus Comidas para llevar',
        'ShipAddress': 'Cerrito 333',
        'ShipCity': 'Buenos Aires',
        'ShipRegion': null,
        'ShipCountry': 'Argentina'
    },
    {
        'OrderID': 11055,
        'CustomerID': 'HILAA',
        'OrderDate': '1998-04-28T16:30:00.000Z',
        'ShippedDate': '1998-05-05T17:30:00.000Z',
        'Freight': 120.92,
        'ShipName': 'HILARION-Abastos',
        'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
        'ShipCity': 'San Cristóbal',
        'ShipRegion': 'Táchira',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 11056,
        'CustomerID': 'EASTC',
        'OrderDate': '1998-04-28T18:30:00.000Z',
        'ShippedDate': '1998-05-01T19:30:00.000Z',
        'Freight': 278.96,
        'ShipName': 'Eastern Connection',
        'ShipAddress': '35 King George',
        'ShipCity': 'London',
        'ShipRegion': null,
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 11057,
        'CustomerID': 'NORTS',
        'OrderDate': '1998-04-29T20:30:00.000Z',
        'ShippedDate': '1998-05-01T21:30:00.000Z',
        'Freight': 4.13,
        'ShipName': 'North/South',
        'ShipAddress': 'South House 300 Queensbridge',
        'ShipCity': 'London',
        'ShipRegion': null,
        'ShipCountry': 'UK'
    },
    {
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        'CustomerID': 'BLAUS',
        'OrderDate': '1998-04-29T22:30:00.000Z',

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        'ShippedDate': null,
        'Freight': 31.14,
        'ShipName': 'Blauer See Delikatessen',
        'ShipAddress': 'Forsterstr. 57',
        'ShipCity': 'Mannheim',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 11059,
        'CustomerID': 'RICAR',
        'OrderDate': '1998-04-29T23:30:00.000Z',
        'ShippedDate': null,
        'Freight': 85.8,
        'ShipName': 'Ricardo Adocicados',
        'ShipAddress': 'Av. Copacabana, 267',
        'ShipCity': 'Rio de Janeiro',
        'ShipRegion': 'RJ',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 11060,
        'CustomerID': 'FRANS',
        'OrderDate': '1998-04-30T01:05:00.000Z',
        'ShippedDate': '1998-05-04T02:05:00.000Z',
        'Freight': 10.98,
        'ShipName': 'Franchi S.p.A.',
        'ShipAddress': 'Via Monte Bianco 34',
        'ShipCity': 'Torino',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
    {
        'OrderID': 11061,
        'CustomerID': 'GREAL',
        'OrderDate': '1998-04-30T03:05:00.000Z',
        'ShippedDate': null,
        'Freight': 14.01,
        'ShipName': 'Great Lakes Food Market',
        'ShipAddress': '2732 Baker Blvd.',
        'ShipCity': 'Eugene',
        'ShipRegion': 'OR',
        'ShipCountry': 'USA'
    },
    {
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        'CustomerID': 'REGGC',
        'OrderDate': '1998-04-30T04:05:00.000Z',
        'ShippedDate': null,
        'Freight': 29.93,
        'ShipName': 'Reggiani Caseifici',
        'ShipAddress': 'Strada Provinciale 124',
        'ShipCity': 'Reggio Emilia',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
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    'OrderID': 11063,
    'CustomerID': 'HUNGO',
    'OrderDate': '1998-04-30T05:05:00.000Z',
    'ShippedDate': '1998-05-06T06:05:00.000Z',
    'Freight': 81.73,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 11064,
    'CustomerID': 'SAVEA',
    'OrderDate': '1998-05-01T07:05:00.000Z',
    'ShippedDate': '1998-05-04T10:05:00.000Z',
    'Freight': 30.09,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 11065,
    'CustomerID': 'LILAS',
    'OrderDate': '1998-05-01T11:05:00.000Z',
    'ShippedDate': null,
    'Freight': 12.91,
    'ShipName': 'LILA-Supermercado',
    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 11066,
    'CustomerID': 'WHITC',
    'OrderDate': '1998-05-01T12:05:00.000Z',
    'ShippedDate': '1998-05-04T13:05:00.000Z',
    'Freight': 44.72,
    'ShipName': 'White Clover Markets',
    'ShipAddress': '1029 - 12th Ave. S.',
    'ShipCity': 'Seattle',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 11067,
    'CustomerID': 'DRACD',
    'OrderDate': '1998-05-04T14:05:00.000Z',
    'ShippedDate': '1998-05-06T15:05:00.000Z',
    'Freight': 7.98,
    'ShipName': 'Drachenblut Delikatessen',
    'ShipAddress': 'Walserweg 21',
    'ShipCity': 'Aachen',
    'ShipRegion': null,

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    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 11068,
    'CustomerID': 'QUEEN',
    'OrderDate': '1998-05-04T16:05:00.000Z',
    'ShippedDate': null,
    'Freight': 81.75,
    'ShipName': 'Queen Cozinha',
    'ShipAddress': 'Alameda dos Canários, 891',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 11069,
    'CustomerID': 'TORTU',
    'OrderDate': '1998-05-04T17:05:00.000Z',
    'ShippedDate': '1998-05-06T18:05:00.000Z',
    'Freight': 15.67,
    'ShipName': 'Tortuga Restaurante',
    'ShipAddress': 'Avda. Azteca 123',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 11070,
    'CustomerID': 'LEHMS',
    'OrderDate': '1998-05-05T19:05:00.000Z',
    'ShippedDate': null,
    'Freight': 136,
    'ShipName': 'Lehmanns Marktstand',
    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 11071,
    'CustomerID': 'LILAS',
    'OrderDate': '1998-05-05T20:05:00.000Z',
    'ShippedDate': null,
    'Freight': 0.93,
    'ShipName': 'LILA-Supermercado',
    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 11072,
    'CustomerID': 'ERNSH',
    'OrderDate': '1998-05-05T21:05:00.000Z',
    'ShippedDate': null,
    'Freight': 258.64,
    'ShipName': 'Ernst Handel',
```

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        'ShipAddress': 'Kirchgasse 6',
        'ShipCity': 'Graz',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
        'OrderID': 11073,
        'CustomerID': 'PERIC',
        'OrderDate': '1998-05-05T22:05:00.000Z',
        'ShippedDate': null,
        'Freight': 24.95,
        'ShipName': 'Pericles Comidas clásicas',
        'ShipAddress': 'Calle Dr. Jorge Cash 321',
        'ShipCity': 'México D.F.',
        'ShipRegion': null,
        'ShipCountry': 'Mexico'
    },
    {
        'OrderID': 11074,
        'CustomerID': 'SIMOB',
        'OrderDate': '1998-05-06T23:05:00.000Z',
        'ShippedDate': null,
        'Freight': 18.44,
        'ShipName': 'Simons bistro',
        'ShipAddress': 'Vinbæltet 34',
        'ShipCity': 'Kobenhavn',
        'ShipRegion': null,
        'ShipCountry': 'Denmark'
    },
    {
        'OrderID': 11075,
        'CustomerID': 'RICSU',
        'OrderDate': '1998-05-06T01:30:00.000Z',
        'ShippedDate': null,
        'Freight': 6.19,
        'ShipName': 'Richter Supermarkt',
        'ShipAddress': 'Starenweg 5',
        'ShipCity': 'Genève',
        'ShipRegion': null,
        'ShipCountry': 'Switzerland'
    },
    {
        'OrderID': 11076,
        'CustomerID': 'BONAP',
        'OrderDate': '1998-05-06T02:30:00.000Z',
        'ShippedDate': null,
        'Freight': 38.28,
        'ShipName': 'Bon app',
        'ShipAddress': '12, rue des Bouchers',
        'ShipCity': 'Marseille',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 11077,
        'CustomerID': 'RATTC',
        'OrderDate': '1998-05-06T03:50:00.000Z',

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```
'ShippedDate': null,  
'Freight': 8.53,  
'ShipName': 'Rattlesnake Canyon Grocery',  
'ShipAddress': '2817 Milton Dr.',  
'ShipCity': 'Albuquerque',  
'ShipRegion': 'NM',  
'ShipCountry': 'USA'  
}];
```

Use custom helper inside the loop with templates in React Grid component

The Syncfusion React Grid allows you to use custom helpers inside the loop with `template` directive of a column. This feature enables you to create complex templates that can incorporate additional helper functions.

The **Customer Rating** column includes a custom template defined using `template`. Inside this template, iterates through the `item` array and generates `` tag, displayed as stars using the CSS below:

```
`css  
.e-grid .rating .star:before {  
  content: '★';  
}  
.e-grid .rating .star {  
  font-size: 132%;  
  color: lightgrey;  
}  
`
```

The dynamically assigns classes based on the result of the `isRatingGreater` method, highlighting the star using the CSS below:

```
`css  
.e-grid .rating .star.checked {  
  color: #ffa600;  
}  
`
```

This is demonstrated in the following example.

APP.JSX

```
import * as React from 'react';  
import { GridComponent, ColumnsDirective, ColumnDirective } from  
  '@syncfusion/ej2-react-grids';  
import { data } from './datasource';  
function App() {  
  const item = [1, 2, 3, 4, 5];  
  const isRatingGreater = (dataRating, comparisonValue) => {  
    return dataRating >= comparisonValue;  
  }  
}
```

```

    }
    const template = (props) => {
      return (
        <div className="rate">
          <div className="rating">
            {item.map((i) => (
              <span
                key={i}
                className={` ${isRatingGreater(props.Rating, i) ?
'checked' : ''} star` }
              ></span>
            ))}
          </div>
        </div>
      )
    }
    return (
      <GridComponent dataSource={data} height={315}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID'
width='100'></ColumnDirective>
          <ColumnDirective field='CustomerID' headerText='CustomerID'
width='100' />
          <ColumnDirective field='Rating' headerText='Customer Rating'
width='150' template={template}></ColumnDirective>
        </ColumnsDirective>
      </GridComponent>);
  }
  export default App;

```

APP.TSX

```

import * as React from 'react';
import { GridComponent, ColumnsDirective, ColumnDirective } from
'@syncfusion/ej2-react-grids';
import { data } from './datasource';
function App() {
  const item = [1, 2, 3, 4, 5];
  const isRatingGreater = (dataRating: number, comparisonValue: number) =>
  {
    return dataRating >= comparisonValue;
  }
  const template = (props) => {
    return (
      <div className="rate">
        <div className="rating">
          {item.map((i) => (
            <span
              key={i}
              className={` ${isRatingGreater(props.Rating, i) ?
'checked' : ''} star` }
            ></span>
          ))}
        </div>
      </div>
    )
  }
}

```

```

    }
    return (
      <GridComponent dataSource={data} height={315}>
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID'
width='100'></ColumnDirective>
          <ColumnDirective field='CustomerID' headerText='CustomerID'
width='100' />
          <ColumnDirective field='Rating' headerText='Customer Rating'
width='150' template={template}></ColumnDirective>
        </ColumnsDirective>
      </GridComponent>);
  }
  export default App;

```

DATASOURCE.JSX

```

export let data = [
  {
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5), Rating: 2,
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
    Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6), Rating: 4,
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
    Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5), Rating: 1,
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
    Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5), Rating: 5,
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
    Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5), Rating: 3,
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',

```

```

        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6), Rating: 4,
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5), Rating: 2,
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5), Rating: 5,
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6), Rating: 0,
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5), Rating: 3,
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5), Rating: 1,
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5), Rating: 3,
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',

```

```

        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5), Rating: 4,
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5), Rating: 5,
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5), Rating: 2,
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
        Date(8364186e5), Rating: 2,
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6), Rating: 4,
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5), Rating: 1,
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {

```

```

    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5), Rating: 5,
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5), Rating: 3,
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6), Rating: 4,
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5), Rating: 2,
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5), Rating: 5,
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6), Rating: 0,
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5), Rating: 3,
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {

```

```

    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5), Rating: 1,
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5), Rating: 3,
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5), Rating: 4,
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5), Rating: 5,
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5), Rating: 2,
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
    ]];

```

Resize the grid in various dimension in React Grid component

The Syncfusion React Grid component offers a friendly way to resize the grid, allowing you to adjust its width and height for improved data visualization.

To resize the grid externally, you can use an external button to modify the width of the parent element that contains the grid. This will effectively resize the grid along with its parent container.

The following example demonstrates how to resize the grid on external button click based on input.

APP.JSX

```

import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Resize }
from '@syncfusion/ej2-react-grids';
import { NumericTextBoxComponent } from '@syncfusion/ej2-react-inputs'
import * as React from 'react';

```

```

import { data } from './datasource';
function App() {
  let widthTextBox;
  let heightTextBox;
  const onExternalResize = () => {
    const parentDiv = document.getElementById('parent');
    parentDiv.style.width = widthTextBox.element.value + 'px';
    parentDiv.style.height = heightTextBox.element.value + 'px';
  }
  return (<div>
    <div>
      <label style={{ padding: "30px 17px 0 0" }}>Enter the
width:</label>
      <NumericTextBoxComponent ref={widthText => widthTextBox =
widthText} min={400} max={650} placeholder='400' step={5}
width={120}></NumericTextBoxComponent>
    </div>
    <div>
      <label style={{ padding: "30px 17px 0 0" }}>Enter the
height:</label>
      <NumericTextBoxComponent ref={heightText => heightTextBox =
heightText} min={200} max={600} placeholder='200' step={5}
width={120}></NumericTextBoxComponent>
    </div>
    <ButtonComponent style={{ margin: "5px 0 5px 5px" }} cssClass="e-
outline" onClick={onExternalResize}>Resize</ButtonComponent>
    <div id='parent'>
      <GridComponent dataSource={data} height='100%' >
        <Inject services={[Resize]} />
        <ColumnsDirective>
          <ColumnDirective field='OrderID' headerText='Order ID'
width='150' maxWidth='200' textAlign='Right'></ColumnDirective>
          <ColumnDirective field='CustomerID' headerText='Customer
ID' width='150'></ColumnDirective>
          <ColumnDirective field='ShipCountry' headerText='Ship
Country' width='150'></ColumnDirective>
          <ColumnDirective field='Freight' headerText='Freight'
width='120' format='C2' />
        </ColumnsDirective>
      </GridComponent></div></div>)
  );
}
export default App;

```

APP.TSX

```

import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { ColumnDirective, ColumnsDirective, GridComponent, Inject, Resize }
from '@syncfusion/ej2-react-grids';
import { NumericTextBoxComponent } from '@syncfusion/ej2-react-inputs';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let widthTextBox: NumericTextBoxComponent | null;
  let heightTextBox: NumericTextBoxComponent | null;
  const onExternalResize = () => {
    const parentDiv = document.getElementById('parent');

```



```

        (parentDiv as HTMLElement).style.width = (widthTextBox as
NumericTextBoxComponent).element.value + 'px';
        (parentDiv as HTMLElement).style.height = (heightTextBox as
NumericTextBoxComponent).element.value + 'px';
    }
    return (<div>
        <div>
            <label style={{ padding: "30px 17px 0 0" }}>Enter the
width:</label>
            <NumericTextBoxComponent ref={widthText => widthTextBox =
widthText} min={400} max={650} placeholder='400' step={5}
width={120}></NumericTextBoxComponent>
        </div>
        <div>
            <label style={{ padding: "30px 17px 0 0" }}>Enter the
height:</label>
            <NumericTextBoxComponent ref={heightText => heightTextBox =
heightText} min={200} max={600} placeholder='200' step={5}
width={120}></NumericTextBoxComponent>
        </div>
        <ButtonComponent style={{ margin: "5px 0 5px 5px" }} cssClass="e-
outline" onClick={onExternalResize}>Resize</ButtonComponent>
        <div id='parent'>
            <GridComponent dataSource={data} height='100%' >
                <Inject services={[Resize]} />
                <ColumnsDirective>
                    <ColumnDirective field='OrderID' headerText='Order ID'
width='150' maxWidth='200' textAlign='Right'></ColumnDirective>
                    <ColumnDirective field='CustomerID' headerText='Customer
ID' width='150'></ColumnDirective>
                    <ColumnDirective field='ShipCountry' headerText='Ship
Country' width='150'></ColumnDirective>
                    <ColumnDirective field='Freight' headerText='Freight'
width='120' format='C2' />
                </ColumnsDirective>
            </GridComponent></div></div>)
    };
export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    }
]

```

```

        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',

```

```

        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```
export let data: Object[] = [
```

```

{
    OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
},
{
    OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
'Luisenstr. 48',
    ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
Freight: 11.61, Verified: !1
},
{
    OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 65.83, Verified: !0
},
{
    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
},
{
    OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
    ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
},
{
    OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
},
{
    OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
    ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
},
{

```

```

    OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
    ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
    ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
},
{
    OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
    ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
    ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
},
{
    OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
    ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
    ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
},
{
    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
},
{
    OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
    ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
    ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
},
{
    OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
},
{
    OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
},
{

```

```

    OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
    Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
    ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
    Freight: 48.29, Verified: !0
  }];

```

Hide sorting in excel filter in React Grid component

You can hide the sorting options on the excel filter dialog by setting display as none for the following classes.

```

`css
.e-excel-ascending,
.e-excel-descending,
.e-separator.e-excel-separator {
display: none;
}
`

```

APP.JSX

```

import { ColumnDirective, ColumnsDirective, GridComponent, Inject } from
 '@syncfusion/ej2-react-grids';
import { Filter } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from './datasource';
function App() {
  let grid;
  const filterOptions = { type: 'Excel' };
  return <GridComponent dataSource={data} height={280}
allowFiltering={true} filterSettings={filterOptions} ref={g => grid = g}>
    <ColumnsDirective>
      <ColumnDirective field='OrderID' headerText='Order ID' width='100'
textAlign="Right"/>
      <ColumnDirective field='EmployeeID' headerText='EmployeeID' width='100'
textAlign="Right"/>
      <ColumnDirective field='Freight' headerText='Freight' width='80'
textAlign="Right" format='C2'/>
      <ColumnDirective field='ShipCountry' headerText='Ship Country'
width='100'/>
    </ColumnsDirective>
    <Inject services={[Filter]}/>
  </GridComponent>;
}
;
export default App;

```

APP.TSX

```

import { createElement } from '@syncfusion/ej2-base';

```

```

import { DataManager } from '@syncfusion/ej2-data';
import { ChangeEventArgs, DropDownList } from '@syncfusion/ej2-dropdowns';
import { ColumnDirective, ColumnsDirective, GridComponent, Inject } from '@syncfusion/ej2-react-grids';
import { Column, Filter, ForeignKey, Grid } from '@syncfusion/ej2-react-grids';
import * as React from 'react';
import { data } from '../datasource';
function App() {
    let grid: Grid | null;
    const filterOptions: any = { type: 'Excel' };
    return <GridComponent dataSource={data} height={280} allowFiltering={true}
    filterSettings={filterOptions} ref={g => grid = g}>
        <ColumnsDirective>
            <ColumnDirective field='OrderID' headerText='Order ID' width='100'
            textAlign="Right" />
            <ColumnDirective field='EmployeeID' headerText='EmployeeID' width='100'
            textAlign="Right" />
            <ColumnDirective field='Freight' headerText='Freight' width='80'
            textAlign="Right" format='C2' />
            <ColumnDirective field='ShipCountry' headerText='Ship Country'
            width='100' />
        </ColumnsDirective>
        <Inject services={[Filter]} />
    </GridComponent>
    };
    export default App;

```

DATASOURCE.JSX

```

export let data = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
        Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
        Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
        Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {

```

```

    OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
rue du Commerce',
    ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
'Venezuela', Freight: 81.91, Verified: !0
    },
    {

```



```

    OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
Date(8375418e5),
    ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
    ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
Freight: 48.29, Verified: !0
    }
}
];

```

DATASOURCE.TSX

```

export let data: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', EmployeeID: 5, OrderDate: new
Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', ShipPostalCode: '51100', ShipCountry: 'France',
Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', EmployeeID: 6, OrderDate: new
Date(836505e6),

```

```

        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', ShipPostalCode: '44087', ShipCountry: 'Germany',
        Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', EmployeeID: 4, OrderDate: new
        Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', EmployeeID: 3, OrderDate: new
        Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', ShipPostalCode: '69004', ShipCountry: 'France',
        Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', EmployeeID: 4, OrderDate: new
        Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', ShipPostalCode: 'B-6000', ShipCountry: 'Belgium',
        Freight: 51.3, Verified: !0
    },
    {
        OrderID: 10253, CustomerID: 'HANAR', EmployeeID: 3, OrderDate: new
        Date(836937e6),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', ShipPostalCode: '05454-876', ShipCountry: 'Brazil',
        Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', EmployeeID: 5, OrderDate: new
        Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
        'Hauptstr. 31',
        ShipRegion: 'CJ', ShipPostalCode: '3012', ShipCountry: 'Switzerland',
        Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', EmployeeID: 9, OrderDate: new
        Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
        'Starenweg 5',
        ShipRegion: 'CJ', ShipPostalCode: '1204', ShipCountry: 'Switzerland',
        Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', EmployeeID: 3, OrderDate: new
        Date(837369e6),

```

```

        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
        'Rua do Mercado, 12',
        ShipRegion: 'SP', ShipPostalCode: '08737-363', ShipCountry: 'Brazil',
        Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', EmployeeID: 4, OrderDate: new
        Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
        'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', ShipPostalCode: '5022', ShipCountry:
        'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', EmployeeID: 1, OrderDate: new
        Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
        6',
        ShipRegion: 'CJ', ShipPostalCode: '8010', ShipCountry: 'Austria',
        Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', EmployeeID: 4, OrderDate: new
        Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
        ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', ShipPostalCode: '05022', ShipCountry: 'Mexico',
        Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
        'Mehrheimerstr. 369',
        ShipRegion: 'CJ', ShipPostalCode: '50739', ShipCountry: 'Germany',
        Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', EmployeeID: 4, OrderDate: new
        Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua da Panificadora, 12',
        ShipRegion: 'RJ', ShipPostalCode: '02389-673', ShipCountry: 'Brazil',
        Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', EmployeeID: 8, OrderDate: new
        Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', ShipPostalCode: '87110', ShipCountry: 'USA',
        Freight: 48.29, Verified: !0
    }
    ]];

```

How to prevent component re-rendering while updating the same state in React

The React component will automatically re-render whenever the state is updated. If you need to prevent unnecessary re-rendering while updating the same state value by using the `useCallback` or `useMemo` hook. This utilization of both `useCallback` and `useMemo` hooks is to improve the overall performance.

This demonstration showcases the implementation of a Master-Detail Grid using the React `useCallback` hook. It allows users to view the details of a specific record from the Master Grid in a separate grid known as the Detail Grid. This is achieved by clicking on a particular row. The steps to accomplish this scenario are as follows:

1. In the Master Grid's `rowSelected` event, you can retrieve the selected record and update the state value called "setRecord" using the React `useState` hook. By doing this, the component will automatically re-render whenever the state is modified. To optimize performance and avoid unnecessary re-renders, you can utilize the `useCallback` hook to pass the selected record from the Master Grid to the Detail Grid only when there is a change in the row index value. The row index value is updated in the "setRowIdx" state using the `rowSelecting` event of the grid. Refer to the code snippet below.

```
`typescript
const [rowIdx, setRowIdx] = useState(null);
const [record, setRecord] = useState(null);
const rowSelecting = (args: any) => {
  setRowIdx(args.rowIndex);
};
const rowSelected = useCallback((args: any) => {
  setRecord(args.data);
}, [rowIdx]);
`
```

2. After obtaining the value from the Master Grid, you need to filter the CustomerID data within the detail's data source based on the selected record. This filtered data should then be bound to the Detail Grid using the `dataSource` property within the React `useEffect` hook. By using the `useEffect` hook, the binding operation will take place after the component renders and will be triggered whenever the selected record changes. Refer to the below code snippet.

```
`typescript
useEffect(()=>{
  let showCustomerName: HTMLElement = document.getElementById('CustomerName') as
  HTMLElement;
  if(props.detailRecord){
```

```

showCustomerName.textContent = props.detailRecord.ContactName;

detailGrid.dataSource = data.filter((record: any) => record.CustomerName ===
props.detailRecord.ContactName).slice(0, 5);
}
},[detailGrid, props.detailRecord]);
`

```

In this demonstration, the [selectedRowIndex](#) property of the Grid was used to automatically select the second row. Based on that, Detail-Grid will be loaded with data during the initial rendering.

APP.JSX

```

import React, { useState, useCallback } from 'react';
import { GridComponent, ColumnsDirective, ColumnDirective } from
'@syncfusion/ej2-react-grids';
import { customerData } from './datasource';
import Detail from './Detail';
function Master() {
    const customerNames = ['AROUT', 'BERGS', 'BLONP', 'CHOPS', 'ERNSH'];
    const masterData = customerData.filter((e) =>
customerNames.indexOf(e.CustomerID) !== -1);
    const [rowIdx, setRowIdx] = useState(null);
    const [record, setRecord] = useState(null);
    const rowSelecting = (args) => {
        setRowIdx(args.rowIndex);
    };
    const rowSelected = useCallback((args) => {
        setRecord(args.data);
    }, [rowIdx]);
    return (
        <div>
            <div>
                <GridComponent dataSource={masterData} selectedRowIndex={2}
rowSelecting={rowSelecting} rowSelected={rowSelected}>
                    <ColumnsDirective>
                        <ColumnDirective field='ContactName'
headerText='Customer Name' width='150'></ColumnDirective>
                        <ColumnDirective field='CompanyName'
headerText='Company Name' width='150'></ColumnDirective>
                        <ColumnDirective field='Address' headerText='Address'
width='150' />
                        <ColumnDirective field='Country' headerText='Country'
width='130' />
                    </ColumnsDirective>
                </GridComponent>
                <br/>
                <Detail detailRecord={record}/>
            </div>
        </div>
    );
}
export default Master;

```

APP.TSX

```

import React, { useState, useCallback } from 'react';
import { GridComponent, ColumnsDirective, ColumnDirective } from
 '@syncfusion/ej2-react-grids';
import { customerData } from './datasource';
import Detail from './Detail';
function Master() {
    const customerNames = ['AROUT', 'BERGS', 'BLONP', 'CHOPS', 'ERNSH'];
    const masterData = customerData.filter((e) =>
customerNames.indexOf(e.CustomerID) !== -1);
    const [rowIdx, setRowIdx] = useState(null);
    const [record, setRecord] = useState(null);
    const rowSelecting = (args: any) => {
        setRowIdx(args.rowIndex);
    };
    const rowSelected = useCallback((args: any) => {
        setRecord(args.data);
    }, [rowIdx]);
    return (
        <div>
            <div>
                <GridComponent dataSource={masterData} selectedRowIndex={2}
rowSelecting={rowSelecting} rowSelected={rowSelected}>
                    <ColumnsDirective>
                        <ColumnDirective field='ContactName'
headerText='Customer Name' width='150'></ColumnDirective>
                        <ColumnDirective field='CompanyName'
headerText='Company Name' width='150'></ColumnDirective>
                        <ColumnDirective field='Address' headerText='Address'
width='150' />
                        <ColumnDirective field='Country' headerText='Country'
width='130' />
                    </ColumnsDirective>
                </GridComponent>
                <br/>
                <Detail detailRecord={record}/>
            </div>
        </div>
    );
}
export default Master;

```

DETAIL.JSX

```

import React, { useEffect } from 'react';
import { GridComponent, ColumnsDirective, ColumnDirective } from
 '@syncfusion/ej2-react-grids';
import { data } from './datasource';
function Detail(props) {
    let detailGrid;
    useEffect(()=>{
        let showCustomerName = document.getElementById('CustomerName');
        if(props.detailRecord){
            showCustomerName.textContent = props.detailRecord.ContactName;
        }
    });

```

```

        detailGrid.dataSource = data.filter((record) =>
record.CustomerName === props.detailRecord.ContactName).slice(0, 5);
    }
    },[detailGrid, props.detailRecord]);
    return (
        <div>
            <div>
                Showing orders of Customer: <b id='CustomerName'></b>
            </div>
            <br/>
            <GridComponent allowSelection={false} ref={grid => detailGrid =
grid}>
                <ColumnsDirective>
                    <ColumnDirective field='OrderID' headerText='Order ID'
width='100' ></ColumnDirective>
                    <ColumnDirective field='Freight' headerText='Freight'
width='100' format='C2' type='number'></ColumnDirective>
                    <ColumnDirective field='ShipName' headerText='Ship Name'
width='150'></ColumnDirective>
                    <ColumnDirective field='ShipCountry' headerText='Ship
Country' width='150'></ColumnDirective>
                    <ColumnDirective field='ShipAddress' headerText='Ship
Address' width='150'></ColumnDirective>
                </ColumnsDirective>
            </GridComponent>
        </div>
    );
}
export default Detail;

```

DETAIL.TSX

```

import React, { useEffect } from 'react';
import { GridComponent, ColumnsDirective, ColumnDirective } from
'@syncfusion/ej2-react-grids';
import { data } from './datasource';
function Detail(props:any) {
    let detailGrid: any;
    useEffect(()=>{
        let showCustomerName: HTMLElement =
document.getElementById('CustomerName') as HTMLElement;
        if(props.detailRecord){
            showCustomerName.textContent = props.detailRecord.ContactName;
            detailGrid.dataSource = data.filter((record: any) =>
record.CustomerName === props.detailRecord.ContactName).slice(0, 5);
        }
    },[detailGrid, props.detailRecord]);
    return (
        <div>
            <div>
                Showing orders of Customer: <b id='CustomerName'></b>
            </div>
            <br/>
            <GridComponent allowSelection={false} ref={(grid: any) =>
detailGrid = grid}>
                <ColumnsDirective>

```

```

        <ColumnDirective field='OrderID' headerText='Order ID'
width='100' ></ColumnDirective>
        <ColumnDirective field='Freight' headerText='Freight'
width='100' format='C2' type='number'></ColumnDirective>
        <ColumnDirective field='ShipName' headerText='Ship Name'
width='150'></ColumnDirective>
        <ColumnDirective field='ShipCountry' headerText='Ship
Country' width='150'></ColumnDirective>
        <ColumnDirective field='ShipAddress' headerText='Ship
Address' width='150'></ColumnDirective>
        </ColumnsDirective>
    </GridComponent>
</div>
);
}
export default Detail;

```

DATASOURCE.JSX

```

"use strict";
Object.defineProperty(exports, "__esModule", { value: true });
exports.data = exports.customerData = exports.orderData = void 0;
var stringData = JSON.stringify([
    {
        'OrderID': 10248,
        'CustomerID': 'VINET',
        'OrderDate': '1996-07-04T00:00:00.000Z',
        'ShippedDate': '1996-07-16T00:00:00.000Z',
        'Freight': 32.38,
        'ShipName': 'Vins et alcools Chevalier',
        'ShipAddress': '59 rue de l\'Abbaye',
        'ShipCity': 'Reims',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10249,
        'CustomerID': 'TOMSP',
        'OrderDate': '1996-07-05T00:00:00.000Z',
        'ShippedDate': '1996-07-10T00:00:00.000Z',
        'Freight': 11.61,
        'ShipName': 'Toms Spezialitäten',
        'ShipAddress': 'Luisenstr. 48',
        'ShipCity': 'Münster',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10250,
        'CustomerID': 'HANAR',
        'OrderDate': '1996-07-08T00:00:00.000Z',
        'ShippedDate': '1996-07-12T00:00:00.000Z',
        'Freight': 65.83,
        'ShipName': 'Hanari Carnes',
        'ShipAddress': 'Rua do Paço, 67',
        'ShipCity': 'Rio de Janeiro',
    }
]);

```



```

        'ShipRegion': 'RJ',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10251,
        'CustomerID': 'VICTE',
        'OrderDate': '1996-07-08T00:00:00.000Z',
        'ShippedDate': '1996-07-15T00:00:00.000Z',
        'Freight': 41.34,
        'ShipName': 'Victuailles en stock',
        'ShipAddress': '2, rue du Commerce',
        'ShipCity': 'Lyon',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10252,
        'CustomerID': 'SUPRD',
        'OrderDate': '1996-07-09T00:00:00.000Z',
        'ShippedDate': '1996-07-11T00:00:00.000Z',
        'Freight': 51.3,
        'ShipName': 'Suprêmes délices',
        'ShipAddress': 'Boulevard Tirou, 255',
        'ShipCity': 'Charleroi',
        'ShipRegion': null,
        'ShipCountry': 'Belgium'
    },
    {
        'OrderID': 10253,
        'CustomerID': 'HANAR',
        'OrderDate': '1996-07-10T00:00:00.000Z',
        'ShippedDate': '1996-07-16T00:00:00.000Z',
        'Freight': 58.17,
        'ShipName': 'Hanari Carnes',
        'ShipAddress': 'Rua do Paço, 67',
        'ShipCity': 'Rio de Janeiro',
        'ShipRegion': 'RJ',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10254,
        'CustomerID': 'CHOPS',
        'OrderDate': '1996-07-11T00:00:00.000Z',
        'ShippedDate': '1996-07-23T00:00:00.000Z',
        'Freight': 22.98,
        'ShipName': 'Chop-suey Chinese',
        'ShipAddress': 'Hauptstr. 31',
        'ShipCity': 'Bern',
        'ShipRegion': null,
        'ShipCountry': 'Switzerland'
    },
    {
        'OrderID': 10255,
        'CustomerID': 'RICSU',
        'OrderDate': '1996-07-12T00:00:00.000Z',
        'ShippedDate': '1996-07-15T00:00:00.000Z',
        'Freight': 148.33,

```

```

    'ShipName': 'Richter Supermarkt',
    'ShipAddress': 'Starenweg 5',
    'ShipCity': 'Genève',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
  {
    'OrderID': 10256,
    'CustomerID': 'WELLI',
    'OrderDate': '1996-07-15T00:00:00.000Z',
    'ShippedDate': '1996-07-17T00:00:00.000Z',
    'Freight': 13.97,
    'ShipName': 'Wellington Importadora',
    'ShipAddress': 'Rua do Mercado, 12',
    'ShipCity': 'Resende',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10257,
    'CustomerID': 'HILAA',
    'OrderDate': '1996-07-16T00:00:00.000Z',
    'ShippedDate': '1996-07-22T00:00:00.000Z',
    'Freight': 81.91,
    'ShipName': 'HILARION-Abastos',
    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10258,
    'CustomerID': 'ERNSH',
    'OrderDate': '1996-07-17T00:00:00.000Z',
    'ShippedDate': '1996-07-23T00:00:00.000Z',
    'Freight': 140.51,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10259,
    'CustomerID': 'CENTC',
    'OrderDate': '1996-07-18T00:00:00.000Z',
    'ShippedDate': '1996-07-25T00:00:00.000Z',
    'Freight': 3.25,
    'ShipName': 'Centro comercial Moctezuma',
    'ShipAddress': 'Sierras de Granada 9993',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10260,
    'CustomerID': 'OTTIK',

```

```

    'OrderDate': '1996-07-19T00:00:00.000Z',
    'ShippedDate': '1996-07-29T00:00:00.000Z',
    'Freight': 55.09,
    'ShipName': 'Ottilies Käseladen',
    'ShipAddress': 'Mehrheimerstr. 369',
    'ShipCity': 'Köln',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10261,
    'CustomerID': 'QUEDE',
    'OrderDate': '1996-07-19T00:00:00.000Z',
    'ShippedDate': '1996-07-30T00:00:00.000Z',
    'Freight': 3.05,
    'ShipName': 'Que Delícia',
    'ShipAddress': 'Rua da Panificadora, 12',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10262,
    'CustomerID': 'RATTC',
    'OrderDate': '1996-07-22T00:00:00.000Z',
    'ShippedDate': '1996-07-25T00:00:00.000Z',
    'Freight': 48.29,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10263,
    'CustomerID': 'ERNSH',
    'OrderDate': '1996-07-23T00:00:00.000Z',
    'ShippedDate': '1996-07-31T00:00:00.000Z',
    'Freight': 146.06,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10264,
    'CustomerID': 'FOLKO',
    'OrderDate': '1996-07-24T00:00:00.000Z',
    'ShippedDate': '1996-08-23T00:00:00.000Z',
    'Freight': 3.67,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
},

```

```

{
  'OrderID': 10265,
  'CustomerID': 'BLONP',
  'OrderDate': '1996-07-25T00:00:00.000Z',
  'ShippedDate': '1996-08-12T00:00:00.000Z',
  'Freight': 55.28,
  'ShipName': 'Blondel père et fils',
  'ShipAddress': '24, place Kléber',
  'ShipCity': 'Strasbourg',
  'ShipRegion': null,
  'ShipCountry': 'France'
},
{
  'OrderID': 10266,
  'CustomerID': 'WARTH',
  'OrderDate': '1996-07-26T00:00:00.000Z',
  'ShippedDate': '1996-07-31T00:00:00.000Z',
  'Freight': 25.73,
  'ShipName': 'Wartian Herkku',
  'ShipAddress': 'Torikatu 38',
  'ShipCity': 'Oulu',
  'ShipRegion': null,
  'ShipCountry': 'Finland'
},
{
  'OrderID': 10267,
  'CustomerID': 'FRANK',
  'OrderDate': '1996-07-29T00:00:00.000Z',
  'ShippedDate': '1996-08-06T00:00:00.000Z',
  'Freight': 208.58,
  'ShipName': 'Frankenversand',
  'ShipAddress': 'Berliner Platz 43',
  'ShipCity': 'München',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10268,
  'CustomerID': 'GROSR',
  'OrderDate': '1996-07-30T00:00:00.000Z',
  'ShippedDate': '1996-08-02T00:00:00.000Z',
  'Freight': 66.29,
  'ShipName': 'GROSELLA-Restaurante',
  'ShipAddress': '5a Ave. Los Palos Grandes',
  'ShipCity': 'Caracas',
  'ShipRegion': 'DF',
  'ShipCountry': 'Venezuela'
},
{
  'OrderID': 10269,
  'CustomerID': 'WHITC',
  'OrderDate': '1996-07-31T00:00:00.000Z',
  'ShippedDate': '1996-08-09T00:00:00.000Z',
  'Freight': 4.56,
  'ShipName': 'White Clover Markets',
  'ShipAddress': '1029 - 12th Ave. S.',
  'ShipCity': 'Seattle',

```

```

        'ShipRegion': 'WA',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10270,
        'CustomerID': 'WARTH',
        'OrderDate': '1996-08-01T00:00:00.000Z',
        'ShippedDate': '1996-08-02T00:00:00.000Z',
        'Freight': 136.54,
        'ShipName': 'Wartian Herkku',
        'ShipAddress': 'Torikatu 38',
        'ShipCity': 'Oulu',
        'ShipRegion': null,
        'ShipCountry': 'Finland'
    },
    {
        'OrderID': 10271,
        'CustomerID': 'SPLIR',
        'OrderDate': '1996-08-01T00:00:00.000Z',
        'ShippedDate': '1996-08-30T00:00:00.000Z',
        'Freight': 4.54,
        'ShipName': 'Split Rail Beer & Ale',
        'ShipAddress': 'P.O. Box 555',
        'ShipCity': 'Lander',
        'ShipRegion': 'WY',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10272,
        'CustomerID': 'RATTC',
        'OrderDate': '1996-08-02T00:00:00.000Z',
        'ShippedDate': '1996-08-06T00:00:00.000Z',
        'Freight': 98.03,
        'ShipName': 'Rattlesnake Canyon Grocery',
        'ShipAddress': '2817 Milton Dr.',
        'ShipCity': 'Albuquerque',
        'ShipRegion': 'NM',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10273,
        'CustomerID': 'QUICK',
        'OrderDate': '1996-08-05T00:00:00.000Z',
        'ShippedDate': '1996-08-12T00:00:00.000Z',
        'Freight': 76.07,
        'ShipName': 'QUICK-Stop',
        'ShipAddress': 'Taucherstraße 10',
        'ShipCity': 'Cunewalde',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10274,
        'CustomerID': 'VINET',
        'OrderDate': '1996-08-06T00:00:00.000Z',
        'ShippedDate': '1996-08-16T00:00:00.000Z',
        'Freight': 6.01,

```

```

        'ShipName': 'Vins et alcools Chevalier',
        'ShipAddress': '59 rue de l\'Abbaye',
        'ShipCity': 'Reims',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10275,
        'CustomerID': 'MAGAA',
        'OrderDate': '1996-08-07T00:00:00.000Z',
        'ShippedDate': '1996-08-09T00:00:00.000Z',
        'Freight': 26.93,
        'ShipName': 'Magazzini Alimentari Riuniti',
        'ShipAddress': 'Via Ludovico il Moro 22',
        'ShipCity': 'Bergamo',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
    {
        'OrderID': 10276,
        'CustomerID': 'TORTU',
        'OrderDate': '1996-08-08T00:00:00.000Z',
        'ShippedDate': '1996-08-14T00:00:00.000Z',
        'Freight': 13.84,
        'ShipName': 'Tortuga Restaurante',
        'ShipAddress': 'Avda. Azteca 123',
        'ShipCity': 'México D.F.',
        'ShipRegion': null,
        'ShipCountry': 'Mexico'
    },
    {
        'OrderID': 10277,
        'CustomerID': 'MORGK',
        'OrderDate': '1996-08-09T00:00:00.000Z',
        'ShippedDate': '1996-08-13T00:00:00.000Z',
        'Freight': 125.77,
        'ShipName': 'Morgenstern Gesundkost',
        'ShipAddress': 'Heerstr. 22',
        'ShipCity': 'Leipzig',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10278,
        'CustomerID': 'BERGS',
        'OrderDate': '1996-08-12T00:00:00.000Z',
        'ShippedDate': '1996-08-16T00:00:00.000Z',
        'Freight': 92.69,
        'ShipName': 'Berglunds snabbköp',
        'ShipAddress': 'Berguvsvägen 8',
        'ShipCity': 'Luleå',
        'ShipRegion': null,
        'ShipCountry': 'Sweden'
    },
    {
        'OrderID': 10279,
        'CustomerID': 'LEHMS',

```

```

    'OrderDate': '1996-08-13T00:00:00.000Z',
    'ShippedDate': '1996-08-16T00:00:00.000Z',
    'Freight': 25.83,
    'ShipName': 'Lehmanns Marktstand',
    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10280,
    'CustomerID': 'BERGS',
    'OrderDate': '1996-08-14T00:00:00.000Z',
    'ShippedDate': '1996-09-12T00:00:00.000Z',
    'Freight': 8.98,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10281,
    'CustomerID': 'ROMEY',
    'OrderDate': '1996-08-14T00:00:00.000Z',
    'ShippedDate': '1996-08-21T00:00:00.000Z',
    'Freight': 2.94,
    'ShipName': 'Romero y tomillo',
    'ShipAddress': 'Gran Vía, 1',
    'ShipCity': 'Madrid',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10282,
    'CustomerID': 'ROMEY',
    'OrderDate': '1996-08-15T00:00:00.000Z',
    'ShippedDate': '1996-08-21T00:00:00.000Z',
    'Freight': 12.69,
    'ShipName': 'Romero y tomillo',
    'ShipAddress': 'Gran Vía, 1',
    'ShipCity': 'Madrid',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10283,
    'CustomerID': 'LILAS',
    'OrderDate': '1996-08-16T00:00:00.000Z',
    'ShippedDate': '1996-08-23T00:00:00.000Z',
    'Freight': 84.81,
    'ShipName': 'LILA-Supermercado',
    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },

```

```
{
  'OrderID': 10284,
  'CustomerID': 'LEHMS',
  'OrderDate': '1996-08-19T00:00:00.000Z',
  'ShippedDate': '1996-08-27T00:00:00.000Z',
  'Freight': 76.56,
  'ShipName': 'Lehmanns Marktstand',
  'ShipAddress': 'Magazinweg 7',
  'ShipCity': 'Frankfurt a.M.',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10285,
  'CustomerID': 'QUICK',
  'OrderDate': '1996-08-20T00:00:00.000Z',
  'ShippedDate': '1996-08-26T00:00:00.000Z',
  'Freight': 76.83,
  'ShipName': 'QUICK-Stop',
  'ShipAddress': 'Taucherstraße 10',
  'ShipCity': 'Cunewalde',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10286,
  'CustomerID': 'QUICK',
  'OrderDate': '1996-08-21T00:00:00.000Z',
  'ShippedDate': '1996-08-30T00:00:00.000Z',
  'Freight': 229.24,
  'ShipName': 'QUICK-Stop',
  'ShipAddress': 'Taucherstraße 10',
  'ShipCity': 'Cunewalde',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10287,
  'CustomerID': 'RICAR',
  'OrderDate': '1996-08-22T00:00:00.000Z',
  'ShippedDate': '1996-08-28T00:00:00.000Z',
  'Freight': 12.76,
  'ShipName': 'Ricardo Adocicados',
  'ShipAddress': 'Av. Copacabana, 267',
  'ShipCity': 'Rio de Janeiro',
  'ShipRegion': 'RJ',
  'ShipCountry': 'Brazil'
},
{
  'OrderID': 10288,
  'CustomerID': 'REGGC',
  'OrderDate': '1996-08-23T00:00:00.000Z',
  'ShippedDate': '1996-09-03T00:00:00.000Z',
  'Freight': 7.45,
  'ShipName': 'Reggiani Caseifici',
  'ShipAddress': 'Strada Provinciale 124',
  'ShipCity': 'Reggio Emilia',
```



```

        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
    {
        'OrderID': 10289,
        'CustomerID': 'BSBEV',
        'OrderDate': '1996-08-26T00:00:00.000Z',
        'ShippedDate': '1996-08-28T00:00:00.000Z',
        'Freight': 22.77,
        'ShipName': 'B\'s Beverages',
        'ShipAddress': 'Fauntleroy Circus',
        'ShipCity': 'London',
        'ShipRegion': null,
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10290,
        'CustomerID': 'COMMI',
        'OrderDate': '1996-08-27T00:00:00.000Z',
        'ShippedDate': '1996-09-03T00:00:00.000Z',
        'Freight': 79.7,
        'ShipName': 'Comércio Mineiro',
        'ShipAddress': 'Av. dos Lusíadas, 23',
        'ShipCity': 'Sao Paulo',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10291,
        'CustomerID': 'QUEDE',
        'OrderDate': '1996-08-27T00:00:00.000Z',
        'ShippedDate': '1996-09-04T00:00:00.000Z',
        'Freight': 6.4,
        'ShipName': 'Que Delícia',
        'ShipAddress': 'Rua da Panificadora, 12',
        'ShipCity': 'Rio de Janeiro',
        'ShipRegion': 'RJ',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10292,
        'CustomerID': 'TRADH',
        'OrderDate': '1996-08-28T00:00:00.000Z',
        'ShippedDate': '1996-09-02T00:00:00.000Z',
        'Freight': 1.35,
        'ShipName': 'Tradição Hipermercados',
        'ShipAddress': 'Av. Inês de Castro, 414',
        'ShipCity': 'Sao Paulo',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
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        'ShippedDate': '1996-09-11T00:00:00.000Z',
        'Freight': 21.18,

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    'ShipAddress': 'Avda. Azteca 123',
    'ShipCity': 'México D.F.',
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  {
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    'ShippedDate': '1996-09-05T00:00:00.000Z',
    'Freight': 147.26,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'VINET',
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    'ShippedDate': '1996-09-10T00:00:00.000Z',
    'Freight': 1.15,
    'ShipName': 'Vins et alcools Chevalier',
    'ShipAddress': '59 rue de l\'Abbaye',
    'ShipCity': 'Reims',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
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    'CustomerID': 'LILAS',
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    'ShippedDate': '1996-09-11T00:00:00.000Z',
    'Freight': 0.12,
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    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },
  {
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    'CustomerID': 'BLONP',
    'OrderDate': '1996-09-04T00:00:00.000Z',
    'ShippedDate': '1996-09-10T00:00:00.000Z',
    'Freight': 5.74,
    'ShipName': 'Blondel père et fils',
    'ShipAddress': '24, place Kléber',
    'ShipCity': 'Strasbourg',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10298,
    'CustomerID': 'HUNGO',

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    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
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    'ShippedDate': '1996-09-13T00:00:00.000Z',
    'Freight': 29.76,
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    'ShipAddress': 'Av. Copacabana, 267',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
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    'CustomerID': 'MAGAA',
    'OrderDate': '1996-09-09T00:00:00.000Z',
    'ShippedDate': '1996-09-18T00:00:00.000Z',
    'Freight': 17.68,
    'ShipName': 'Magazzini Alimentari Riuniti',
    'ShipAddress': 'Via Ludovico il Moro 22',
    'ShipCity': 'Bergamo',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
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    'CustomerID': 'WANDK',
    'OrderDate': '1996-09-09T00:00:00.000Z',
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    'Freight': 45.08,
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    'ShipAddress': 'Adenauerallee 900',
    'ShipCity': 'Stuttgart',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
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    'CustomerID': 'SUPRD',
    'OrderDate': '1996-09-10T00:00:00.000Z',
    'ShippedDate': '1996-10-09T00:00:00.000Z',
    'Freight': 6.27,
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    'ShipAddress': 'Boulevard Tirou, 255',
    'ShipCity': 'Charleroi',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },

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    'Freight': 107.83,
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    'ShipAddress': 'C/ Romero, 33',
    'ShipCity': 'Sevilla',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
},
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    'Freight': 63.79,
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    'ShipAddress': 'Avda. Azteca 123',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
},
{
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    'CustomerID': 'OLDWO',
    'OrderDate': '1996-09-13T00:00:00.000Z',
    'ShippedDate': '1996-10-09T00:00:00.000Z',
    'Freight': 257.62,
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    'ShipAddress': '2743 Bering St.',
    'ShipCity': 'Anchorage',
    'ShipRegion': 'AK',
    'ShipCountry': 'USA'
},
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    'ShippedDate': '1996-09-23T00:00:00.000Z',
    'Freight': 7.56,
    'ShipName': 'Romero y tomillo',
    'ShipAddress': 'Gran Vía, 1',
    'ShipCity': 'Madrid',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
},
{
    'OrderID': 10307,
    'CustomerID': 'LONEP',
    'OrderDate': '1996-09-17T00:00:00.000Z',
    'ShippedDate': '1996-09-25T00:00:00.000Z',
    'Freight': 0.56,
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    'ShipAddress': '89 Chiaroscuro Rd.',
    'ShipCity': 'Portland',

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        'ShipRegion': 'OR',
        'ShipCountry': 'USA'
    },
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        'ShippedDate': '1996-09-24T00:00:00.000Z',
        'Freight': 1.61,
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        'ShipAddress': 'Avda. de la Constitución 2222',
        'ShipCity': 'México D.F.',
        'ShipRegion': null,
        'ShipCountry': 'Mexico'
    },
    {
        'OrderID': 10309,
        'CustomerID': 'HUNGO',
        'OrderDate': '1996-09-19T00:00:00.000Z',
        'ShippedDate': '1996-10-23T00:00:00.000Z',
        'Freight': 47.3,
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        'ShipAddress': '8 Johnstown Road',
        'ShipCity': 'Cork',
        'ShipRegion': 'Co. Cork',
        'ShipCountry': 'Ireland'
    },
    {
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        'CustomerID': 'THEBI',
        'OrderDate': '1996-09-20T00:00:00.000Z',
        'ShippedDate': '1996-09-27T00:00:00.000Z',
        'Freight': 17.52,
        'ShipName': 'The Big Cheese',
        'ShipAddress': '89 Jefferson Way Suite 2',
        'ShipCity': 'Portland',
        'ShipRegion': 'OR',
        'ShipCountry': 'USA'
    },
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        'CustomerID': 'DUMON',
        'OrderDate': '1996-09-20T00:00:00.000Z',
        'ShippedDate': '1996-09-26T00:00:00.000Z',
        'Freight': 24.69,
        'ShipName': 'Du monde entier',
        'ShipAddress': '67, rue des Cinquante Otages',
        'ShipCity': 'Nantes',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10312,
        'CustomerID': 'WANDK',
        'OrderDate': '1996-09-23T00:00:00.000Z',
        'ShippedDate': '1996-10-03T00:00:00.000Z',
        'Freight': 40.26,

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    'ShipName': 'Die Wandernde Kuh',
    'ShipAddress': 'Adenauerallee 900',
    'ShipCity': 'Stuttgart',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
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    'CustomerID': 'QUICK',
    'OrderDate': '1996-09-24T00:00:00.000Z',
    'ShippedDate': '1996-10-04T00:00:00.000Z',
    'Freight': 1.96,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10314,
    'CustomerID': 'RATTC',
    'OrderDate': '1996-09-25T00:00:00.000Z',
    'ShippedDate': '1996-10-04T00:00:00.000Z',
    'Freight': 74.16,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'ISLAT',
    'OrderDate': '1996-09-26T00:00:00.000Z',
    'ShippedDate': '1996-10-03T00:00:00.000Z',
    'Freight': 41.76,
    'ShipName': 'Island Trading',
    'ShipAddress': 'Garden House Crowther Way',
    'ShipCity': 'Cowes',
    'ShipRegion': 'Isle of Wight',
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10316,
    'CustomerID': 'RATTC',
    'OrderDate': '1996-09-27T00:00:00.000Z',
    'ShippedDate': '1996-10-08T00:00:00.000Z',
    'Freight': 150.15,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10317,
    'CustomerID': 'LONEP',

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    'OrderDate': '1996-09-30T00:00:00.000Z',
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    'ShipAddress': '89 Chiaroscuro Rd.',
    'ShipCity': 'Portland',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10318,
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    'ShippedDate': '1996-10-04T00:00:00.000Z',
    'Freight': 4.73,
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    'ShipAddress': 'Garden House Crowther Way',
    'ShipCity': 'Cowes',
    'ShipRegion': 'Isle of Wight',
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10319,
    'CustomerID': 'TORTU',
    'OrderDate': '1996-10-02T00:00:00.000Z',
    'ShippedDate': '1996-10-11T00:00:00.000Z',
    'Freight': 64.5,
    'ShipName': 'Tortuga Restaurante',
    'ShipAddress': 'Avda. Azteca 123',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10320,
    'CustomerID': 'WARTH',
    'OrderDate': '1996-10-03T00:00:00.000Z',
    'ShippedDate': '1996-10-18T00:00:00.000Z',
    'Freight': 34.57,
    'ShipName': 'Wartian Herkku',
    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 10321,
    'CustomerID': 'ISLAT',
    'OrderDate': '1996-10-03T00:00:00.000Z',
    'ShippedDate': '1996-10-11T00:00:00.000Z',
    'Freight': 3.43,
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    'ShipAddress': 'Garden House Crowther Way',
    'ShipCity': 'Cowes',
    'ShipRegion': 'Isle of Wight',
    'ShipCountry': 'UK'
  },

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  'ShippedDate': '1996-10-23T00:00:00.000Z',
  'Freight': 0.4,
  'ShipName': 'Pericles Comidas clásicas',
  'ShipAddress': 'Calle Dr. Jorge Cash 321',
  'ShipCity': 'México D.F.',
  'ShipRegion': null,
  'ShipCountry': 'Mexico'
},
{
  'OrderID': 10323,
  'CustomerID': 'KOENE',
  'OrderDate': '1996-10-07T00:00:00.000Z',
  'ShippedDate': '1996-10-14T00:00:00.000Z',
  'Freight': 4.88,
  'ShipName': 'Königlich Essen',
  'ShipAddress': 'Maubelstr. 90',
  'ShipCity': 'Brandenburg',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10324,
  'CustomerID': 'SAVEA',
  'OrderDate': '1996-10-08T00:00:00.000Z',
  'ShippedDate': '1996-10-10T00:00:00.000Z',
  'Freight': 214.27,
  'ShipName': 'Save-a-lot Markets',
  'ShipAddress': '187 Suffolk Ln.',
  'ShipCity': 'Boise',
  'ShipRegion': 'ID',
  'ShipCountry': 'USA'
},
{
  'OrderID': 10325,
  'CustomerID': 'KOENE',
  'OrderDate': '1996-10-09T00:00:00.000Z',
  'ShippedDate': '1996-10-14T00:00:00.000Z',
  'Freight': 64.86,
  'ShipName': 'Königlich Essen',
  'ShipAddress': 'Maubelstr. 90',
  'ShipCity': 'Brandenburg',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
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  'CustomerID': 'BOLID',
  'OrderDate': '1996-10-10T00:00:00.000Z',
  'ShippedDate': '1996-10-14T00:00:00.000Z',
  'Freight': 77.92,
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  'ShipAddress': 'C/ Araquil, 67',
  'ShipCity': 'Madrid',

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    'ShipRegion': null,
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  },
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    'ShippedDate': '1996-10-14T00:00:00.000Z',
    'Freight': 63.36,
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    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
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    'CustomerID': 'FURIB',
    'OrderDate': '1996-10-14T00:00:00.000Z',
    'ShippedDate': '1996-10-17T00:00:00.000Z',
    'Freight': 87.03,
    'ShipName': 'Furia Bacalhau e Frutos do Mar',
    'ShipAddress': 'Jardim das rosas n. 32',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {
    'OrderID': 10329,
    'CustomerID': 'SPLIR',
    'OrderDate': '1996-10-15T00:00:00.000Z',
    'ShippedDate': '1996-10-23T00:00:00.000Z',
    'Freight': 191.67,
    'ShipName': 'Split Rail Beer & Ale',
    'ShipAddress': 'P.O. Box 555',
    'ShipCity': 'Lander',
    'ShipRegion': 'WY',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10330,
    'CustomerID': 'LILAS',
    'OrderDate': '1996-10-16T00:00:00.000Z',
    'ShippedDate': '1996-10-28T00:00:00.000Z',
    'Freight': 12.75,
    'ShipName': 'LILA-Supermercado',
    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10331,
    'CustomerID': 'BONAP',
    'OrderDate': '1996-10-16T00:00:00.000Z',
    'ShippedDate': '1996-10-21T00:00:00.000Z',
    'Freight': 10.19,

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    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10332,
    'CustomerID': 'MEREP',
    'OrderDate': '1996-10-17T00:00:00.000Z',
    'ShippedDate': '1996-10-21T00:00:00.000Z',
    'Freight': 52.84,
    'ShipName': 'Mère Paillarde',
    'ShipAddress': '43 rue St. Laurent',
    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10333,
    'CustomerID': 'WARTH',
    'OrderDate': '1996-10-18T00:00:00.000Z',
    'ShippedDate': '1996-10-25T00:00:00.000Z',
    'Freight': 0.59,
    'ShipName': 'Wartian Herkku',
    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
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    'CustomerID': 'VICTE',
    'OrderDate': '1996-10-21T00:00:00.000Z',
    'ShippedDate': '1996-10-28T00:00:00.000Z',
    'Freight': 8.56,
    'ShipName': 'Victuailles en stock',
    'ShipAddress': '2, rue du Commerce',
    'ShipCity': 'Lyon',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10335,
    'CustomerID': 'HUNGO',
    'OrderDate': '1996-10-22T00:00:00.000Z',
    'ShippedDate': '1996-10-24T00:00:00.000Z',
    'Freight': 42.11,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10336,
    'CustomerID': 'PRINI',

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    'ShipAddress': 'Estrada da saúde n. 58',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {
    'OrderID': 10337,
    'CustomerID': 'FRANK',
    'OrderDate': '1996-10-24T00:00:00.000Z',
    'ShippedDate': '1996-10-29T00:00:00.000Z',
    'Freight': 108.26,
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    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10338,
    'CustomerID': 'OLDWO',
    'OrderDate': '1996-10-25T00:00:00.000Z',
    'ShippedDate': '1996-10-29T00:00:00.000Z',
    'Freight': 84.21,
    'ShipName': 'Old World Delicatessen',
    'ShipAddress': '2743 Bering St.',
    'ShipCity': 'Anchorage',
    'ShipRegion': 'AK',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10339,
    'CustomerID': 'MEREP',
    'OrderDate': '1996-10-28T00:00:00.000Z',
    'ShippedDate': '1996-11-04T00:00:00.000Z',
    'Freight': 15.66,
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    'ShipAddress': '43 rue St. Laurent',
    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10340,
    'CustomerID': 'BONAP',
    'OrderDate': '1996-10-29T00:00:00.000Z',
    'ShippedDate': '1996-11-08T00:00:00.000Z',
    'Freight': 166.31,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
},

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{
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  'CustomerID': 'SIMOB',
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  'ShippedDate': '1996-11-05T00:00:00.000Z',
  'Freight': 26.78,
  'ShipName': 'Simons bistro',
  'ShipAddress': 'Vinbæltet 34',
  'ShipCity': 'Kobenhavn',
  'ShipRegion': null,
  'ShipCountry': 'Denmark'
},
{
  'OrderID': 10342,
  'CustomerID': 'FRANK',
  'OrderDate': '1996-10-30T00:00:00.000Z',
  'ShippedDate': '1996-11-04T00:00:00.000Z',
  'Freight': 54.83,
  'ShipName': 'Frankenversand',
  'ShipAddress': 'Berliner Platz 43',
  'ShipCity': 'München',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10343,
  'CustomerID': 'LEHMS',
  'OrderDate': '1996-10-31T00:00:00.000Z',
  'ShippedDate': '1996-11-06T00:00:00.000Z',
  'Freight': 110.37,
  'ShipName': 'Lehmanns Marktstand',
  'ShipAddress': 'Magazinweg 7',
  'ShipCity': 'Frankfurt a.M.',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10344,
  'CustomerID': 'WHITC',
  'OrderDate': '1996-11-01T00:00:00.000Z',
  'ShippedDate': '1996-11-05T00:00:00.000Z',
  'Freight': 23.29,
  'ShipName': 'White Clover Markets',
  'ShipAddress': '1029 - 12th Ave. S.',
  'ShipCity': 'Seattle',
  'ShipRegion': 'WA',
  'ShipCountry': 'USA'
},
{
  'OrderID': 10345,
  'CustomerID': 'QUICK',
  'OrderDate': '1996-11-04T00:00:00.000Z',
  'ShippedDate': '1996-11-11T00:00:00.000Z',
  'Freight': 249.06,
  'ShipName': 'QUICK-Stop',
  'ShipAddress': 'Taucherstraße 10',
  'ShipCity': 'Cunewalde',

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        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10346,
        'CustomerID': 'RATTC',
        'OrderDate': '1996-11-05T00:00:00.000Z',
        'ShippedDate': '1996-11-08T00:00:00.000Z',
        'Freight': 142.08,
        'ShipName': 'Rattlesnake Canyon Grocery',
        'ShipAddress': '2817 Milton Dr.',
        'ShipCity': 'Albuquerque',
        'ShipRegion': 'NM',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10347,
        'CustomerID': 'FAMIA',
        'OrderDate': '1996-11-06T00:00:00.000Z',
        'ShippedDate': '1996-11-08T00:00:00.000Z',
        'Freight': 3.1,
        'ShipName': 'Familia Arquibaldo',
        'ShipAddress': 'Rua Orós, 92',
        'ShipCity': 'Sao Paulo',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10348,
        'CustomerID': 'WANDK',
        'OrderDate': '1996-11-07T00:00:00.000Z',
        'ShippedDate': '1996-11-15T00:00:00.000Z',
        'Freight': 0.78,
        'ShipName': 'Die Wandernde Kuh',
        'ShipAddress': 'Adenauerallee 900',
        'ShipCity': 'Stuttgart',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10349,
        'CustomerID': 'SPLIR',
        'OrderDate': '1996-11-08T00:00:00.000Z',
        'ShippedDate': '1996-11-15T00:00:00.000Z',
        'Freight': 8.63,
        'ShipName': 'Split Rail Beer & Ale',
        'ShipAddress': 'P.O. Box 555',
        'ShipCity': 'Lander',
        'ShipRegion': 'WY',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10350,
        'CustomerID': 'LAMAI',
        'OrderDate': '1996-11-11T00:00:00.000Z',
        'ShippedDate': '1996-12-03T00:00:00.000Z',
        'Freight': 64.19,

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    'ShipName': 'La maison d\'Asie',
    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10351,
    'CustomerID': 'ERNSH',
    'OrderDate': '1996-11-11T00:00:00.000Z',
    'ShippedDate': '1996-11-20T00:00:00.000Z',
    'Freight': 162.33,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10352,
    'CustomerID': 'FURIB',
    'OrderDate': '1996-11-12T00:00:00.000Z',
    'ShippedDate': '1996-11-18T00:00:00.000Z',
    'Freight': 1.3,
    'ShipName': 'Furia Bacalhau e Frutos do Mar',
    'ShipAddress': 'Jardim das rosas n. 32',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {
    'OrderID': 10353,
    'CustomerID': 'PICCO',
    'OrderDate': '1996-11-13T00:00:00.000Z',
    'ShippedDate': '1996-11-25T00:00:00.000Z',
    'Freight': 360.63,
    'ShipName': 'Piccolo und mehr',
    'ShipAddress': 'Geislweg 14',
    'ShipCity': 'Salzburg',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10354,
    'CustomerID': 'PERIC',
    'OrderDate': '1996-11-14T00:00:00.000Z',
    'ShippedDate': '1996-11-20T00:00:00.000Z',
    'Freight': 53.8,
    'ShipName': 'Pericles Comidas clásicas',
    'ShipAddress': 'Calle Dr. Jorge Cash 321',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10355,
    'CustomerID': 'AROUT',

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    'OrderDate': '1996-11-15T00:00:00.000Z',
    'ShippedDate': '1996-11-20T00:00:00.000Z',
    'Freight': 41.95,
    'ShipName': 'Around the Horn',
    'ShipAddress': 'Brook Farm Stratford St. Mary',
    'ShipCity': 'Colchester',
    'ShipRegion': 'Essex',
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10356,
    'CustomerID': 'WANDK',
    'OrderDate': '1996-11-18T00:00:00.000Z',
    'ShippedDate': '1996-11-27T00:00:00.000Z',
    'Freight': 36.71,
    'ShipName': 'Die Wandernde Kuh',
    'ShipAddress': 'Adenauerallee 900',
    'ShipCity': 'Stuttgart',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10357,
    'CustomerID': 'LILAS',
    'OrderDate': '1996-11-19T00:00:00.000Z',
    'ShippedDate': '1996-12-02T00:00:00.000Z',
    'Freight': 34.88,
    'ShipName': 'LILA-Supermercado',
    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10358,
    'CustomerID': 'LAMAI',
    'OrderDate': '1996-11-20T00:00:00.000Z',
    'ShippedDate': '1996-11-27T00:00:00.000Z',
    'Freight': 19.64,
    'ShipName': 'La maison d\'Asie',
    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10359,
    'CustomerID': 'SEVES',
    'OrderDate': '1996-11-21T00:00:00.000Z',
    'ShippedDate': '1996-11-26T00:00:00.000Z',
    'Freight': 288.43,
    'ShipName': 'Seven Seas Imports',
    'ShipAddress': '90 Wadhurst Rd.',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },

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{
    'OrderID': 10360,
    'CustomerID': 'BLONP',
    'OrderDate': '1996-11-22T00:00:00.000Z',
    'ShippedDate': '1996-12-02T00:00:00.000Z',
    'Freight': 131.7,
    'ShipName': 'Blondel père et fils',
    'ShipAddress': '24, place Kléber',
    'ShipCity': 'Strasbourg',
    'ShipRegion': null,
    'ShipCountry': 'France'
},
{
    'OrderID': 10361,
    'CustomerID': 'QUICK',
    'OrderDate': '1996-11-22T00:00:00.000Z',
    'ShippedDate': '1996-12-03T00:00:00.000Z',
    'Freight': 183.17,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
},
{
    'OrderID': 10362,
    'CustomerID': 'BONAP',
    'OrderDate': '1996-11-25T00:00:00.000Z',
    'ShippedDate': '1996-11-28T00:00:00.000Z',
    'Freight': 96.04,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
},
{
    'OrderID': 10363,
    'CustomerID': 'DRACD',
    'OrderDate': '1996-11-26T00:00:00.000Z',
    'ShippedDate': '1996-12-04T00:00:00.000Z',
    'Freight': 30.54,
    'ShipName': 'Drachenblut Delikatessen',
    'ShipAddress': 'Walserweg 21',
    'ShipCity': 'Aachen',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
},
{
    'OrderID': 10364,
    'CustomerID': 'EASTC',
    'OrderDate': '1996-11-26T00:00:00.000Z',
    'ShippedDate': '1996-12-04T00:00:00.000Z',
    'Freight': 71.97,
    'ShipName': 'Eastern Connection',
    'ShipAddress': '35 King George',
    'ShipCity': 'London',

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        'ShipRegion': null,
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10365,
        'CustomerID': 'ANTON',
        'OrderDate': '1996-11-27T00:00:00.000Z',
        'ShippedDate': '1996-12-02T00:00:00.000Z',
        'Freight': 22,
        'ShipName': 'Antonio Moreno Taquería',
        'ShipAddress': 'Mataderos 2312',
        'ShipCity': 'México D.F.',
        'ShipRegion': null,
        'ShipCountry': 'Mexico'
    },
    {
        'OrderID': 10366,
        'CustomerID': 'GALED',
        'OrderDate': '1996-11-28T00:00:00.000Z',
        'ShippedDate': '1996-12-30T00:00:00.000Z',
        'Freight': 10.14,
        'ShipName': 'Galería del gastronómo',
        'ShipAddress': 'Rambla de Cataluña, 23',
        'ShipCity': 'Barcelona',
        'ShipRegion': null,
        'ShipCountry': 'Spain'
    },
    {
        'OrderID': 10367,
        'CustomerID': 'VAFFE',
        'OrderDate': '1996-11-28T00:00:00.000Z',
        'ShippedDate': '1996-12-02T00:00:00.000Z',
        'Freight': 13.55,
        'ShipName': 'Vaffeljernet',
        'ShipAddress': 'Smagsloget 45',
        'ShipCity': 'Århus',
        'ShipRegion': null,
        'ShipCountry': 'Denmark'
    },
    {
        'OrderID': 10368,
        'CustomerID': 'ERNSH',
        'OrderDate': '1996-11-29T00:00:00.000Z',
        'ShippedDate': '1996-12-02T00:00:00.000Z',
        'Freight': 101.95,
        'ShipName': 'Ernst Handel',
        'ShipAddress': 'Kirchgasse 6',
        'ShipCity': 'Graz',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
        'OrderID': 10369,
        'CustomerID': 'SPLIR',
        'OrderDate': '1996-12-02T00:00:00.000Z',
        'ShippedDate': '1996-12-09T00:00:00.000Z',
        'Freight': 195.68,

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    'ShipName': 'Split Rail Beer & Ale',
    'ShipAddress': 'P.O. Box 555',
    'ShipCity': 'Lander',
    'ShipRegion': 'WY',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10370,
    'CustomerID': 'CHOPS',
    'OrderDate': '1996-12-03T00:00:00.000Z',
    'ShippedDate': '1996-12-27T00:00:00.000Z',
    'Freight': 1.17,
    'ShipName': 'Chop-suey Chinese',
    'ShipAddress': 'Hauptstr. 31',
    'ShipCity': 'Bern',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
  {
    'OrderID': 10371,
    'CustomerID': 'LAMAI',
    'OrderDate': '1996-12-03T00:00:00.000Z',
    'ShippedDate': '1996-12-24T00:00:00.000Z',
    'Freight': 0.45,
    'ShipName': 'La maison d\'Asie',
    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10372,
    'CustomerID': 'QUEEN',
    'OrderDate': '1996-12-04T00:00:00.000Z',
    'ShippedDate': '1996-12-09T00:00:00.000Z',
    'Freight': 890.78,
    'ShipName': 'Queen Cozinha',
    'ShipAddress': 'Alameda dos Canários, 891',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10373,
    'CustomerID': 'HUNGO',
    'OrderDate': '1996-12-05T00:00:00.000Z',
    'ShippedDate': '1996-12-11T00:00:00.000Z',
    'Freight': 124.12,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10374,
    'CustomerID': 'WOLZA',

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      'OrderDate': '1996-12-05T00:00:00.000Z',
      'ShippedDate': '1996-12-09T00:00:00.000Z',
      'Freight': 3.94,
      'ShipName': 'Wolski Zajazd',
      'ShipAddress': 'ul. Filtrowa 68',
      'ShipCity': 'Warszawa',
      'ShipRegion': null,
      'ShipCountry': 'Poland'
    },
    {
      'OrderID': 10375,
      'CustomerID': 'HUNGC',
      'OrderDate': '1996-12-06T00:00:00.000Z',
      'ShippedDate': '1996-12-09T00:00:00.000Z',
      'Freight': 20.12,
      'ShipName': 'Hungry Coyote Import Store',
      'ShipAddress': 'City Center Plaza 516 Main St.',
      'ShipCity': 'Elgin',
      'ShipRegion': 'OR',
      'ShipCountry': 'USA'
    },
    {
      'OrderID': 10376,
      'CustomerID': 'MEREP',
      'OrderDate': '1996-12-09T00:00:00.000Z',
      'ShippedDate': '1996-12-13T00:00:00.000Z',
      'Freight': 20.39,
      'ShipName': 'Mère Paillarde',
      'ShipAddress': '43 rue St. Laurent',
      'ShipCity': 'Montréal',
      'ShipRegion': 'Québec',
      'ShipCountry': 'Canada'
    },
    {
      'OrderID': 10377,
      'CustomerID': 'SEVES',
      'OrderDate': '1996-12-09T00:00:00.000Z',
      'ShippedDate': '1996-12-13T00:00:00.000Z',
      'Freight': 22.21,
      'ShipName': 'Seven Seas Imports',
      'ShipAddress': '90 Wadhurst Rd.',
      'ShipCity': 'London',
      'ShipRegion': null,
      'ShipCountry': 'UK'
    },
    {
      'OrderID': 10378,
      'CustomerID': 'FOLKO',
      'OrderDate': '1996-12-10T00:00:00.000Z',
      'ShippedDate': '1996-12-19T00:00:00.000Z',
      'Freight': 5.44,
      'ShipName': 'Folk och fä HB',
      'ShipAddress': 'Åkergatan 24',
      'ShipCity': 'Bräcke',
      'ShipRegion': null,
      'ShipCountry': 'Sweden'
    }
  ],

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{
    'OrderID': 10379,
    'CustomerID': 'QUEDE',
    'OrderDate': '1996-12-11T00:00:00.000Z',
    'ShippedDate': '1996-12-13T00:00:00.000Z',
    'Freight': 45.03,
    'ShipName': 'Que Delícia',
    'ShipAddress': 'Rua da Panificadora, 12',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
},
{
    'OrderID': 10380,
    'CustomerID': 'HUNGO',
    'OrderDate': '1996-12-12T00:00:00.000Z',
    'ShippedDate': '1997-01-16T00:00:00.000Z',
    'Freight': 35.03,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
},
{
    'OrderID': 10381,
    'CustomerID': 'LILAS',
    'OrderDate': '1996-12-12T00:00:00.000Z',
    'ShippedDate': '1996-12-13T00:00:00.000Z',
    'Freight': 7.99,
    'ShipName': 'LILA-Supermercado',
    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
},
{
    'OrderID': 10382,
    'CustomerID': 'ERNSH',
    'OrderDate': '1996-12-13T00:00:00.000Z',
    'ShippedDate': '1996-12-16T00:00:00.000Z',
    'Freight': 94.77,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
},
{
    'OrderID': 10383,
    'CustomerID': 'AROUT',
    'OrderDate': '1996-12-16T00:00:00.000Z',
    'ShippedDate': '1996-12-18T00:00:00.000Z',
    'Freight': 34.24,
    'ShipName': 'Around the Horn',
    'ShipAddress': 'Brook Farm Stratford St. Mary',
    'ShipCity': 'Colchester',

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'ShipRegion': 'Essex',
'ShipCountry': 'UK'
},
{
  'OrderID': 10384,
  'CustomerID': 'BERGS',
  'OrderDate': '1996-12-16T00:00:00.000Z',
  'ShippedDate': '1996-12-20T00:00:00.000Z',
  'Freight': 168.64,
  'ShipName': 'Berglunds snabbköp',
  'ShipAddress': 'Berguvsvägen 8',
  'ShipCity': 'Luleå',
  'ShipRegion': null,
  'ShipCountry': 'Sweden'
},
{
  'OrderID': 10385,
  'CustomerID': 'SPLIR',
  'OrderDate': '1996-12-17T00:00:00.000Z',
  'ShippedDate': '1996-12-23T00:00:00.000Z',
  'Freight': 30.96,
  'ShipName': 'Split Rail Beer & Ale',
  'ShipAddress': 'P.O. Box 555',
  'ShipCity': 'Lander',
  'ShipRegion': 'WY',
  'ShipCountry': 'USA'
},
{
  'OrderID': 10386,
  'CustomerID': 'FAMIA',
  'OrderDate': '1996-12-18T00:00:00.000Z',
  'ShippedDate': '1996-12-25T00:00:00.000Z',
  'Freight': 13.99,
  'ShipName': 'Familia Arquibaldo',
  'ShipAddress': 'Rua Orós, 92',
  'ShipCity': 'Sao Paulo',
  'ShipRegion': 'SP',
  'ShipCountry': 'Brazil'
},
{
  'OrderID': 10387,
  'CustomerID': 'SANTG',
  'OrderDate': '1996-12-18T00:00:00.000Z',
  'ShippedDate': '1996-12-20T00:00:00.000Z',
  'Freight': 93.63,
  'ShipName': 'Santé Gourmet',
  'ShipAddress': 'Erling Skakkes gate 78',
  'ShipCity': 'Stavern',
  'ShipRegion': null,
  'ShipCountry': 'Norway'
},
{
  'OrderID': 10388,
  'CustomerID': 'SEVES',
  'OrderDate': '1996-12-19T00:00:00.000Z',
  'ShippedDate': '1996-12-20T00:00:00.000Z',
  'Freight': 34.86,
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        'ShipName': 'Seven Seas Imports',
        'ShipAddress': '90 Wadhurst Rd.',
        'ShipCity': 'London',
        'ShipRegion': null,
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10389,
        'CustomerID': 'BOTTM',
        'OrderDate': '1996-12-20T00:00:00.000Z',
        'ShippedDate': '1996-12-24T00:00:00.000Z',
        'Freight': 47.42,
        'ShipName': 'Bottom-Dollar Markets',
        'ShipAddress': '23 Tsawassen Blvd.',
        'ShipCity': 'Tsawassen',
        'ShipRegion': 'BC',
        'ShipCountry': 'Canada'
    },
    {
        'OrderID': 10390,
        'CustomerID': 'ERNSH',
        'OrderDate': '1996-12-23T00:00:00.000Z',
        'ShippedDate': '1996-12-26T00:00:00.000Z',
        'Freight': 126.38,
        'ShipName': 'Ernst Handel',
        'ShipAddress': 'Kirchgasse 6',
        'ShipCity': 'Graz',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
        'OrderID': 10391,
        'CustomerID': 'DRACD',
        'OrderDate': '1996-12-23T00:00:00.000Z',
        'ShippedDate': '1996-12-31T00:00:00.000Z',
        'Freight': 5.45,
        'ShipName': 'Drachenblut Delikatessen',
        'ShipAddress': 'Walserweg 21',
        'ShipCity': 'Aachen',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10392,
        'CustomerID': 'PICCO',
        'OrderDate': '1996-12-24T00:00:00.000Z',
        'ShippedDate': '1997-01-01T00:00:00.000Z',
        'Freight': 122.46,
        'ShipName': 'Piccolo und mehr',
        'ShipAddress': 'Geislweg 14',
        'ShipCity': 'Salzburg',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
        'OrderID': 10393,
        'CustomerID': 'SAVEA',

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    'OrderDate': '1996-12-25T00:00:00.000Z',
    'ShippedDate': '1997-01-03T00:00:00.000Z',
    'Freight': 126.56,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10394,
    'CustomerID': 'HUNGC',
    'OrderDate': '1996-12-25T00:00:00.000Z',
    'ShippedDate': '1997-01-03T00:00:00.000Z',
    'Freight': 30.34,
    'ShipName': 'Hungry Coyote Import Store',
    'ShipAddress': 'City Center Plaza 516 Main St.',
    'ShipCity': 'Elgin',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10395,
    'CustomerID': 'HILAA',
    'OrderDate': '1996-12-26T00:00:00.000Z',
    'ShippedDate': '1997-01-03T00:00:00.000Z',
    'Freight': 184.41,
    'ShipName': 'HILARION-Abastos',
    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10396,
    'CustomerID': 'FRANK',
    'OrderDate': '1996-12-27T00:00:00.000Z',
    'ShippedDate': '1997-01-06T00:00:00.000Z',
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    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
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    'ShippedDate': '1997-01-02T00:00:00.000Z',
    'Freight': 60.26,
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    'ShipAddress': 'Estrada da saúde n. 58',
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    'ShipRegion': null,
    'ShipCountry': 'Portugal'
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  'Freight': 89.16,
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  'ShipAddress': '187 Suffolk Ln.',
  'ShipCity': 'Boise',
  'ShipRegion': 'ID',
  'ShipCountry': 'USA'
},
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  'CustomerID': 'VAFFE',
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  'ShippedDate': '1997-01-08T00:00:00.000Z',
  'Freight': 27.36,
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  'ShipAddress': 'Smagsloget 45',
  'ShipCity': 'Århus',
  'ShipRegion': null,
  'ShipCountry': 'Denmark'
},
{
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  'CustomerID': 'EASTC',
  'OrderDate': '1997-01-01T00:00:00.000Z',
  'ShippedDate': '1997-01-16T00:00:00.000Z',
  'Freight': 83.93,
  'ShipName': 'Eastern Connection',
  'ShipAddress': '35 King George',
  'ShipCity': 'London',
  'ShipRegion': null,
  'ShipCountry': 'UK'
},
{
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  'CustomerID': 'RATTC',
  'OrderDate': '1997-01-01T00:00:00.000Z',
  'ShippedDate': '1997-01-10T00:00:00.000Z',
  'Freight': 12.51,
  'ShipName': 'Rattlesnake Canyon Grocery',
  'ShipAddress': '2817 Milton Dr.',
  'ShipCity': 'Albuquerque',
  'ShipRegion': 'NM',
  'ShipCountry': 'USA'
},
{
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  'CustomerID': 'ERNSH',
  'OrderDate': '1997-01-02T00:00:00.000Z',
  'ShippedDate': '1997-01-10T00:00:00.000Z',
  'Freight': 67.88,
  'ShipName': 'Ernst Handel',
  'ShipAddress': 'Kirchgasse 6',
  'ShipCity': 'Graz',

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    },
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        'ShippedDate': '1997-01-09T00:00:00.000Z',
        'Freight': 73.79,
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        'ShipAddress': 'Kirchgasse 6',
        'ShipCity': 'Graz',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
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        'ShippedDate': '1997-01-08T00:00:00.000Z',
        'Freight': 155.97,
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        'ShipAddress': 'Via Ludovico il Moro 22',
        'ShipCity': 'Bergamo',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
    {
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        'CustomerID': 'LINOD',
        'OrderDate': '1997-01-06T00:00:00.000Z',
        'ShippedDate': '1997-01-22T00:00:00.000Z',
        'Freight': 34.82,
        'ShipName': 'LINO-Delicateses',
        'ShipAddress': 'Ave. 5 de Mayo Porlamar',
        'ShipCity': 'I. de Margarita',
        'ShipRegion': 'Nueva Esparta',
        'ShipCountry': 'Venezuela'
    },
    {
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        'CustomerID': 'QUEEN',
        'OrderDate': '1997-01-07T00:00:00.000Z',
        'ShippedDate': '1997-01-13T00:00:00.000Z',
        'Freight': 108.04,
        'ShipName': 'Queen Cozinha',
        'ShipAddress': 'Alameda dos Canários, 891',
        'ShipCity': 'Sao Paulo',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10407,
        'CustomerID': 'OTTIK',
        'OrderDate': '1997-01-07T00:00:00.000Z',
        'ShippedDate': '1997-01-30T00:00:00.000Z',
        'Freight': 91.48,

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    'ShipAddress': 'Mehrheimerstr. 369',
    'ShipCity': 'Köln',
    'ShipRegion': null,
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  },
  {
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    'CustomerID': 'FOLIG',
    'OrderDate': '1997-01-08T00:00:00.000Z',
    'ShippedDate': '1997-01-14T00:00:00.000Z',
    'Freight': 11.26,
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    'ShipAddress': '184, chaussée de Tournai',
    'ShipCity': 'Lille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
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    'Freight': 29.83,
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    'ShipAddress': 'Ing. Gustavo Moncada 8585 Piso 20-A',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },
  {
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    'Freight': 2.4,
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    'ShipAddress': '23 Tsawassen Blvd.',
    'ShipCity': 'Tsawassen',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
  {
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    'CustomerID': 'BOTTM',
    'OrderDate': '1997-01-10T00:00:00.000Z',
    'ShippedDate': '1997-01-21T00:00:00.000Z',
    'Freight': 23.65,
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    'ShipAddress': '23 Tsawassen Blvd.',
    'ShipCity': 'Tsawassen',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10412,
    'CustomerID': 'WARTH',

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    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
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    'CustomerID': 'LAMAI',
    'OrderDate': '1997-01-14T00:00:00.000Z',
    'ShippedDate': '1997-01-16T00:00:00.000Z',
    'Freight': 95.66,
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    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
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    'CustomerID': 'FAMIA',
    'OrderDate': '1997-01-14T00:00:00.000Z',
    'ShippedDate': '1997-01-17T00:00:00.000Z',
    'Freight': 21.48,
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    'ShipAddress': 'Rua Orós, 92',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10415,
    'CustomerID': 'HUNGC',
    'OrderDate': '1997-01-15T00:00:00.000Z',
    'ShippedDate': '1997-01-24T00:00:00.000Z',
    'Freight': 0.2,
    'ShipName': 'Hungry Coyote Import Store',
    'ShipAddress': 'City Center Plaza 516 Main St.',
    'ShipCity': 'Elgin',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10416,
    'CustomerID': 'WARTH',
    'OrderDate': '1997-01-16T00:00:00.000Z',
    'ShippedDate': '1997-01-27T00:00:00.000Z',
    'Freight': 22.72,
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    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },

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  'Freight': 70.29,
  'ShipName': 'Simons bistro',
  'ShipAddress': 'Vinbæltet 34',
  'ShipCity': 'Kobenhavn',
  'ShipRegion': null,
  'ShipCountry': 'Denmark'
},
{
  'OrderID': 10418,
  'CustomerID': 'QUICK',
  'OrderDate': '1997-01-17T00:00:00.000Z',
  'ShippedDate': '1997-01-24T00:00:00.000Z',
  'Freight': 17.55,
  'ShipName': 'QUICK-Stop',
  'ShipAddress': 'Taucherstraße 10',
  'ShipCity': 'Cunewalde',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10419,
  'CustomerID': 'RICSU',
  'OrderDate': '1997-01-20T00:00:00.000Z',
  'ShippedDate': '1997-01-30T00:00:00.000Z',
  'Freight': 137.35,
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  'ShipAddress': 'Starenweg 5',
  'ShipCity': 'Genève',
  'ShipRegion': null,
  'ShipCountry': 'Switzerland'
},
{
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  'CustomerID': 'WELLI',
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  'Freight': 44.12,
  'ShipName': 'Wellington Importadora',
  'ShipAddress': 'Rua do Mercado, 12',
  'ShipCity': 'Resende',
  'ShipRegion': 'SP',
  'ShipCountry': 'Brazil'
},
{
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  'CustomerID': 'QUEDE',
  'OrderDate': '1997-01-21T00:00:00.000Z',
  'ShippedDate': '1997-01-27T00:00:00.000Z',
  'Freight': 99.23,
  'ShipName': 'Que Delícia',
  'ShipAddress': 'Rua da Panificadora, 12',
  'ShipCity': 'Rio de Janeiro',

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        'ShipCountry': 'Brazil'
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        'ShippedDate': '1997-01-31T00:00:00.000Z',
        'Freight': 3.02,
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        'ShipAddress': 'Via Monte Bianco 34',
        'ShipCity': 'Torino',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
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        'CustomerID': 'GOURL',
        'OrderDate': '1997-01-23T00:00:00.000Z',
        'ShippedDate': '1997-02-24T00:00:00.000Z',
        'Freight': 24.5,
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        'ShipAddress': 'Av. Brasil, 442',
        'ShipCity': 'Campinas',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
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        'CustomerID': 'MEREPI',
        'OrderDate': '1997-01-23T00:00:00.000Z',
        'ShippedDate': '1997-01-27T00:00:00.000Z',
        'Freight': 370.61,
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        'ShipAddress': '43 rue St. Laurent',
        'ShipCity': 'Montréal',
        'ShipRegion': 'Québec',
        'ShipCountry': 'Canada'
    },
    {
        'OrderID': 10425,
        'CustomerID': 'LAMAI',
        'OrderDate': '1997-01-24T00:00:00.000Z',
        'ShippedDate': '1997-02-14T00:00:00.000Z',
        'Freight': 7.93,
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        'ShipAddress': '1 rue Alsace-Lorraine',
        'ShipCity': 'Toulouse',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
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        'CustomerID': 'GALED',
        'OrderDate': '1997-01-27T00:00:00.000Z',
        'ShippedDate': '1997-02-06T00:00:00.000Z',
        'Freight': 18.69,

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    'ShipCity': 'Barcelona',
    'ShipRegion': null,
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  },
  {
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    'CustomerID': 'PICCO',
    'OrderDate': '1997-01-27T00:00:00.000Z',
    'ShippedDate': '1997-03-03T00:00:00.000Z',
    'Freight': 31.29,
    'ShipName': 'Piccolo und mehr',
    'ShipAddress': 'Geislweg 14',
    'ShipCity': 'Salzburg',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
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    'OrderID': 10428,
    'CustomerID': 'REGGC',
    'OrderDate': '1997-01-28T00:00:00.000Z',
    'ShippedDate': '1997-02-04T00:00:00.000Z',
    'Freight': 11.09,
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    'ShipAddress': 'Strada Provinciale 124',
    'ShipCity': 'Reggio Emilia',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 10429,
    'CustomerID': 'HUNGO',
    'OrderDate': '1997-01-29T00:00:00.000Z',
    'ShippedDate': '1997-02-07T00:00:00.000Z',
    'Freight': 56.63,
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    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
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    'CustomerID': 'ERNSH',
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    'ShippedDate': '1997-02-03T00:00:00.000Z',
    'Freight': 458.78,
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    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
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    'ShipAddress': '23 Tsawassen Blvd.',
    'ShipCity': 'Tsawassen',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
  {
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    'CustomerID': 'SPLIR',
    'OrderDate': '1997-01-31T00:00:00.000Z',
    'ShippedDate': '1997-02-07T00:00:00.000Z',
    'Freight': 4.34,
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    'ShipAddress': 'P.O. Box 555',
    'ShipCity': 'Lander',
    'ShipRegion': 'WY',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'PRINI',
    'OrderDate': '1997-02-03T00:00:00.000Z',
    'ShippedDate': '1997-03-04T00:00:00.000Z',
    'Freight': 73.83,
    'ShipName': 'Princesa Isabel Vinhos',
    'ShipAddress': 'Estrada da saúde n. 58',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {
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    'CustomerID': 'FOLKO',
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    'ShippedDate': '1997-02-13T00:00:00.000Z',
    'Freight': 17.92,
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    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
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    'CustomerID': 'CONSH',
    'OrderDate': '1997-02-04T00:00:00.000Z',
    'ShippedDate': '1997-02-07T00:00:00.000Z',
    'Freight': 9.21,
    'ShipName': 'Consolidated Holdings',
    'ShipAddress': 'Berkeley Gardens 12 Brewery',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },

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  'OrderDate': '1997-02-05T00:00:00.000Z',
  'ShippedDate': '1997-02-11T00:00:00.000Z',
  'Freight': 156.66,
  'ShipName': 'Blondel père et fils',
  'ShipAddress': '24, place Kléber',
  'ShipCity': 'Strasbourg',
  'ShipRegion': null,
  'ShipCountry': 'France'
},
{
  'OrderID': 10437,
  'CustomerID': 'WARTH',
  'OrderDate': '1997-02-05T00:00:00.000Z',
  'ShippedDate': '1997-02-12T00:00:00.000Z',
  'Freight': 19.97,
  'ShipName': 'Wartian Herkku',
  'ShipAddress': 'Torikatu 38',
  'ShipCity': 'Oulu',
  'ShipRegion': null,
  'ShipCountry': 'Finland'
},
{
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  'CustomerID': 'TOMSP',
  'OrderDate': '1997-02-06T00:00:00.000Z',
  'ShippedDate': '1997-02-14T00:00:00.000Z',
  'Freight': 8.24,
  'ShipName': 'Toms Spezialitäten',
  'ShipAddress': 'Luisenstr. 48',
  'ShipCity': 'Münster',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
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  'CustomerID': 'MEREP',
  'OrderDate': '1997-02-07T00:00:00.000Z',
  'ShippedDate': '1997-02-10T00:00:00.000Z',
  'Freight': 4.07,
  'ShipName': 'Mère Paillard',
  'ShipAddress': '43 rue St. Laurent',
  'ShipCity': 'Montréal',
  'ShipRegion': 'Québec',
  'ShipCountry': 'Canada'
},
{
  'OrderID': 10440,
  'CustomerID': 'SAVEA',
  'OrderDate': '1997-02-10T00:00:00.000Z',
  'ShippedDate': '1997-02-28T00:00:00.000Z',
  'Freight': 86.53,
  'ShipName': 'Save-a-lot Markets',
  'ShipAddress': '187 Suffolk Ln.',
  'ShipCity': 'Boise',
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'ShipRegion': 'ID',
'ShipCountry': 'USA'
},
{
  'OrderID': 10441,
  'CustomerID': 'OLDWO',
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  'ShippedDate': '1997-03-14T00:00:00.000Z',
  'Freight': 73.02,
  'ShipName': 'Old World Delicatessen',
  'ShipAddress': '2743 Bering St.',
  'ShipCity': 'Anchorage',
  'ShipRegion': 'AK',
  'ShipCountry': 'USA'
},
{
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  'CustomerID': 'ERNSH',
  'OrderDate': '1997-02-11T00:00:00.000Z',
  'ShippedDate': '1997-02-18T00:00:00.000Z',
  'Freight': 47.94,
  'ShipName': 'Ernst Handel',
  'ShipAddress': 'Kirchgasse 6',
  'ShipCity': 'Graz',
  'ShipRegion': null,
  'ShipCountry': 'Austria'
},
{
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  'CustomerID': 'REGGC',
  'OrderDate': '1997-02-12T00:00:00.000Z',
  'ShippedDate': '1997-02-14T00:00:00.000Z',
  'Freight': 13.95,
  'ShipName': 'Reggiani Caseifici',
  'ShipAddress': 'Strada Provinciale 124',
  'ShipCity': 'Reggio Emilia',
  'ShipRegion': null,
  'ShipCountry': 'Italy'
},
{
  'OrderID': 10444,
  'CustomerID': 'BERGS',
  'OrderDate': '1997-02-12T00:00:00.000Z',
  'ShippedDate': '1997-02-21T00:00:00.000Z',
  'Freight': 3.5,
  'ShipName': 'Berglunds snabbköp',
  'ShipAddress': 'Berguvsvägen 8',
  'ShipCity': 'Luleå',
  'ShipRegion': null,
  'ShipCountry': 'Sweden'
},
{
  'OrderID': 10445,
  'CustomerID': 'BERGS',
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  'ShippedDate': '1997-02-20T00:00:00.000Z',
  'Freight': 9.3,
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    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10446,
    'CustomerID': 'TOMSP',
    'OrderDate': '1997-02-14T00:00:00.000Z',
    'ShippedDate': '1997-02-19T00:00:00.000Z',
    'Freight': 14.68,
    'ShipName': 'Toms Spezialitäten',
    'ShipAddress': 'Luisenstr. 48',
    'ShipCity': 'Münster',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10447,
    'CustomerID': 'RICAR',
    'OrderDate': '1997-02-14T00:00:00.000Z',
    'ShippedDate': '1997-03-07T00:00:00.000Z',
    'Freight': 68.66,
    'ShipName': 'Ricardo Adocicados',
    'ShipAddress': 'Av. Copacabana, 267',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10448,
    'CustomerID': 'RANCH',
    'OrderDate': '1997-02-17T00:00:00.000Z',
    'ShippedDate': '1997-02-24T00:00:00.000Z',
    'Freight': 38.82,
    'ShipName': 'Rancho grande',
    'ShipAddress': 'Av. del Libertador 900',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },
  {
    'OrderID': 10449,
    'CustomerID': 'BLONP',
    'OrderDate': '1997-02-18T00:00:00.000Z',
    'ShippedDate': '1997-02-27T00:00:00.000Z',
    'Freight': 53.3,
    'ShipName': 'Blondel père et fils',
    'ShipAddress': '24, place Kléber',
    'ShipCity': 'Strasbourg',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10450,
    'CustomerID': 'VICTE',

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    'OrderDate': '1997-02-19T00:00:00.000Z',
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    'Freight': 7.23,
    'ShipName': 'Victuailles en stock',
    'ShipAddress': '2, rue du Commerce',
    'ShipCity': 'Lyon',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10451,
    'CustomerID': 'QUICK',
    'OrderDate': '1997-02-19T00:00:00.000Z',
    'ShippedDate': '1997-03-12T00:00:00.000Z',
    'Freight': 189.09,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10452,
    'CustomerID': 'SAVEA',
    'OrderDate': '1997-02-20T00:00:00.000Z',
    'ShippedDate': '1997-02-26T00:00:00.000Z',
    'Freight': 140.26,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10453,
    'CustomerID': 'AROUT',
    'OrderDate': '1997-02-21T00:00:00.000Z',
    'ShippedDate': '1997-02-26T00:00:00.000Z',
    'Freight': 25.36,
    'ShipName': 'Around the Horn',
    'ShipAddress': 'Brook Farm Stratford St. Mary',
    'ShipCity': 'Colchester',
    'ShipRegion': 'Essex',
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10454,
    'CustomerID': 'LAMAI',
    'OrderDate': '1997-02-21T00:00:00.000Z',
    'ShippedDate': '1997-02-25T00:00:00.000Z',
    'Freight': 2.74,
    'ShipName': 'La maison d\'Asie',
    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },

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{
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  'CustomerID': 'WARTH',
  'OrderDate': '1997-02-24T00:00:00.000Z',
  'ShippedDate': '1997-03-03T00:00:00.000Z',
  'Freight': 180.45,
  'ShipName': 'Wartian Herkku',
  'ShipAddress': 'Torikatu 38',
  'ShipCity': 'Oulu',
  'ShipRegion': null,
  'ShipCountry': 'Finland'
},
{
  'OrderID': 10456,
  'CustomerID': 'KOENE',
  'OrderDate': '1997-02-25T00:00:00.000Z',
  'ShippedDate': '1997-02-28T00:00:00.000Z',
  'Freight': 8.12,
  'ShipName': 'Königlich Essen',
  'ShipAddress': 'Maubelstr. 90',
  'ShipCity': 'Brandenburg',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10457,
  'CustomerID': 'KOENE',
  'OrderDate': '1997-02-25T00:00:00.000Z',
  'ShippedDate': '1997-03-03T00:00:00.000Z',
  'Freight': 11.57,
  'ShipName': 'Königlich Essen',
  'ShipAddress': 'Maubelstr. 90',
  'ShipCity': 'Brandenburg',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10458,
  'CustomerID': 'SUPRD',
  'OrderDate': '1997-02-26T00:00:00.000Z',
  'ShippedDate': '1997-03-04T00:00:00.000Z',
  'Freight': 147.06,
  'ShipName': 'Suprêmes délices',
  'ShipAddress': 'Boulevard Tirou, 255',
  'ShipCity': 'Charleroi',
  'ShipRegion': null,
  'ShipCountry': 'Belgium'
},
{
  'OrderID': 10459,
  'CustomerID': 'VICTE',
  'OrderDate': '1997-02-27T00:00:00.000Z',
  'ShippedDate': '1997-02-28T00:00:00.000Z',
  'Freight': 25.09,
  'ShipName': 'Victuailles en stock',
  'ShipAddress': '2, rue du Commerce',
  'ShipCity': 'Lyon',

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        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10460,
        'CustomerID': 'FOLKO',
        'OrderDate': '1997-02-28T00:00:00.000Z',
        'ShippedDate': '1997-03-03T00:00:00.000Z',
        'Freight': 16.27,
        'ShipName': 'Folk och fä HB',
        'ShipAddress': 'Åkergatan 24',
        'ShipCity': 'Bräcke',
        'ShipRegion': null,
        'ShipCountry': 'Sweden'
    },
    {
        'OrderID': 10461,
        'CustomerID': 'LILAS',
        'OrderDate': '1997-02-28T00:00:00.000Z',
        'ShippedDate': '1997-03-05T00:00:00.000Z',
        'Freight': 148.61,
        'ShipName': 'LILA-Supermercado',
        'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
        'ShipCity': 'Barquisimeto',
        'ShipRegion': 'Lara',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 10462,
        'CustomerID': 'CONSH',
        'OrderDate': '1997-03-03T00:00:00.000Z',
        'ShippedDate': '1997-03-18T00:00:00.000Z',
        'Freight': 6.17,
        'ShipName': 'Consolidated Holdings',
        'ShipAddress': 'Berkeley Gardens 12 Brewery',
        'ShipCity': 'London',
        'ShipRegion': null,
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10463,
        'CustomerID': 'SUPRD',
        'OrderDate': '1997-03-04T00:00:00.000Z',
        'ShippedDate': '1997-03-06T00:00:00.000Z',
        'Freight': 14.78,
        'ShipName': 'Suprêmes délices',
        'ShipAddress': 'Boulevard Tirou, 255',
        'ShipCity': 'Charleroi',
        'ShipRegion': null,
        'ShipCountry': 'Belgium'
    },
    {
        'OrderID': 10464,
        'CustomerID': 'FURIB',
        'OrderDate': '1997-03-04T00:00:00.000Z',
        'ShippedDate': '1997-03-14T00:00:00.000Z',
        'Freight': 89,

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    'ShipName': 'Furia Bacalhau e Frutos do Mar',
    'ShipAddress': 'Jardim das rosas n. 32',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {
    'OrderID': 10465,
    'CustomerID': 'VAFFE',
    'OrderDate': '1997-03-05T00:00:00.000Z',
    'ShippedDate': '1997-03-14T00:00:00.000Z',
    'Freight': 145.04,
    'ShipName': 'Vaffeljernet',
    'ShipAddress': 'Smagsloget 45',
    'ShipCity': 'Århus',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
    'OrderID': 10466,
    'CustomerID': 'COMMI',
    'OrderDate': '1997-03-06T00:00:00.000Z',
    'ShippedDate': '1997-03-13T00:00:00.000Z',
    'Freight': 11.93,
    'ShipName': 'Comércio Mineiro',
    'ShipAddress': 'Av. dos Lusíadas, 23',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10467,
    'CustomerID': 'MAGAA',
    'OrderDate': '1997-03-06T00:00:00.000Z',
    'ShippedDate': '1997-03-11T00:00:00.000Z',
    'Freight': 4.93,
    'ShipName': 'Magazzini Alimentari Riuniti',
    'ShipAddress': 'Via Ludovico il Moro 22',
    'ShipCity': 'Bergamo',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 10468,
    'CustomerID': 'KOENE',
    'OrderDate': '1997-03-07T00:00:00.000Z',
    'ShippedDate': '1997-03-12T00:00:00.000Z',
    'Freight': 44.12,
    'ShipName': 'Königlich Essen',
    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10469,
    'CustomerID': 'WHITC',

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    'OrderDate': '1997-03-10T00:00:00.000Z',
    'ShippedDate': '1997-03-14T00:00:00.000Z',
    'Freight': 60.18,
    'ShipName': 'White Clover Markets',
    'ShipAddress': '1029 - 12th Ave. S.',
    'ShipCity': 'Seattle',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10470,
    'CustomerID': 'BONAP',
    'OrderDate': '1997-03-11T00:00:00.000Z',
    'ShippedDate': '1997-03-14T00:00:00.000Z',
    'Freight': 64.56,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10471,
    'CustomerID': 'BSBEV',
    'OrderDate': '1997-03-11T00:00:00.000Z',
    'ShippedDate': '1997-03-18T00:00:00.000Z',
    'Freight': 45.59,
    'ShipName': 'B\'s Beverages',
    'ShipAddress': 'Fauntleroy Circus',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10472,
    'CustomerID': 'SEVES',
    'OrderDate': '1997-03-12T00:00:00.000Z',
    'ShippedDate': '1997-03-19T00:00:00.000Z',
    'Freight': 4.2,
    'ShipName': 'Seven Seas Imports',
    'ShipAddress': '90 Wadhurst Rd.',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10473,
    'CustomerID': 'ISLAT',
    'OrderDate': '1997-03-13T00:00:00.000Z',
    'ShippedDate': '1997-03-21T00:00:00.000Z',
    'Freight': 16.37,
    'ShipName': 'Island Trading',
    'ShipAddress': 'Garden House Crowther Way',
    'ShipCity': 'Cowes',
    'ShipRegion': 'Isle of Wight',
    'ShipCountry': 'UK'
  }
},

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{
  'OrderID': 10474,
  'CustomerID': 'PERIC',
  'OrderDate': '1997-03-13T00:00:00.000Z',
  'ShippedDate': '1997-03-21T00:00:00.000Z',
  'Freight': 83.49,
  'ShipName': 'Pericles Comidas clásicas',
  'ShipAddress': 'Calle Dr. Jorge Cash 321',
  'ShipCity': 'México D.F.',
  'ShipRegion': null,
  'ShipCountry': 'Mexico'
},
{
  'OrderID': 10475,
  'CustomerID': 'SUPRD',
  'OrderDate': '1997-03-14T00:00:00.000Z',
  'ShippedDate': '1997-04-04T00:00:00.000Z',
  'Freight': 68.52,
  'ShipName': 'Suprêmes délices',
  'ShipAddress': 'Boulevard Tirou, 255',
  'ShipCity': 'Charleroi',
  'ShipRegion': null,
  'ShipCountry': 'Belgium'
},
{
  'OrderID': 10476,
  'CustomerID': 'HILAA',
  'OrderDate': '1997-03-17T00:00:00.000Z',
  'ShippedDate': '1997-03-24T00:00:00.000Z',
  'Freight': 4.41,
  'ShipName': 'HILARION-Abastos',
  'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
  'ShipCity': 'San Cristóbal',
  'ShipRegion': 'Táchira',
  'ShipCountry': 'Venezuela'
},
{
  'OrderID': 10477,
  'CustomerID': 'PRINI',
  'OrderDate': '1997-03-17T00:00:00.000Z',
  'ShippedDate': '1997-03-25T00:00:00.000Z',
  'Freight': 13.02,
  'ShipName': 'Princesa Isabel Vinhos',
  'ShipAddress': 'Estrada da saúde n. 58',
  'ShipCity': 'Lisboa',
  'ShipRegion': null,
  'ShipCountry': 'Portugal'
},
{
  'OrderID': 10478,
  'CustomerID': 'VICTE',
  'OrderDate': '1997-03-18T00:00:00.000Z',
  'ShippedDate': '1997-03-26T00:00:00.000Z',
  'Freight': 4.81,
  'ShipName': 'Victuailles en stock',
  'ShipAddress': '2, rue du Commerce',
  'ShipCity': 'Lyon',

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        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10479,
        'CustomerID': 'RATTC',
        'OrderDate': '1997-03-19T00:00:00.000Z',
        'ShippedDate': '1997-03-21T00:00:00.000Z',
        'Freight': 708.95,
        'ShipName': 'Rattlesnake Canyon Grocery',
        'ShipAddress': '2817 Milton Dr.',
        'ShipCity': 'Albuquerque',
        'ShipRegion': 'NM',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10480,
        'CustomerID': 'FOLIG',
        'OrderDate': '1997-03-20T00:00:00.000Z',
        'ShippedDate': '1997-03-24T00:00:00.000Z',
        'Freight': 1.35,
        'ShipName': 'Folies gourmandes',
        'ShipAddress': '184, chaussée de Tournai',
        'ShipCity': 'Lille',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10481,
        'CustomerID': 'RICAR',
        'OrderDate': '1997-03-20T00:00:00.000Z',
        'ShippedDate': '1997-03-25T00:00:00.000Z',
        'Freight': 64.33,
        'ShipName': 'Ricardo Adocicados',
        'ShipAddress': 'Av. Copacabana, 267',
        'ShipCity': 'Rio de Janeiro',
        'ShipRegion': 'RJ',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10482,
        'CustomerID': 'LAZYK',
        'OrderDate': '1997-03-21T00:00:00.000Z',
        'ShippedDate': '1997-04-10T00:00:00.000Z',
        'Freight': 7.48,
        'ShipName': 'Lazy K Kountry Store',
        'ShipAddress': '12 Orchestra Terrace',
        'ShipCity': 'Walla Walla',
        'ShipRegion': 'WA',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10483,
        'CustomerID': 'WHITC',
        'OrderDate': '1997-03-24T00:00:00.000Z',
        'ShippedDate': '1997-04-25T00:00:00.000Z',
        'Freight': 15.28,

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    'ShipName': 'White Clover Markets',
    'ShipAddress': '1029 - 12th Ave. S.',
    'ShipCity': 'Seattle',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10484,
    'CustomerID': 'BSBEV',
    'OrderDate': '1997-03-24T00:00:00.000Z',
    'ShippedDate': '1997-04-01T00:00:00.000Z',
    'Freight': 6.88,
    'ShipName': 'B\'s Beverages',
    'ShipAddress': 'Fauntleroy Circus',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10485,
    'CustomerID': 'LINOD',
    'OrderDate': '1997-03-25T00:00:00.000Z',
    'ShippedDate': '1997-03-31T00:00:00.000Z',
    'Freight': 64.45,
    'ShipName': 'LINO-Delicateses',
    'ShipAddress': 'Ave. 5 de Mayo Porlamar',
    'ShipCity': 'I. de Margarita',
    'ShipRegion': 'Nueva Esparta',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10486,
    'CustomerID': 'HILAA',
    'OrderDate': '1997-03-26T00:00:00.000Z',
    'ShippedDate': '1997-04-02T00:00:00.000Z',
    'Freight': 30.53,
    'ShipName': 'HILARION-Abastos',
    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10487,
    'CustomerID': 'QUEEN',
    'OrderDate': '1997-03-26T00:00:00.000Z',
    'ShippedDate': '1997-03-28T00:00:00.000Z',
    'Freight': 71.07,
    'ShipName': 'Queen Cozinha',
    'ShipAddress': 'Alameda dos Canários, 891',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10488,
    'CustomerID': 'FRANK',

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    'OrderDate': '1997-03-27T00:00:00.000Z',
    'ShippedDate': '1997-04-02T00:00:00.000Z',
    'Freight': 4.93,
    'ShipName': 'Frankenversand',
    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10489,
    'CustomerID': 'PICCO',
    'OrderDate': '1997-03-28T00:00:00.000Z',
    'ShippedDate': '1997-04-09T00:00:00.000Z',
    'Freight': 5.29,
    'ShipName': 'Piccolo und mehr',
    'ShipAddress': 'Geislweg 14',
    'ShipCity': 'Salzburg',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10490,
    'CustomerID': 'HILAA',
    'OrderDate': '1997-03-31T00:00:00.000Z',
    'ShippedDate': '1997-04-03T00:00:00.000Z',
    'Freight': 210.19,
    'ShipName': 'HILARION-Abastos',
    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10491,
    'CustomerID': 'FURIB',
    'OrderDate': '1997-03-31T00:00:00.000Z',
    'ShippedDate': '1997-04-08T00:00:00.000Z',
    'Freight': 16.96,
    'ShipName': 'Furia Bacalhau e Frutos do Mar',
    'ShipAddress': 'Jardim das rosas n. 32',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {
    'OrderID': 10492,
    'CustomerID': 'BOTTM',
    'OrderDate': '1997-04-01T00:00:00.000Z',
    'ShippedDate': '1997-04-11T00:00:00.000Z',
    'Freight': 62.89,
    'ShipName': 'Bottom-Dollar Markets',
    'ShipAddress': '23 Tsawassen Blvd.',
    'ShipCity': 'Tsawassen',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },

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{
  'OrderID': 10493,
  'CustomerID': 'LAMAI',
  'OrderDate': '1997-04-02T00:00:00.000Z',
  'ShippedDate': '1997-04-10T00:00:00.000Z',
  'Freight': 10.64,
  'ShipName': 'La maison d\'Asie',
  'ShipAddress': '1 rue Alsace-Lorraine',
  'ShipCity': 'Toulouse',
  'ShipRegion': null,
  'ShipCountry': 'France'
},
{
  'OrderID': 10494,
  'CustomerID': 'COMMI',
  'OrderDate': '1997-04-02T00:00:00.000Z',
  'ShippedDate': '1997-04-09T00:00:00.000Z',
  'Freight': 65.99,
  'ShipName': 'Comércio Mineiro',
  'ShipAddress': 'Av. dos Lusíadas, 23',
  'ShipCity': 'Sao Paulo',
  'ShipRegion': 'SP',
  'ShipCountry': 'Brazil'
},
{
  'OrderID': 10495,
  'CustomerID': 'LAUGB',
  'OrderDate': '1997-04-03T00:00:00.000Z',
  'ShippedDate': '1997-04-11T00:00:00.000Z',
  'Freight': 4.65,
  'ShipName': 'Laughing Bacchus Wine Cellars',
  'ShipAddress': '2319 Elm St.',
  'ShipCity': 'Vancouver',
  'ShipRegion': 'BC',
  'ShipCountry': 'Canada'
},
{
  'OrderID': 10496,
  'CustomerID': 'TRADH',
  'OrderDate': '1997-04-04T00:00:00.000Z',
  'ShippedDate': '1997-04-07T00:00:00.000Z',
  'Freight': 46.77,
  'ShipName': 'Tradição Hipermercados',
  'ShipAddress': 'Av. Inês de Castro, 414',
  'ShipCity': 'Sao Paulo',
  'ShipRegion': 'SP',
  'ShipCountry': 'Brazil'
},
{
  'OrderID': 10497,
  'CustomerID': 'LEHMS',
  'OrderDate': '1997-04-04T00:00:00.000Z',
  'ShippedDate': '1997-04-07T00:00:00.000Z',
  'Freight': 36.21,
  'ShipName': 'Lehmanns Marktstand',
  'ShipAddress': 'Magazinweg 7',
  'ShipCity': 'Frankfurt a.M.',

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        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10498,
        'CustomerID': 'HILAA',
        'OrderDate': '1997-04-07T00:00:00.000Z',
        'ShippedDate': '1997-04-11T00:00:00.000Z',
        'Freight': 29.75,
        'ShipName': 'HILARION-Abastos',
        'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
        'ShipCity': 'San Cristóbal',
        'ShipRegion': 'Táchira',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 10499,
        'CustomerID': 'LILAS',
        'OrderDate': '1997-04-08T00:00:00.000Z',
        'ShippedDate': '1997-04-16T00:00:00.000Z',
        'Freight': 102.02,
        'ShipName': 'LILA-Supermercado',
        'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
        'ShipCity': 'Barquisimeto',
        'ShipRegion': 'Lara',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 10500,
        'CustomerID': 'LAMAI',
        'OrderDate': '1997-04-09T00:00:00.000Z',
        'ShippedDate': '1997-04-17T00:00:00.000Z',
        'Freight': 42.68,
        'ShipName': 'La maison d\'Asie',
        'ShipAddress': '1 rue Alsace-Lorraine',
        'ShipCity': 'Toulouse',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10501,
        'CustomerID': 'BLAUS',
        'OrderDate': '1997-04-09T00:00:00.000Z',
        'ShippedDate': '1997-04-16T00:00:00.000Z',
        'Freight': 8.85,
        'ShipName': 'Blauer See Delikatessen',
        'ShipAddress': 'Forsterstr. 57',
        'ShipCity': 'Mannheim',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10502,
        'CustomerID': 'PERIC',
        'OrderDate': '1997-04-10T00:00:00.000Z',
        'ShippedDate': '1997-04-29T00:00:00.000Z',
        'Freight': 69.32,

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    'ShipName': 'Pericles Comidas clásicas',
    'ShipAddress': 'Calle Dr. Jorge Cash 321',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
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    'CustomerID': 'HUNGO',
    'OrderDate': '1997-04-11T00:00:00.000Z',
    'ShippedDate': '1997-04-16T00:00:00.000Z',
    'Freight': 16.74,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10504,
    'CustomerID': 'WHITC',
    'OrderDate': '1997-04-11T00:00:00.000Z',
    'ShippedDate': '1997-04-18T00:00:00.000Z',
    'Freight': 59.13,
    'ShipName': 'White Clover Markets',
    'ShipAddress': '1029 - 12th Ave. S.',
    'ShipCity': 'Seattle',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10505,
    'CustomerID': 'MEREP',
    'OrderDate': '1997-04-14T00:00:00.000Z',
    'ShippedDate': '1997-04-21T00:00:00.000Z',
    'Freight': 7.13,
    'ShipName': 'Mère Paillarde',
    'ShipAddress': '43 rue St. Laurent',
    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10506,
    'CustomerID': 'KOENE',
    'OrderDate': '1997-04-15T00:00:00.000Z',
    'ShippedDate': '1997-05-02T00:00:00.000Z',
    'Freight': 21.19,
    'ShipName': 'Königlich Essen',
    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10507,
    'CustomerID': 'ANTON',

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    'OrderDate': '1997-04-15T00:00:00.000Z',
    'ShippedDate': '1997-04-22T00:00:00.000Z',
    'Freight': 47.45,
    'ShipName': 'Antonio Moreno Taquería',
    'ShipAddress': 'Mataderos 2312',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10508,
    'CustomerID': 'OTTIK',
    'OrderDate': '1997-04-16T00:00:00.000Z',
    'ShippedDate': '1997-05-13T00:00:00.000Z',
    'Freight': 4.99,
    'ShipName': 'Ottilies Käseladen',
    'ShipAddress': 'Mehrheimerstr. 369',
    'ShipCity': 'Köln',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10509,
    'CustomerID': 'BLAUS',
    'OrderDate': '1997-04-17T00:00:00.000Z',
    'ShippedDate': '1997-04-29T00:00:00.000Z',
    'Freight': 0.15,
    'ShipName': 'Blauer See Delikatessen',
    'ShipAddress': 'Forsterstr. 57',
    'ShipCity': 'Mannheim',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10510,
    'CustomerID': 'SAVEA',
    'OrderDate': '1997-04-18T00:00:00.000Z',
    'ShippedDate': '1997-04-28T00:00:00.000Z',
    'Freight': 367.63,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10511,
    'CustomerID': 'BONAP',
    'OrderDate': '1997-04-18T00:00:00.000Z',
    'ShippedDate': '1997-04-21T00:00:00.000Z',
    'Freight': 350.64,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },

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{
    'OrderID': 10512,
    'CustomerID': 'FAMIA',
    'OrderDate': '1997-04-21T00:00:00.000Z',
    'ShippedDate': '1997-04-24T00:00:00.000Z',
    'Freight': 3.53,
    'ShipName': 'Familia Arquibaldo',
    'ShipAddress': 'Rua Orós, 92',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
},
{
    'OrderID': 10513,
    'CustomerID': 'WANDK',
    'OrderDate': '1997-04-22T00:00:00.000Z',
    'ShippedDate': '1997-04-28T00:00:00.000Z',
    'Freight': 105.65,
    'ShipName': 'Die Wandernde Kuh',
    'ShipAddress': 'Adenauerallee 900',
    'ShipCity': 'Stuttgart',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
},
{
    'OrderID': 10514,
    'CustomerID': 'ERNSH',
    'OrderDate': '1997-04-22T00:00:00.000Z',
    'ShippedDate': '1997-05-16T00:00:00.000Z',
    'Freight': 789.95,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
},
{
    'OrderID': 10515,
    'CustomerID': 'QUICK',
    'OrderDate': '1997-04-23T00:00:00.000Z',
    'ShippedDate': '1997-05-23T00:00:00.000Z',
    'Freight': 204.47,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
},
{
    'OrderID': 10516,
    'CustomerID': 'HUNGO',
    'OrderDate': '1997-04-24T00:00:00.000Z',
    'ShippedDate': '1997-05-01T00:00:00.000Z',
    'Freight': 62.78,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',

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    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10517,
    'CustomerID': 'NORTS',
    'OrderDate': '1997-04-24T00:00:00.000Z',
    'ShippedDate': '1997-04-29T00:00:00.000Z',
    'Freight': 32.07,
    'ShipName': 'North/South',
    'ShipAddress': 'South House 300 Queensbridge',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10518,
    'CustomerID': 'TORTU',
    'OrderDate': '1997-04-25T00:00:00.000Z',
    'ShippedDate': '1997-05-05T00:00:00.000Z',
    'Freight': 218.15,
    'ShipName': 'Tortuga Restaurante',
    'ShipAddress': 'Avda. Azteca 123',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10519,
    'CustomerID': 'CHOPS',
    'OrderDate': '1997-04-28T00:00:00.000Z',
    'ShippedDate': '1997-05-01T00:00:00.000Z',
    'Freight': 91.76,
    'ShipName': 'Chop-suey Chinese',
    'ShipAddress': 'Hauptstr. 31',
    'ShipCity': 'Bern',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
  {
    'OrderID': 10520,
    'CustomerID': 'SANTG',
    'OrderDate': '1997-04-29T00:00:00.000Z',
    'ShippedDate': '1997-05-01T00:00:00.000Z',
    'Freight': 13.37,
    'ShipName': 'Santé Gourmet',
    'ShipAddress': 'Erling Skakkes gate 78',
    'ShipCity': 'Stavern',
    'ShipRegion': null,
    'ShipCountry': 'Norway'
  },
  {
    'OrderID': 10521,
    'CustomerID': 'CACTU',
    'OrderDate': '1997-04-29T00:00:00.000Z',
    'ShippedDate': '1997-05-02T00:00:00.000Z',
    'Freight': 17.22,

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    'ShipName': 'Cactus Comidas para llevar',
    'ShipAddress': 'Cerrito 333',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },
  {
    'OrderID': 10522,
    'CustomerID': 'LEHMS',
    'OrderDate': '1997-04-30T00:00:00.000Z',
    'ShippedDate': '1997-05-06T00:00:00.000Z',
    'Freight': 45.33,
    'ShipName': 'Lehmanns Marktstand',
    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10523,
    'CustomerID': 'SEVES',
    'OrderDate': '1997-05-01T00:00:00.000Z',
    'ShippedDate': '1997-05-30T00:00:00.000Z',
    'Freight': 77.63,
    'ShipName': 'Seven Seas Imports',
    'ShipAddress': '90 Wadhurst Rd.',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10524,
    'CustomerID': 'BERGS',
    'OrderDate': '1997-05-01T00:00:00.000Z',
    'ShippedDate': '1997-05-07T00:00:00.000Z',
    'Freight': 244.79,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10525,
    'CustomerID': 'BONAP',
    'OrderDate': '1997-05-02T00:00:00.000Z',
    'ShippedDate': '1997-05-23T00:00:00.000Z',
    'Freight': 11.06,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10526,
    'CustomerID': 'WARTH',

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    'OrderDate': '1997-05-05T00:00:00.000Z',
    'ShippedDate': '1997-05-15T00:00:00.000Z',
    'Freight': 58.59,
    'ShipName': 'Wartian Herkku',
    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 10527,
    'CustomerID': 'QUICK',
    'OrderDate': '1997-05-05T00:00:00.000Z',
    'ShippedDate': '1997-05-07T00:00:00.000Z',
    'Freight': 41.9,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10528,
    'CustomerID': 'GREAL',
    'OrderDate': '1997-05-06T00:00:00.000Z',
    'ShippedDate': '1997-05-09T00:00:00.000Z',
    'Freight': 3.35,
    'ShipName': 'Great Lakes Food Market',
    'ShipAddress': '2732 Baker Blvd.',
    'ShipCity': 'Eugene',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10529,
    'CustomerID': 'MAISD',
    'OrderDate': '1997-05-07T00:00:00.000Z',
    'ShippedDate': '1997-05-09T00:00:00.000Z',
    'Freight': 66.69,
    'ShipName': 'Maison Dewey',
    'ShipAddress': 'Rue Joseph-Bens 532',
    'ShipCity': 'Bruxelles',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
    'OrderID': 10530,
    'CustomerID': 'PICCO',
    'OrderDate': '1997-05-08T00:00:00.000Z',
    'ShippedDate': '1997-05-12T00:00:00.000Z',
    'Freight': 339.22,
    'ShipName': 'Piccolo und mehr',
    'ShipAddress': 'Geislweg 14',
    'ShipCity': 'Salzburg',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },

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{
    'OrderID': 10531,
    'CustomerID': 'OCEAN',
    'OrderDate': '1997-05-08T00:00:00.000Z',
    'ShippedDate': '1997-05-19T00:00:00.000Z',
    'Freight': 8.12,
    'ShipName': 'Océano Atlántico Ltda.',
    'ShipAddress': 'Ing. Gustavo Moncada 8585 Piso 20-A',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
},
{
    'OrderID': 10532,
    'CustomerID': 'EASTC',
    'OrderDate': '1997-05-09T00:00:00.000Z',
    'ShippedDate': '1997-05-12T00:00:00.000Z',
    'Freight': 74.46,
    'ShipName': 'Eastern Connection',
    'ShipAddress': '35 King George',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
},
{
    'OrderID': 10533,
    'CustomerID': 'FOLKO',
    'OrderDate': '1997-05-12T00:00:00.000Z',
    'ShippedDate': '1997-05-22T00:00:00.000Z',
    'Freight': 188.04,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergratan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
},
{
    'OrderID': 10534,
    'CustomerID': 'LEHMS',
    'OrderDate': '1997-05-12T00:00:00.000Z',
    'ShippedDate': '1997-05-14T00:00:00.000Z',
    'Freight': 27.94,
    'ShipName': 'Lehmanns Marktstand',
    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
},
{
    'OrderID': 10535,
    'CustomerID': 'ANTON',
    'OrderDate': '1997-05-13T00:00:00.000Z',
    'ShippedDate': '1997-05-21T00:00:00.000Z',
    'Freight': 15.64,
    'ShipName': 'Antonio Moreno Taquería',
    'ShipAddress': 'Mataderos 2312',
    'ShipCity': 'México D.F.',

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        'ShipRegion': null,
        'ShipCountry': 'Mexico'
    },
    {
        'OrderID': 10536,
        'CustomerID': 'LEHMS',
        'OrderDate': '1997-05-14T00:00:00.000Z',
        'ShippedDate': '1997-06-06T00:00:00.000Z',
        'Freight': 58.88,
        'ShipName': 'Lehmanns Marktstand',
        'ShipAddress': 'Magazinweg 7',
        'ShipCity': 'Frankfurt a.M.',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10537,
        'CustomerID': 'RICSU',
        'OrderDate': '1997-05-14T00:00:00.000Z',
        'ShippedDate': '1997-05-19T00:00:00.000Z',
        'Freight': 78.85,
        'ShipName': 'Richter Supermarkt',
        'ShipAddress': 'Starenweg 5',
        'ShipCity': 'Genève',
        'ShipRegion': null,
        'ShipCountry': 'Switzerland'
    },
    {
        'OrderID': 10538,
        'CustomerID': 'BSBEV',
        'OrderDate': '1997-05-15T00:00:00.000Z',
        'ShippedDate': '1997-05-16T00:00:00.000Z',
        'Freight': 4.87,
        'ShipName': 'B\'s Beverages',
        'ShipAddress': 'Fauntleroy Circus',
        'ShipCity': 'London',
        'ShipRegion': null,
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10539,
        'CustomerID': 'BSBEV',
        'OrderDate': '1997-05-16T00:00:00.000Z',
        'ShippedDate': '1997-05-23T00:00:00.000Z',
        'Freight': 12.36,
        'ShipName': 'B\'s Beverages',
        'ShipAddress': 'Fauntleroy Circus',
        'ShipCity': 'London',
        'ShipRegion': null,
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10540,
        'CustomerID': 'QUICK',
        'OrderDate': '1997-05-19T00:00:00.000Z',
        'ShippedDate': '1997-06-13T00:00:00.000Z',
        'Freight': 1007.64,

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    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10541,
    'CustomerID': 'HANAR',
    'OrderDate': '1997-05-19T00:00:00.000Z',
    'ShippedDate': '1997-05-29T00:00:00.000Z',
    'Freight': 68.65,
    'ShipName': 'Hanari Carnes',
    'ShipAddress': 'Rua do Paço, 67',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10542,
    'CustomerID': 'KOENE',
    'OrderDate': '1997-05-20T00:00:00.000Z',
    'ShippedDate': '1997-05-26T00:00:00.000Z',
    'Freight': 10.95,
    'ShipName': 'Königlich Essen',
    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10543,
    'CustomerID': 'LILAS',
    'OrderDate': '1997-05-21T00:00:00.000Z',
    'ShippedDate': '1997-05-23T00:00:00.000Z',
    'Freight': 48.17,
    'ShipName': 'LILA-Supermercado',
    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10544,
    'CustomerID': 'LONEP',
    'OrderDate': '1997-05-21T00:00:00.000Z',
    'ShippedDate': '1997-05-30T00:00:00.000Z',
    'Freight': 24.91,
    'ShipName': 'Lonesome Pine Restaurant',
    'ShipAddress': '89 Chiaroscuro Rd.',
    'ShipCity': 'Portland',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10545,
    'CustomerID': 'LAZYK',

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    'OrderDate': '1997-05-22T00:00:00.000Z',
    'ShippedDate': '1997-06-26T00:00:00.000Z',
    'Freight': 11.92,
    'ShipName': 'Lazy K Kountry Store',
    'ShipAddress': '12 Orchestra Terrace',
    'ShipCity': 'Walla Walla',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10546,
    'CustomerID': 'VICTE',
    'OrderDate': '1997-05-23T00:00:00.000Z',
    'ShippedDate': '1997-05-27T00:00:00.000Z',
    'Freight': 194.72,
    'ShipName': 'Victuailles en stock',
    'ShipAddress': '2, rue du Commerce',
    'ShipCity': 'Lyon',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10547,
    'CustomerID': 'SEVES',
    'OrderDate': '1997-05-23T00:00:00.000Z',
    'ShippedDate': '1997-06-02T00:00:00.000Z',
    'Freight': 178.43,
    'ShipName': 'Seven Seas Imports',
    'ShipAddress': '90 Wadhurst Rd.',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10548,
    'CustomerID': 'TOMSP',
    'OrderDate': '1997-05-26T00:00:00.000Z',
    'ShippedDate': '1997-06-02T00:00:00.000Z',
    'Freight': 1.43,
    'ShipName': 'Toms Spezialitäten',
    'ShipAddress': 'Luisenstr. 48',
    'ShipCity': 'Münster',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10549,
    'CustomerID': 'QUICK',
    'OrderDate': '1997-05-27T00:00:00.000Z',
    'ShippedDate': '1997-05-30T00:00:00.000Z',
    'Freight': 171.24,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },

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{
    'OrderID': 10550,
    'CustomerID': 'GODOS',
    'OrderDate': '1997-05-28T00:00:00.000Z',
    'ShippedDate': '1997-06-06T00:00:00.000Z',
    'Freight': 4.32,
    'ShipName': 'Godos Cocina Típica',
    'ShipAddress': 'C/ Romero, 33',
    'ShipCity': 'Sevilla',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
},
{
    'OrderID': 10551,
    'CustomerID': 'FURIB',
    'OrderDate': '1997-05-28T00:00:00.000Z',
    'ShippedDate': '1997-06-06T00:00:00.000Z',
    'Freight': 72.95,
    'ShipName': 'Furia Bacalhau e Frutos do Mar',
    'ShipAddress': 'Jardim das rosas n. 32',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
},
{
    'OrderID': 10552,
    'CustomerID': 'HILAA',
    'OrderDate': '1997-05-29T00:00:00.000Z',
    'ShippedDate': '1997-06-05T00:00:00.000Z',
    'Freight': 83.22,
    'ShipName': 'HILARION-Abastos',
    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
},
{
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    'CustomerID': 'WARTH',
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    'ShippedDate': '1997-06-03T00:00:00.000Z',
    'Freight': 149.49,
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    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
},
{
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    'ShipAddress': 'Mehrheimerstr. 369',
    'ShipCity': 'Köln',

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    },
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        'ShippedDate': '1997-06-04T00:00:00.000Z',
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        'ShipCity': 'Boise',
        'ShipRegion': 'ID',
        'ShipCountry': 'USA'
    },
    {
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        'CustomerID': 'SIMOB',
        'OrderDate': '1997-06-03T00:00:00.000Z',
        'ShippedDate': '1997-06-13T00:00:00.000Z',
        'Freight': 9.8,
        'ShipName': 'Simons bistro',
        'ShipAddress': 'Vinbæltet 34',
        'ShipCity': 'Kobenhavn',
        'ShipRegion': null,
        'ShipCountry': 'Denmark'
    },
    {
        'OrderID': 10557,
        'CustomerID': 'LEHMS',
        'OrderDate': '1997-06-03T00:00:00.000Z',
        'ShippedDate': '1997-06-06T00:00:00.000Z',
        'Freight': 96.72,
        'ShipName': 'Lehmanns Marktstand',
        'ShipAddress': 'Magazinweg 7',
        'ShipCity': 'Frankfurt a.M.',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
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        'CustomerID': 'AROUT',
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        'ShippedDate': '1997-06-10T00:00:00.000Z',
        'Freight': 72.97,
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        'ShipAddress': 'Brook Farm Stratford St. Mary',
        'ShipCity': 'Colchester',
        'ShipRegion': 'Essex',
        'ShipCountry': 'UK'
    },
    {
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        'CustomerID': 'BLONP',
        'OrderDate': '1997-06-05T00:00:00.000Z',
        'ShippedDate': '1997-06-13T00:00:00.000Z',
        'Freight': 8.05,

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    'ShipAddress': '24, place Kléber',
    'ShipCity': 'Strasbourg',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
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    'CustomerID': 'FRANK',
    'OrderDate': '1997-06-06T00:00:00.000Z',
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    'Freight': 36.65,
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    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
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    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
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    'CustomerID': 'REGGC',
    'OrderDate': '1997-06-09T00:00:00.000Z',
    'ShippedDate': '1997-06-12T00:00:00.000Z',
    'Freight': 22.95,
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    'ShipAddress': 'Strada Provinciale 124',
    'ShipCity': 'Reggio Emilia',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
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    'CustomerID': 'RICAR',
    'OrderDate': '1997-06-10T00:00:00.000Z',
    'ShippedDate': '1997-06-24T00:00:00.000Z',
    'Freight': 60.43,
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    'ShipAddress': 'Av. Copacabana, 267',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10564,
    'CustomerID': 'RATTC',

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    'ShippedDate': '1997-06-16T00:00:00.000Z',
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    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'MEREP',
    'OrderDate': '1997-06-11T00:00:00.000Z',
    'ShippedDate': '1997-06-18T00:00:00.000Z',
    'Freight': 7.15,
    'ShipName': 'Mère Paillarde',
    'ShipAddress': '43 rue St. Laurent',
    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10566,
    'CustomerID': 'BLONP',
    'OrderDate': '1997-06-12T00:00:00.000Z',
    'ShippedDate': '1997-06-18T00:00:00.000Z',
    'Freight': 88.4,
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    'ShipAddress': '24, place Kléber',
    'ShipCity': 'Strasbourg',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
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    'CustomerID': 'HUNGO',
    'OrderDate': '1997-06-12T00:00:00.000Z',
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    'Freight': 33.97,
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    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10568,
    'CustomerID': 'GALED',
    'OrderDate': '1997-06-13T00:00:00.000Z',
    'ShippedDate': '1997-07-09T00:00:00.000Z',
    'Freight': 6.54,
    'ShipName': 'Galería del gastronómo',
    'ShipAddress': 'Rambla de Catalunya, 23',
    'ShipCity': 'Barcelona',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },

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{
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    'Freight': 58.98,
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    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
},
{
    'OrderID': 10570,
    'CustomerID': 'MEREP',
    'OrderDate': '1997-06-17T00:00:00.000Z',
    'ShippedDate': '1997-06-19T00:00:00.000Z',
    'Freight': 188.99,
    'ShipName': 'Mère Paillarde',
    'ShipAddress': '43 rue St. Laurent',
    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
},
{
    'OrderID': 10571,
    'CustomerID': 'ERNSH',
    'OrderDate': '1997-06-17T00:00:00.000Z',
    'ShippedDate': '1997-07-04T00:00:00.000Z',
    'Freight': 26.06,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
},
{
    'OrderID': 10572,
    'CustomerID': 'BERGS',
    'OrderDate': '1997-06-18T00:00:00.000Z',
    'ShippedDate': '1997-06-25T00:00:00.000Z',
    'Freight': 116.43,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
},
{
    'OrderID': 10573,
    'CustomerID': 'ANTON',
    'OrderDate': '1997-06-19T00:00:00.000Z',
    'ShippedDate': '1997-06-20T00:00:00.000Z',
    'Freight': 84.84,
    'ShipName': 'Antonio Moreno Taquería',
    'ShipAddress': 'Mataderos 2312',
    'ShipCity': 'México D.F.',

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  },
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    'ShippedDate': '1997-06-30T00:00:00.000Z',
    'Freight': 37.6,
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    'ShipAddress': '722 DaVinci Blvd.',
    'ShipCity': 'Kirkland',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10575,
    'CustomerID': 'MORGK',
    'OrderDate': '1997-06-20T00:00:00.000Z',
    'ShippedDate': '1997-06-30T00:00:00.000Z',
    'Freight': 127.34,
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    'ShipAddress': 'Heerstr. 22',
    'ShipCity': 'Leipzig',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
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    'CustomerID': 'TORTU',
    'OrderDate': '1997-06-23T00:00:00.000Z',
    'ShippedDate': '1997-06-30T00:00:00.000Z',
    'Freight': 18.56,
    'ShipName': 'Tortuga Restaurante',
    'ShipAddress': 'Avda. Azteca 123',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10577,
    'CustomerID': 'TRAIH',
    'OrderDate': '1997-06-23T00:00:00.000Z',
    'ShippedDate': '1997-06-30T00:00:00.000Z',
    'Freight': 25.41,
    'ShipName': 'Trail\'s Head Gourmet Provisioners',
    'ShipAddress': '722 DaVinci Blvd.',
    'ShipCity': 'Kirkland',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10578,
    'CustomerID': 'BSBEV',
    'OrderDate': '1997-06-24T00:00:00.000Z',
    'ShippedDate': '1997-07-25T00:00:00.000Z',
    'Freight': 29.6,

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    'ShipName': 'B\'s Beverages',
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    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10579,
    'CustomerID': 'LETSS',
    'OrderDate': '1997-06-25T00:00:00.000Z',
    'ShippedDate': '1997-07-04T00:00:00.000Z',
    'Freight': 13.73,
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    'ShipAddress': '87 Polk St. Suite 5',
    'ShipCity': 'San Francisco',
    'ShipRegion': 'CA',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'OTTIK',
    'OrderDate': '1997-06-26T00:00:00.000Z',
    'ShippedDate': '1997-07-01T00:00:00.000Z',
    'Freight': 75.89,
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    'ShipAddress': 'Mehrheimerstr. 369',
    'ShipCity': 'Köln',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10581,
    'CustomerID': 'FAMIA',
    'OrderDate': '1997-06-26T00:00:00.000Z',
    'ShippedDate': '1997-07-02T00:00:00.000Z',
    'Freight': 3.01,
    'ShipName': 'Familia Arquibaldo',
    'ShipAddress': 'Rua Orós, 92',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
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    'CustomerID': 'BLAUS',
    'OrderDate': '1997-06-27T00:00:00.000Z',
    'ShippedDate': '1997-07-14T00:00:00.000Z',
    'Freight': 27.71,
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    'ShipAddress': 'Forsterstr. 57',
    'ShipCity': 'Mannheim',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
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    'OrderID': 10583,
    'CustomerID': 'WARTH',

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    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
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    'CustomerID': 'BLONP',
    'OrderDate': '1997-06-30T00:00:00.000Z',
    'ShippedDate': '1997-07-04T00:00:00.000Z',
    'Freight': 59.14,
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    'ShipAddress': '24, place Kléber',
    'ShipCity': 'Strasbourg',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
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    'CustomerID': 'WELLI',
    'OrderDate': '1997-07-01T00:00:00.000Z',
    'ShippedDate': '1997-07-10T00:00:00.000Z',
    'Freight': 13.41,
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    'ShipAddress': 'Rua do Mercado, 12',
    'ShipCity': 'Resende',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10586,
    'CustomerID': 'REGGC',
    'OrderDate': '1997-07-02T00:00:00.000Z',
    'ShippedDate': '1997-07-09T00:00:00.000Z',
    'Freight': 0.48,
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    'ShipAddress': 'Strada Provinciale 124',
    'ShipCity': 'Reggio Emilia',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
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    'CustomerID': 'QUEDE',
    'OrderDate': '1997-07-02T00:00:00.000Z',
    'ShippedDate': '1997-07-09T00:00:00.000Z',
    'Freight': 62.52,
    'ShipName': 'Que Delícia',
    'ShipAddress': 'Rua da Panificadora, 12',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },

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  'ShippedDate': '1997-07-10T00:00:00.000Z',
  'Freight': 194.67,
  'ShipName': 'QUICK-Stop',
  'ShipAddress': 'Taucherstraße 10',
  'ShipCity': 'Cunewalde',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10589,
  'CustomerID': 'GREAL',
  'OrderDate': '1997-07-04T00:00:00.000Z',
  'ShippedDate': '1997-07-14T00:00:00.000Z',
  'Freight': 4.42,
  'ShipName': 'Great Lakes Food Market',
  'ShipAddress': '2732 Baker Blvd.',
  'ShipCity': 'Eugene',
  'ShipRegion': 'OR',
  'ShipCountry': 'USA'
},
{
  'OrderID': 10590,
  'CustomerID': 'MEREP',
  'OrderDate': '1997-07-07T00:00:00.000Z',
  'ShippedDate': '1997-07-14T00:00:00.000Z',
  'Freight': 44.77,
  'ShipName': 'Mère Paillarde',
  'ShipAddress': '43 rue St. Laurent',
  'ShipCity': 'Montréal',
  'ShipRegion': 'Québec',
  'ShipCountry': 'Canada'
},
{
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  'CustomerID': 'VAFFE',
  'OrderDate': '1997-07-07T00:00:00.000Z',
  'ShippedDate': '1997-07-16T00:00:00.000Z',
  'Freight': 55.92,
  'ShipName': 'Vaffeljernet',
  'ShipAddress': 'Smagsloget 45',
  'ShipCity': 'Århus',
  'ShipRegion': null,
  'ShipCountry': 'Denmark'
},
{
  'OrderID': 10592,
  'CustomerID': 'LEHMS',
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  'ShippedDate': '1997-07-16T00:00:00.000Z',
  'Freight': 32.1,
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  'ShipAddress': 'Magazinweg 7',
  'ShipCity': 'Frankfurt a.M.',

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        'ShipAddress': 'Magazinweg 7',
        'ShipCity': 'Frankfurt a.M.',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
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        'ShippedDate': '1997-07-16T00:00:00.000Z',
        'Freight': 5.24,
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        'ShipAddress': '2743 Bering St.',
        'ShipCity': 'Anchorage',
        'ShipRegion': 'AK',
        'ShipCountry': 'USA'
    },
    {
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        'CustomerID': 'ERNSH',
        'OrderDate': '1997-07-10T00:00:00.000Z',
        'ShippedDate': '1997-07-14T00:00:00.000Z',
        'Freight': 96.78,
        'ShipName': 'Ernst Handel',
        'ShipAddress': 'Kirchgasse 6',
        'ShipCity': 'Graz',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
        'OrderID': 10596,
        'CustomerID': 'WHITC',
        'OrderDate': '1997-07-11T00:00:00.000Z',
        'ShippedDate': '1997-08-12T00:00:00.000Z',
        'Freight': 16.34,
        'ShipName': 'White Clover Markets',
        'ShipAddress': '1029 - 12th Ave. S.',
        'ShipCity': 'Seattle',
        'ShipRegion': 'WA',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10597,
        'CustomerID': 'PICCO',
        'OrderDate': '1997-07-11T00:00:00.000Z',
        'ShippedDate': '1997-07-18T00:00:00.000Z',
        'Freight': 35.12,

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    'ShipAddress': 'Geislweg 14',
    'ShipCity': 'Salzburg',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10598,
    'CustomerID': 'RATTC',
    'OrderDate': '1997-07-14T00:00:00.000Z',
    'ShippedDate': '1997-07-18T00:00:00.000Z',
    'Freight': 44.42,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'BSBEV',
    'OrderDate': '1997-07-15T00:00:00.000Z',
    'ShippedDate': '1997-07-21T00:00:00.000Z',
    'Freight': 29.98,
    'ShipName': 'B\'s Beverages',
    'ShipAddress': 'Fauntleroy Circus',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
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    'CustomerID': 'HUNGC',
    'OrderDate': '1997-07-16T00:00:00.000Z',
    'ShippedDate': '1997-07-21T00:00:00.000Z',
    'Freight': 45.13,
    'ShipName': 'Hungry Coyote Import Store',
    'ShipAddress': 'City Center Plaza 516 Main St.',
    'ShipCity': 'Elgin',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10601,
    'CustomerID': 'HILAA',
    'OrderDate': '1997-07-16T00:00:00.000Z',
    'ShippedDate': '1997-07-22T00:00:00.000Z',
    'Freight': 58.3,
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    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10602,
    'CustomerID': 'VAFFE',

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    'ShipAddress': 'Smagsloget 45',
    'ShipCity': 'Århus',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
    'OrderID': 10603,
    'CustomerID': 'SAVEA',
    'OrderDate': '1997-07-18T00:00:00.000Z',
    'ShippedDate': '1997-08-08T00:00:00.000Z',
    'Freight': 48.77,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'FURIB',
    'OrderDate': '1997-07-18T00:00:00.000Z',
    'ShippedDate': '1997-07-29T00:00:00.000Z',
    'Freight': 7.46,
    'ShipName': 'Furia Bacalhau e Frutos do Mar',
    'ShipAddress': 'Jardim das rosas n. 32',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {
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    'CustomerID': 'MEREP',
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    'Freight': 379.13,
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    'ShipAddress': '43 rue St. Laurent',
    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
  },
  {
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    'CustomerID': 'TRADH',
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    'ShippedDate': '1997-07-31T00:00:00.000Z',
    'Freight': 79.4,
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    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
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    'Freight': 200.24,
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    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
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    'Freight': 27.79,
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    'ShipAddress': 'Luisenstr. 48',
    'ShipCity': 'Münster',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
},
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    'CustomerID': 'DUMON',
    'OrderDate': '1997-07-24T00:00:00.000Z',
    'ShippedDate': '1997-07-30T00:00:00.000Z',
    'Freight': 1.85,
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    'ShipAddress': '67, rue des Cinquante Otages',
    'ShipCity': 'Nantes',
    'ShipRegion': null,
    'ShipCountry': 'France'
},
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    'ShippedDate': '1997-08-06T00:00:00.000Z',
    'Freight': 26.78,
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    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
},
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    'ShippedDate': '1997-08-01T00:00:00.000Z',
    'Freight': 80.65,
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    'ShipAddress': 'ul. Filtrowa 68',
    'ShipCity': 'Warszawa',

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        'ShipAddress': '187 Suffolk Ln.',
        'ShipCity': 'Boise',
        'ShipRegion': 'ID',
        'ShipCountry': 'USA'
    },
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        'ShippedDate': '1997-08-01T00:00:00.000Z',
        'Freight': 8.11,
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        'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
        'ShipCity': 'San Cristóbal',
        'ShipRegion': 'Táchira',
        'ShipCountry': 'Venezuela'
    },
    {
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        'CustomerID': 'BLAUS',
        'OrderDate': '1997-07-29T00:00:00.000Z',
        'ShippedDate': '1997-08-01T00:00:00.000Z',
        'Freight': 1.93,
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        'ShipAddress': 'Forsterstr. 57',
        'ShipCity': 'Mannheim',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10615,
        'CustomerID': 'WILMK',
        'OrderDate': '1997-07-30T00:00:00.000Z',
        'ShippedDate': '1997-08-06T00:00:00.000Z',
        'Freight': 0.75,
        'ShipName': 'Wilman Kala',
        'ShipAddress': 'Keskuskatu 45',
        'ShipCity': 'Helsinki',
        'ShipRegion': null,
        'ShipCountry': 'Finland'
    },
    {
        'OrderID': 10616,
        'CustomerID': 'GREAL',
        'OrderDate': '1997-07-31T00:00:00.000Z',
        'ShippedDate': '1997-08-05T00:00:00.000Z',
        'Freight': 116.53,

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    'ShipCity': 'Eugene',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'GREAL',
    'OrderDate': '1997-07-31T00:00:00.000Z',
    'ShippedDate': '1997-08-04T00:00:00.000Z',
    'Freight': 18.53,
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    'ShipAddress': '2732 Baker Blvd.',
    'ShipCity': 'Eugene',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
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    'ShippedDate': '1997-08-08T00:00:00.000Z',
    'Freight': 154.68,
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    'ShipAddress': '43 rue St. Laurent',
    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
  },
  {
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    'CustomerID': 'MEREP',
    'OrderDate': '1997-08-04T00:00:00.000Z',
    'ShippedDate': '1997-08-07T00:00:00.000Z',
    'Freight': 91.05,
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    'ShipAddress': '43 rue St. Laurent',
    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
  },
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    'CustomerID': 'LAUGB',
    'OrderDate': '1997-08-05T00:00:00.000Z',
    'ShippedDate': '1997-08-14T00:00:00.000Z',
    'Freight': 0.94,
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    'ShipAddress': '2319 Elm St.',
    'ShipCity': 'Vancouver',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10621,
    'CustomerID': 'ISLAT',

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    'ShipAddress': 'Garden House Crowther Way',
    'ShipCity': 'Cowes',
    'ShipRegion': 'Isle of Wight',
    'ShipCountry': 'UK'
  },
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    'CustomerID': 'RICAR',
    'OrderDate': '1997-08-06T00:00:00.000Z',
    'ShippedDate': '1997-08-11T00:00:00.000Z',
    'Freight': 50.97,
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    'ShipAddress': 'Av. Copacabana, 267',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
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    'CustomerID': 'FRANK',
    'OrderDate': '1997-08-07T00:00:00.000Z',
    'ShippedDate': '1997-08-12T00:00:00.000Z',
    'Freight': 97.18,
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    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10624,
    'CustomerID': 'THECR',
    'OrderDate': '1997-08-07T00:00:00.000Z',
    'ShippedDate': '1997-08-19T00:00:00.000Z',
    'Freight': 94.8,
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    'ShipAddress': '55 Grizzly Peak Rd.',
    'ShipCity': 'Butte',
    'ShipRegion': 'MT',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'ANATR',
    'OrderDate': '1997-08-08T00:00:00.000Z',
    'ShippedDate': '1997-08-14T00:00:00.000Z',
    'Freight': 43.9,
    'ShipName': 'Ana Trujillo Emparedados y helados',
    'ShipAddress': 'Avda. de la Constitución 2222',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
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  'Freight': 138.69,
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  'ShipAddress': 'Berguvsvägen 8',
  'ShipCity': 'Luleå',
  'ShipRegion': null,
  'ShipCountry': 'Sweden'
},
{
  'OrderID': 10627,
  'CustomerID': 'SAVEA',
  'OrderDate': '1997-08-11T00:00:00.000Z',
  'ShippedDate': '1997-08-21T00:00:00.000Z',
  'Freight': 107.46,
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  'ShipAddress': '187 Suffolk Ln.',
  'ShipCity': 'Boise',
  'ShipRegion': 'ID',
  'ShipCountry': 'USA'
},
{
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  'CustomerID': 'BLONP',
  'OrderDate': '1997-08-12T00:00:00.000Z',
  'ShippedDate': '1997-08-20T00:00:00.000Z',
  'Freight': 30.36,
  'ShipName': 'Blondel père et fils',
  'ShipAddress': '24, place Kléber',
  'ShipCity': 'Strasbourg',
  'ShipRegion': null,
  'ShipCountry': 'France'
},
{
  'OrderID': 10629,
  'CustomerID': 'GODOS',
  'OrderDate': '1997-08-12T00:00:00.000Z',
  'ShippedDate': '1997-08-20T00:00:00.000Z',
  'Freight': 85.46,
  'ShipName': 'Godos Cocina Típica',
  'ShipAddress': 'C/ Romero, 33',
  'ShipCity': 'Sevilla',
  'ShipRegion': null,
  'ShipCountry': 'Spain'
},
{
  'OrderID': 10630,
  'CustomerID': 'KOENE',
  'OrderDate': '1997-08-13T00:00:00.000Z',
  'ShippedDate': '1997-08-19T00:00:00.000Z',
  'Freight': 32.35,
  'ShipName': 'Königlich Essen',
  'ShipAddress': 'Maubelstr. 90',
  'ShipCity': 'Brandenburg',

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        'ShipRegion': null,
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    },
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        'ShippedDate': '1997-08-15T00:00:00.000Z',
        'Freight': 0.87,
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        'ShipAddress': '1 rue Alsace-Lorraine',
        'ShipCity': 'Toulouse',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
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        'CustomerID': 'WANDK',
        'OrderDate': '1997-08-14T00:00:00.000Z',
        'ShippedDate': '1997-08-19T00:00:00.000Z',
        'Freight': 41.38,
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        'ShipAddress': 'Adenauerallee 900',
        'ShipCity': 'Stuttgart',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
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        'OrderDate': '1997-08-15T00:00:00.000Z',
        'ShippedDate': '1997-08-18T00:00:00.000Z',
        'Freight': 477.9,
        'ShipName': 'Ernst Handel',
        'ShipAddress': 'Kirchgasse 6',
        'ShipCity': 'Graz',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
        'OrderID': 10634,
        'CustomerID': 'FOLIG',
        'OrderDate': '1997-08-15T00:00:00.000Z',
        'ShippedDate': '1997-08-21T00:00:00.000Z',
        'Freight': 487.38,
        'ShipName': 'Folies gourmandes',
        'ShipAddress': '184, chaussée de Tournai',
        'ShipCity': 'Lille',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10635,
        'CustomerID': 'MAGAA',
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        'ShippedDate': '1997-08-21T00:00:00.000Z',
        'Freight': 47.46,

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        'ShipCity': 'Bergamo',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
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        'CustomerID': 'WARTH',
        'OrderDate': '1997-08-19T00:00:00.000Z',
        'ShippedDate': '1997-08-26T00:00:00.000Z',
        'Freight': 1.15,
        'ShipName': 'Wartian Herkku',
        'ShipAddress': 'Torikatu 38',
        'ShipCity': 'Oulu',
        'ShipRegion': null,
        'ShipCountry': 'Finland'
    },
    {
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        'CustomerID': 'QUEEN',
        'OrderDate': '1997-08-19T00:00:00.000Z',
        'ShippedDate': '1997-08-26T00:00:00.000Z',
        'Freight': 201.29,
        'ShipName': 'Queen Cozinha',
        'ShipAddress': 'Alameda dos Canários, 891',
        'ShipCity': 'Sao Paulo',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10638,
        'CustomerID': 'LINOD',
        'OrderDate': '1997-08-20T00:00:00.000Z',
        'ShippedDate': '1997-09-01T00:00:00.000Z',
        'Freight': 158.44,
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        'ShipAddress': 'Ave. 5 de Mayo Porlamar',
        'ShipCity': 'I. de Margarita',
        'ShipRegion': 'Nueva Esparta',
        'ShipCountry': 'Venezuela'
    },
    {
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        'CustomerID': 'SANTG',
        'OrderDate': '1997-08-20T00:00:00.000Z',
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        'Freight': 38.64,
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        'ShipAddress': 'Erling Skakkes gate 78',
        'ShipCity': 'Stavern',
        'ShipRegion': null,
        'ShipCountry': 'Norway'
    },
    {
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        'CustomerID': 'WANDK',

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    'ShipAddress': 'Adenauerallee 900',
    'ShipCity': 'Stuttgart',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
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    'CustomerID': 'HILAA',
    'OrderDate': '1997-08-22T00:00:00.000Z',
    'ShippedDate': '1997-08-26T00:00:00.000Z',
    'Freight': 179.61,
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    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10642,
    'CustomerID': 'SIMOB',
    'OrderDate': '1997-08-22T00:00:00.000Z',
    'ShippedDate': '1997-09-05T00:00:00.000Z',
    'Freight': 41.89,
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    'ShipAddress': 'Vinbæltet 34',
    'ShipCity': 'Kobenhavn',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
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    'CustomerID': 'ALFKI',
    'OrderDate': '1997-08-25T00:00:00.000Z',
    'ShippedDate': '1997-09-02T00:00:00.000Z',
    'Freight': 29.46,
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    'ShipAddress': 'Obere Str. 57',
    'ShipCity': 'Berlin',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10644,
    'CustomerID': 'WELLI',
    'OrderDate': '1997-08-25T00:00:00.000Z',
    'ShippedDate': '1997-09-01T00:00:00.000Z',
    'Freight': 0.14,
    'ShipName': 'Wellington Importadora',
    'ShipAddress': 'Rua do Mercado, 12',
    'ShipCity': 'Resende',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },

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    'CustomerID': 'HANAR',
    'OrderDate': '1997-08-26T00:00:00.000Z',
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    'Freight': 12.41,
    'ShipName': 'Hanari Carnes',
    'ShipAddress': 'Rua do Paço, 67',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
},
{
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    'CustomerID': 'HUNGO',
    'OrderDate': '1997-08-27T00:00:00.000Z',
    'ShippedDate': '1997-09-03T00:00:00.000Z',
    'Freight': 142.33,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
},
{
    'OrderID': 10647,
    'CustomerID': 'QUEDE',
    'OrderDate': '1997-08-27T00:00:00.000Z',
    'ShippedDate': '1997-09-03T00:00:00.000Z',
    'Freight': 45.54,
    'ShipName': 'Que Delícia',
    'ShipAddress': 'Rua da Panificadora, 12',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
},
{
    'OrderID': 10648,
    'CustomerID': 'RICAR',
    'OrderDate': '1997-08-28T00:00:00.000Z',
    'ShippedDate': '1997-09-09T00:00:00.000Z',
    'Freight': 14.25,
    'ShipName': 'Ricardo Adocicados',
    'ShipAddress': 'Av. Copacabana, 267',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
},
{
    'OrderID': 10649,
    'CustomerID': 'MAISD',
    'OrderDate': '1997-08-28T00:00:00.000Z',
    'ShippedDate': '1997-08-29T00:00:00.000Z',
    'Freight': 6.2,
    'ShipName': 'Maison Dewey',
    'ShipAddress': 'Rue Joseph-Bens 532',
    'ShipCity': 'Bruxelles',

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        'ShipRegion': null,
        'ShipCountry': 'Belgium'
    },
    {
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        'CustomerID': 'FAMIA',
        'OrderDate': '1997-08-29T00:00:00.000Z',
        'ShippedDate': '1997-09-03T00:00:00.000Z',
        'Freight': 176.81,
        'ShipName': 'Familia Arquibaldo',
        'ShipAddress': 'Rua Orós, 92',
        'ShipCity': 'Sao Paulo',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10651,
        'CustomerID': 'WANDK',
        'OrderDate': '1997-09-01T00:00:00.000Z',
        'ShippedDate': '1997-09-11T00:00:00.000Z',
        'Freight': 20.6,
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        'ShipAddress': 'Adenauerallee 900',
        'ShipCity': 'Stuttgart',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
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        'CustomerID': 'GOURL',
        'OrderDate': '1997-09-01T00:00:00.000Z',
        'ShippedDate': '1997-09-08T00:00:00.000Z',
        'Freight': 7.14,
        'ShipName': 'Gourmet Lanchonetes',
        'ShipAddress': 'Av. Brasil, 442',
        'ShipCity': 'Campinas',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10653,
        'CustomerID': 'FRANK',
        'OrderDate': '1997-09-02T00:00:00.000Z',
        'ShippedDate': '1997-09-19T00:00:00.000Z',
        'Freight': 93.25,
        'ShipName': 'Frankenversand',
        'ShipAddress': 'Berliner Platz 43',
        'ShipCity': 'München',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10654,
        'CustomerID': 'BERGS',
        'OrderDate': '1997-09-02T00:00:00.000Z',
        'ShippedDate': '1997-09-11T00:00:00.000Z',
        'Freight': 55.26,

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    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10655,
    'CustomerID': 'REGGC',
    'OrderDate': '1997-09-03T00:00:00.000Z',
    'ShippedDate': '1997-09-11T00:00:00.000Z',
    'Freight': 4.41,
    'ShipName': 'Reggiani Caseifici',
    'ShipAddress': 'Strada Provinciale 124',
    'ShipCity': 'Reggio Emilia',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 10656,
    'CustomerID': 'GREAL',
    'OrderDate': '1997-09-04T00:00:00.000Z',
    'ShippedDate': '1997-09-10T00:00:00.000Z',
    'Freight': 57.15,
    'ShipName': 'Great Lakes Food Market',
    'ShipAddress': '2732 Baker Blvd.',
    'ShipCity': 'Eugene',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10657,
    'CustomerID': 'SAVEA',
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    'ShippedDate': '1997-09-15T00:00:00.000Z',
    'Freight': 352.69,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10658,
    'CustomerID': 'QUICK',
    'OrderDate': '1997-09-05T00:00:00.000Z',
    'ShippedDate': '1997-09-08T00:00:00.000Z',
    'Freight': 364.15,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10659,
    'CustomerID': 'QUEEN',

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    'ShipAddress': 'Alameda dos Canários, 891',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
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    'ShippedDate': '1997-10-15T00:00:00.000Z',
    'Freight': 111.29,
    'ShipName': 'Hungry Coyote Import Store',
    'ShipAddress': 'City Center Plaza 516 Main St.',
    'ShipCity': 'Elgin',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10661,
    'CustomerID': 'HUNGO',
    'OrderDate': '1997-09-09T00:00:00.000Z',
    'ShippedDate': '1997-09-15T00:00:00.000Z',
    'Freight': 17.55,
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    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
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    'CustomerID': 'LONEP',
    'OrderDate': '1997-09-09T00:00:00.000Z',
    'ShippedDate': '1997-09-18T00:00:00.000Z',
    'Freight': 1.28,
    'ShipName': 'Lonesome Pine Restaurant',
    'ShipAddress': '89 Chiaroscuro Rd.',
    'ShipCity': 'Portland',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'BONAP',
    'OrderDate': '1997-09-10T00:00:00.000Z',
    'ShippedDate': '1997-10-03T00:00:00.000Z',
    'Freight': 113.15,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },

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    'CustomerID': 'FURIB',
    'OrderDate': '1997-09-10T00:00:00.000Z',
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    'Freight': 1.27,
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    'ShipAddress': 'Jardim das rosas n. 32',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
},
{
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    'CustomerID': 'LONEP',
    'OrderDate': '1997-09-11T00:00:00.000Z',
    'ShippedDate': '1997-09-17T00:00:00.000Z',
    'Freight': 26.31,
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    'ShipAddress': '89 Chiaroscuro Rd.',
    'ShipCity': 'Portland',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
},
{
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    'CustomerID': 'RICSU',
    'OrderDate': '1997-09-12T00:00:00.000Z',
    'ShippedDate': '1997-09-22T00:00:00.000Z',
    'Freight': 232.42,
    'ShipName': 'Richter Supermarkt',
    'ShipAddress': 'Starenweg 5',
    'ShipCity': 'Genève',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
},
{
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    'CustomerID': 'ERNSH',
    'OrderDate': '1997-09-12T00:00:00.000Z',
    'ShippedDate': '1997-09-19T00:00:00.000Z',
    'Freight': 78.09,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
},
{
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    'CustomerID': 'WANDK',
    'OrderDate': '1997-09-15T00:00:00.000Z',
    'ShippedDate': '1997-09-23T00:00:00.000Z',
    'Freight': 47.22,
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    'ShipAddress': 'Adenauerallee 900',
    'ShipCity': 'Stuttgart',

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'ShipRegion': null,
'ShipCountry': 'Germany'
},
{
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  'CustomerID': 'SIMOB',
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  'Freight': 24.39,
  'ShipName': 'Simons bistro',
  'ShipAddress': 'Vinbæltet 34',
  'ShipCity': 'Kobenhavn',
  'ShipRegion': null,
  'ShipCountry': 'Denmark'
},
{
  'OrderID': 10670,
  'CustomerID': 'FRANK',
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  'ShippedDate': '1997-09-18T00:00:00.000Z',
  'Freight': 203.48,
  'ShipName': 'Frankenversand',
  'ShipAddress': 'Berliner Platz 43',
  'ShipCity': 'München',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10671,
  'CustomerID': 'FRANR',
  'OrderDate': '1997-09-17T00:00:00.000Z',
  'ShippedDate': '1997-09-24T00:00:00.000Z',
  'Freight': 30.34,
  'ShipName': 'France restauration',
  'ShipAddress': '54, rue Royale',
  'ShipCity': 'Nantes',
  'ShipRegion': null,
  'ShipCountry': 'France'
},
{
  'OrderID': 10672,
  'CustomerID': 'BERGS',
  'OrderDate': '1997-09-17T00:00:00.000Z',
  'ShippedDate': '1997-09-26T00:00:00.000Z',
  'Freight': 95.75,
  'ShipName': 'Berglunds snabbköp',
  'ShipAddress': 'Berguvsvägen 8',
  'ShipCity': 'Luleå',
  'ShipRegion': null,
  'ShipCountry': 'Sweden'
},
{
  'OrderID': 10673,
  'CustomerID': 'WILMK',
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  'Freight': 22.76,
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        'ShipName': 'Wilman Kala',
        'ShipAddress': 'Keskuskatu 45',
        'ShipCity': 'Helsinki',
        'ShipRegion': null,
        'ShipCountry': 'Finland'
    },
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        'Freight': 0.9,
        'ShipName': 'Island Trading',
        'ShipAddress': 'Garden House Crowther Way',
        'ShipCity': 'Cowes',
        'ShipRegion': 'Isle of Wight',
        'ShipCountry': 'UK'
    },
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        'OrderID': 10675,
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        'Freight': 31.85,
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        'ShipAddress': 'Berliner Platz 43',
        'ShipCity': 'München',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
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        'CustomerID': 'TORTU',
        'OrderDate': '1997-09-22T00:00:00.000Z',
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        'Freight': 2.01,
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        'ShipAddress': 'Avda. Azteca 123',
        'ShipCity': 'México D.F.',
        'ShipRegion': null,
        'ShipCountry': 'Mexico'
    },
    {
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        'CustomerID': 'ANTON',
        'OrderDate': '1997-09-22T00:00:00.000Z',
        'ShippedDate': '1997-09-26T00:00:00.000Z',
        'Freight': 4.03,
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        'ShipAddress': 'Mataderos 2312',
        'ShipCity': 'México D.F.',
        'ShipRegion': null,
        'ShipCountry': 'Mexico'
    },
    {
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        'CustomerID': 'SAVEA',

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    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'BLONP',
    'OrderDate': '1997-09-23T00:00:00.000Z',
    'ShippedDate': '1997-09-30T00:00:00.000Z',
    'Freight': 27.94,
    'ShipName': 'Blondel père et fils',
    'ShipAddress': '24, place Kléber',
    'ShipCity': 'Strasbourg',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
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    'CustomerID': 'OLDWO',
    'OrderDate': '1997-09-24T00:00:00.000Z',
    'ShippedDate': '1997-09-26T00:00:00.000Z',
    'Freight': 26.61,
    'ShipName': 'Old World Delicatessen',
    'ShipAddress': '2743 Bering St.',
    'ShipCity': 'Anchorage',
    'ShipRegion': 'AK',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10681,
    'CustomerID': 'GREAL',
    'OrderDate': '1997-09-25T00:00:00.000Z',
    'ShippedDate': '1997-09-30T00:00:00.000Z',
    'Freight': 76.13,
    'ShipName': 'Great Lakes Food Market',
    'ShipAddress': '2732 Baker Blvd.',
    'ShipCity': 'Eugene',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'ANTON',
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    'ShippedDate': '1997-10-01T00:00:00.000Z',
    'Freight': 36.13,
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    'ShipAddress': 'Mataderos 2312',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },

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  'ShippedDate': '1997-10-01T00:00:00.000Z',
  'Freight': 4.4,
  'ShipName': 'Du monde entier',
  'ShipAddress': '67, rue des Cinquante Otages',
  'ShipCity': 'Nantes',
  'ShipRegion': null,
  'ShipCountry': 'France'
},
{
  'OrderID': 10684,
  'CustomerID': 'OTTIK',
  'OrderDate': '1997-09-26T00:00:00.000Z',
  'ShippedDate': '1997-09-30T00:00:00.000Z',
  'Freight': 145.63,
  'ShipName': 'Ottilies Käseladen',
  'ShipAddress': 'Mehrheimerstr. 369',
  'ShipCity': 'Köln',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10685,
  'CustomerID': 'GOURL',
  'OrderDate': '1997-09-29T00:00:00.000Z',
  'ShippedDate': '1997-10-03T00:00:00.000Z',
  'Freight': 33.75,
  'ShipName': 'Gourmet Lanchonetes',
  'ShipAddress': 'Av. Brasil, 442',
  'ShipCity': 'Campinas',
  'ShipRegion': 'SP',
  'ShipCountry': 'Brazil'
},
{
  'OrderID': 10686,
  'CustomerID': 'PICCO',
  'OrderDate': '1997-09-30T00:00:00.000Z',
  'ShippedDate': '1997-10-08T00:00:00.000Z',
  'Freight': 96.5,
  'ShipName': 'Piccolo und mehr',
  'ShipAddress': 'Geislweg 14',
  'ShipCity': 'Salzburg',
  'ShipRegion': null,
  'ShipCountry': 'Austria'
},
{
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  'CustomerID': 'HUNGO',
  'OrderDate': '1997-09-30T00:00:00.000Z',
  'ShippedDate': '1997-10-30T00:00:00.000Z',
  'Freight': 296.43,
  'ShipName': 'Hungry Owl All-Night Grocers',
  'ShipAddress': '8 Johnstown Road',
  'ShipCity': 'Cork',

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'ShipCountry': 'Ireland'
},
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  'ShippedDate': '1997-10-07T00:00:00.000Z',
  'Freight': 299.09,
  'ShipName': 'Vaffeljernet',
  'ShipAddress': 'Smagsloget 45',
  'ShipCity': 'Århus',
  'ShipRegion': null,
  'ShipCountry': 'Denmark'
},
{
  'OrderID': 10689,
  'CustomerID': 'BERGS',
  'OrderDate': '1997-10-01T00:00:00.000Z',
  'ShippedDate': '1997-10-07T00:00:00.000Z',
  'Freight': 13.42,
  'ShipName': 'Berglunds snabbköp',
  'ShipAddress': 'Berguvsvägen 8',
  'ShipCity': 'Luleå',
  'ShipRegion': null,
  'ShipCountry': 'Sweden'
},
{
  'OrderID': 10690,
  'CustomerID': 'HANAR',
  'OrderDate': '1997-10-02T00:00:00.000Z',
  'ShippedDate': '1997-10-03T00:00:00.000Z',
  'Freight': 15.8,
  'ShipName': 'Hanari Carnes',
  'ShipAddress': 'Rua do Paço, 67',
  'ShipCity': 'Rio de Janeiro',
  'ShipRegion': 'RJ',
  'ShipCountry': 'Brazil'
},
{
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  'CustomerID': 'QUICK',
  'OrderDate': '1997-10-03T00:00:00.000Z',
  'ShippedDate': '1997-10-22T00:00:00.000Z',
  'Freight': 810.05,
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  'ShipAddress': 'Taucherstraße 10',
  'ShipCity': 'Cunewalde',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10692,
  'CustomerID': 'ALFKI',
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  'Freight': 61.02,
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    'ShipCity': 'Berlin',
    'ShipRegion': null,
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  },
  {
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    'CustomerID': 'WHITC',
    'OrderDate': '1997-10-06T00:00:00.000Z',
    'ShippedDate': '1997-10-10T00:00:00.000Z',
    'Freight': 139.34,
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    'ShipAddress': '1029 - 12th Ave. S.',
    'ShipCity': 'Seattle',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10694,
    'CustomerID': 'QUICK',
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    'ShippedDate': '1997-10-09T00:00:00.000Z',
    'Freight': 398.36,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10695,
    'CustomerID': 'WILMK',
    'OrderDate': '1997-10-07T00:00:00.000Z',
    'ShippedDate': '1997-10-14T00:00:00.000Z',
    'Freight': 16.72,
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    'ShipAddress': 'Keskuskatu 45',
    'ShipCity': 'Helsinki',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 10696,
    'CustomerID': 'WHITC',
    'OrderDate': '1997-10-08T00:00:00.000Z',
    'ShippedDate': '1997-10-14T00:00:00.000Z',
    'Freight': 102.55,
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    'ShipAddress': '1029 - 12th Ave. S.',
    'ShipCity': 'Seattle',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
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    'CustomerID': 'LINOD',

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    'ShipAddress': 'Ave. 5 de Mayo Porlamar',
    'ShipCity': 'I. de Margarita',
    'ShipRegion': 'Nueva Esparta',
    'ShipCountry': 'Venezuela'
  },
  {
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    'CustomerID': 'ERNSH',
    'OrderDate': '1997-10-09T00:00:00.000Z',
    'ShippedDate': '1997-10-17T00:00:00.000Z',
    'Freight': 272.47,
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    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
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    'CustomerID': 'MORGK',
    'OrderDate': '1997-10-09T00:00:00.000Z',
    'ShippedDate': '1997-10-13T00:00:00.000Z',
    'Freight': 0.58,
    'ShipName': 'Morgenstern Gesundkost',
    'ShipAddress': 'Heerstr. 22',
    'ShipCity': 'Leipzig',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10700,
    'CustomerID': 'SAVEA',
    'OrderDate': '1997-10-10T00:00:00.000Z',
    'ShippedDate': '1997-10-16T00:00:00.000Z',
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    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10701,
    'CustomerID': 'HUNGO',
    'OrderDate': '1997-10-13T00:00:00.000Z',
    'ShippedDate': '1997-10-15T00:00:00.000Z',
    'Freight': 220.31,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },

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  'CustomerID': 'ALFKI',
  'OrderDate': '1997-10-13T00:00:00.000Z',
  'ShippedDate': '1997-10-21T00:00:00.000Z',
  'Freight': 23.94,
  'ShipName': 'Alfred\'s Futterkiste',
  'ShipAddress': 'Obere Str. 57',
  'ShipCity': 'Berlin',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10703,
  'CustomerID': 'FOLKO',
  'OrderDate': '1997-10-14T00:00:00.000Z',
  'ShippedDate': '1997-10-20T00:00:00.000Z',
  'Freight': 152.3,
  'ShipName': 'Folk och fä HB',
  'ShipAddress': 'Åkergatan 24',
  'ShipCity': 'Bräcke',
  'ShipRegion': null,
  'ShipCountry': 'Sweden'
},
{
  'OrderID': 10704,
  'CustomerID': 'QUEEN',
  'OrderDate': '1997-10-14T00:00:00.000Z',
  'ShippedDate': '1997-11-07T00:00:00.000Z',
  'Freight': 4.78,
  'ShipName': 'Queen Cozinha',
  'ShipAddress': 'Alameda dos Canários, 891',
  'ShipCity': 'Sao Paulo',
  'ShipRegion': 'SP',
  'ShipCountry': 'Brazil'
},
{
  'OrderID': 10705,
  'CustomerID': 'HILAA',
  'OrderDate': '1997-10-15T00:00:00.000Z',
  'ShippedDate': '1997-11-18T00:00:00.000Z',
  'Freight': 3.52,
  'ShipName': 'HILARION-Abastos',
  'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
  'ShipCity': 'San Cristóbal',
  'ShipRegion': 'Táchira',
  'ShipCountry': 'Venezuela'
},
{
  'OrderID': 10706,
  'CustomerID': 'OLDWO',
  'OrderDate': '1997-10-16T00:00:00.000Z',
  'ShippedDate': '1997-10-21T00:00:00.000Z',
  'Freight': 135.63,
  'ShipName': 'Old World Delicatessen',
  'ShipAddress': '2743 Bering St.',
  'ShipCity': 'Anchorage',

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        'ShipRegion': 'AK',
        'ShipCountry': 'USA'
    },
    {
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        'CustomerID': 'AROUT',
        'OrderDate': '1997-10-16T00:00:00.000Z',
        'ShippedDate': '1997-10-23T00:00:00.000Z',
        'Freight': 21.74,
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        'ShipAddress': 'Brook Farm Stratford St. Mary',
        'ShipCity': 'Colchester',
        'ShipRegion': 'Essex',
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10708,
        'CustomerID': 'THEBI',
        'OrderDate': '1997-10-17T00:00:00.000Z',
        'ShippedDate': '1997-11-05T00:00:00.000Z',
        'Freight': 2.96,
        'ShipName': 'The Big Cheese',
        'ShipAddress': '89 Jefferson Way Suite 2',
        'ShipCity': 'Portland',
        'ShipRegion': 'OR',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10709,
        'CustomerID': 'GOURL',
        'OrderDate': '1997-10-17T00:00:00.000Z',
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        'ShipCity': 'Campinas',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
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        'CustomerID': 'FRANS',
        'OrderDate': '1997-10-20T00:00:00.000Z',
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        'Freight': 4.98,
        'ShipName': 'Franchi S.p.A.',
        'ShipAddress': 'Via Monte Bianco 34',
        'ShipCity': 'Torino',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
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        'ShipCity': 'Boise',
        'ShipRegion': 'ID',
        'ShipCountry': 'USA'
    },
    {
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        'Freight': 89.93,
        'ShipName': 'Hungry Owl All-Night Grocers',
        'ShipAddress': '8 Johnstown Road',
        'ShipCity': 'Cork',
        'ShipRegion': 'Co. Cork',
        'ShipCountry': 'Ireland'
    },
    {
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        'Freight': 167.05,
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        'ShipCity': 'Boise',
        'ShipRegion': 'ID',
        'ShipCountry': 'USA'
    },
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        'ShipRegion': 'ID',
        'ShipCountry': 'USA'
    },
    {
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        'OrderDate': '1997-10-23T00:00:00.000Z',
        'ShippedDate': '1997-10-29T00:00:00.000Z',
        'Freight': 63.2,
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        'ShipAddress': '12, rue des Bouchers',
        'ShipCity': 'Marseille',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
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    'ShipRegion': null,
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    'Freight': 59.25,
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    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
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    'CustomerID': 'KOENE',
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    'ShippedDate': '1997-10-29T00:00:00.000Z',
    'Freight': 170.88,
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    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10719,
    'CustomerID': 'LETSS',
    'OrderDate': '1997-10-27T00:00:00.000Z',
    'ShippedDate': '1997-11-05T00:00:00.000Z',
    'Freight': 51.44,
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    'ShipAddress': '87 Polk St. Suite 5',
    'ShipCity': 'San Francisco',
    'ShipRegion': 'CA',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'QUEDE',
    'OrderDate': '1997-10-28T00:00:00.000Z',
    'ShippedDate': '1997-11-05T00:00:00.000Z',
    'Freight': 9.53,
    'ShipName': 'Que Delícia',
    'ShipAddress': 'Rua da Panificadora, 12',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  },

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  'ShippedDate': '1997-10-31T00:00:00.000Z',
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  'ShipAddress': 'Taucherstraße 10',
  'ShipCity': 'Cunewalde',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
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  'CustomerID': 'SAVEA',
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  'ShippedDate': '1997-11-04T00:00:00.000Z',
  'Freight': 74.58,
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  'ShipAddress': '187 Suffolk Ln.',
  'ShipCity': 'Boise',
  'ShipRegion': 'ID',
  'ShipCountry': 'USA'
},
{
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  'ShippedDate': '1997-11-25T00:00:00.000Z',
  'Freight': 21.72,
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  'ShipAddress': '1029-12th Ave. S.',
  'ShipCity': 'Seattle',
  'ShipRegion': 'WA',
  'ShipCountry': 'USA'
},
{
  'OrderID': 10724,
  'CustomerID': 'MEREP',
  'OrderDate': '1997-10-30T00:00:00.000Z',
  'ShippedDate': '1997-11-05T00:00:00.000Z',
  'Freight': 57.75,
  'ShipName': 'Mère Paillarde',
  'ShipAddress': '43 rue St. Laurent',
  'ShipCity': 'Montréal',
  'ShipRegion': 'Québec',
  'ShipCountry': 'Canada'
},
{
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  'CustomerID': 'FAMIA',
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  'ShippedDate': '1997-11-05T00:00:00.000Z',
  'Freight': 10.83,
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  'ShipAddress': 'Rua Orós, 92',
  'ShipCity': 'Sao Paulo',
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        'ShipCity': 'London',
        'ShipRegion': null,
        'ShipCountry': 'UK'
    },
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        'ShipAddress': 'Strada Provinciale 124',
        'ShipCity': 'Reggio Emilia',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
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        'ShipAddress': 'Alameda dos Canários, 891',
        'ShipCity': 'Sao Paulo',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
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        'CustomerID': 'LINOD',
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        'ShippedDate': '1997-11-14T00:00:00.000Z',
        'Freight': 141.06,
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        'ShipAddress': 'Ave. 5 de Mayo Porlamar',
        'ShipCity': 'I. de Margarita',
        'ShipRegion': 'Nueva Esparta',
        'ShipCountry': 'Venezuela'
    },
    {
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        'CustomerID': 'BONAP',
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        'ShippedDate': '1997-11-14T00:00:00.000Z',
        'Freight': 20.12,

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    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
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    'CustomerID': 'CHOPS',
    'OrderDate': '1997-11-06T00:00:00.000Z',
    'ShippedDate': '1997-11-14T00:00:00.000Z',
    'Freight': 96.65,
    'ShipName': 'Chop-suey Chinese',
    'ShipAddress': 'Hauptstr. 31',
    'ShipCity': 'Bern',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
  {
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    'OrderDate': '1997-11-06T00:00:00.000Z',
    'ShippedDate': '1997-11-07T00:00:00.000Z',
    'Freight': 16.97,
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    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
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    'CustomerID': 'BERGS',
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    'ShippedDate': '1997-11-10T00:00:00.000Z',
    'Freight': 110.11,
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    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
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    'CustomerID': 'GOURL',
    'OrderDate': '1997-11-07T00:00:00.000Z',
    'ShippedDate': '1997-11-12T00:00:00.000Z',
    'Freight': 1.63,
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    'ShipAddress': 'Av. Brasil, 442',
    'ShipCity': 'Campinas',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
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    'CustomerID': 'LETSS',

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    'ShipAddress': '87 Polk St. Suite 5',
    'ShipCity': 'San Francisco',
    'ShipRegion': 'CA',
    'ShipCountry': 'USA'
  },
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    'CustomerID': 'HUNGO',
    'OrderDate': '1997-11-11T00:00:00.000Z',
    'ShippedDate': '1997-11-21T00:00:00.000Z',
    'Freight': 44.1,
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    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
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    'CustomerID': 'VINET',
    'OrderDate': '1997-11-11T00:00:00.000Z',
    'ShippedDate': '1997-11-18T00:00:00.000Z',
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    'ShipAddress': '59 rue de l\'Abbaye',
    'ShipCity': 'Reims',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
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    'CustomerID': 'SPECB',
    'OrderDate': '1997-11-12T00:00:00.000Z',
    'ShippedDate': '1997-11-18T00:00:00.000Z',
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    'ShipName': 'Spécialités du monde',
    'ShipAddress': '25, rue Lauriston',
    'ShipCity': 'Paris',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
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    'CustomerID': 'VINET',
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    'ShippedDate': '1997-11-17T00:00:00.000Z',
    'Freight': 11.08,
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    'ShipAddress': '59 rue de l\'Abbaye',
    'ShipCity': 'Reims',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },

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  'Freight': 81.88,
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  'ShipAddress': '1029 - 12th Ave. S.',
  'ShipCity': 'Seattle',
  'ShipRegion': 'WA',
  'ShipCountry': 'USA'
},
{
  'OrderID': 10741,
  'CustomerID': 'AROUT',
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  'ShippedDate': '1997-11-18T00:00:00.000Z',
  'Freight': 10.96,
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  'ShipAddress': 'Brook Farm Stratford St. Mary',
  'ShipCity': 'Colchester',
  'ShipRegion': 'Essex',
  'ShipCountry': 'UK'
},
{
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  'CustomerID': 'BOTTM',
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  'ShippedDate': '1997-11-18T00:00:00.000Z',
  'Freight': 243.73,
  'ShipName': 'Bottom-Dollar Markets',
  'ShipAddress': '23 Tsawassen Blvd.',
  'ShipCity': 'Tsawassen',
  'ShipRegion': 'BC',
  'ShipCountry': 'Canada'
},
{
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  'CustomerID': 'AROUT',
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  'ShippedDate': '1997-11-21T00:00:00.000Z',
  'Freight': 23.72,
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  'ShipCity': 'Colchester',
  'ShipRegion': 'Essex',
  'ShipCountry': 'UK'
},
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  'ShippedDate': '1997-11-24T00:00:00.000Z',
  'Freight': 69.19,
  'ShipName': 'Vaffeljernet',
  'ShipAddress': 'Smagsloget 45',
  'ShipCity': 'Århus',

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'ShipCountry': 'Denmark'
},
{
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  'ShippedDate': '1997-11-27T00:00:00.000Z',
  'Freight': 3.52,
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  'ShipAddress': 'Taucherstraße 10',
  'ShipCity': 'Cunewalde',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10746,
  'CustomerID': 'CHOPS',
  'OrderDate': '1997-11-19T00:00:00.000Z',
  'ShippedDate': '1997-11-21T00:00:00.000Z',
  'Freight': 31.43,
  'ShipName': 'Chop-suey Chinese',
  'ShipAddress': 'Hauptstr. 31',
  'ShipCity': 'Bern',
  'ShipRegion': null,
  'ShipCountry': 'Switzerland'
},
{
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  'CustomerID': 'PICCO',
  'OrderDate': '1997-11-19T00:00:00.000Z',
  'ShippedDate': '1997-11-26T00:00:00.000Z',
  'Freight': 117.33,
  'ShipName': 'Piccolo und mehr',
  'ShipAddress': 'Geislweg 14',
  'ShipCity': 'Salzburg',
  'ShipRegion': null,
  'ShipCountry': 'Austria'
},
{
  'OrderID': 10748,
  'CustomerID': 'SAVEA',
  'OrderDate': '1997-11-20T00:00:00.000Z',
  'ShippedDate': '1997-11-28T00:00:00.000Z',
  'Freight': 232.55,
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  'ShipAddress': '187 Suffolk Ln.',
  'ShipCity': 'Boise',
  'ShipRegion': 'ID',
  'ShipCountry': 'USA'
},
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  'ShippedDate': '1997-12-19T00:00:00.000Z',
  'Freight': 61.53,
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    'ShipRegion': 'Isle of Wight',
    'ShipCountry': 'UK'
  },
  {
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    'CustomerID': 'WARTH',
    'OrderDate': '1997-11-21T00:00:00.000Z',
    'ShippedDate': '1997-11-24T00:00:00.000Z',
    'Freight': 79.3,
    'ShipName': 'Wartian Herkku',
    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
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    'CustomerID': 'RICSU',
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    'ShippedDate': '1997-12-03T00:00:00.000Z',
    'Freight': 130.79,
    'ShipName': 'Richter Supermarkt',
    'ShipAddress': 'Starenweg 5',
    'ShipCity': 'Genève',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
  {
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    'CustomerID': 'NORTS',
    'OrderDate': '1997-11-24T00:00:00.000Z',
    'ShippedDate': '1997-11-28T00:00:00.000Z',
    'Freight': 1.39,
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    'ShipAddress': 'South House 300 Queensbridge',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10753,
    'CustomerID': 'FRANS',
    'OrderDate': '1997-11-25T00:00:00.000Z',
    'ShippedDate': '1997-11-27T00:00:00.000Z',
    'Freight': 7.7,
    'ShipName': 'Franchi S.p.A.',
    'ShipAddress': 'Via Monte Bianco 34',
    'ShipCity': 'Torino',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 10754,
    'CustomerID': 'MAGAA',

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      'OrderDate': '1997-11-25T00:00:00.000Z',
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      'ShipAddress': 'Via Ludovico il Moro 22',
      'ShipCity': 'Bergamo',
      'ShipRegion': null,
      'ShipCountry': 'Italy'
    },
    {
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      'CustomerID': 'BONAP',
      'OrderDate': '1997-11-26T00:00:00.000Z',
      'ShippedDate': '1997-11-28T00:00:00.000Z',
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      'ShipAddress': '12, rue des Bouchers',
      'ShipCity': 'Marseille',
      'ShipRegion': null,
      'ShipCountry': 'France'
    },
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      'CustomerID': 'SPLIR',
      'OrderDate': '1997-11-27T00:00:00.000Z',
      'ShippedDate': '1997-12-02T00:00:00.000Z',
      'Freight': 73.21,
      'ShipName': 'Split Rail Beer & Ale',
      'ShipAddress': 'P.O. Box 555',
      'ShipCity': 'Lander',
      'ShipRegion': 'WY',
      'ShipCountry': 'USA'
    },
    {
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      'CustomerID': 'SAVEA',
      'OrderDate': '1997-11-27T00:00:00.000Z',
      'ShippedDate': '1997-12-15T00:00:00.000Z',
      'Freight': 8.19,
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      'ShipAddress': '187 Suffolk Ln.',
      'ShipCity': 'Boise',
      'ShipRegion': 'ID',
      'ShipCountry': 'USA'
    },
    {
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      'CustomerID': 'RICSU',
      'OrderDate': '1997-11-28T00:00:00.000Z',
      'ShippedDate': '1997-12-04T00:00:00.000Z',
      'Freight': 138.17,
      'ShipName': 'Richter Supermarkt',
      'ShipAddress': 'Starenweg 5',
      'ShipCity': 'Genève',
      'ShipRegion': null,
      'ShipCountry': 'Switzerland'
    }
  ],

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{
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  'Freight': 11.99,
  'ShipName': 'Ana Trujillo Emparedados y helados',
  'ShipAddress': 'Avda. de la Constitución 2222',
  'ShipCity': 'México D.F.',
  'ShipRegion': null,
  'ShipCountry': 'Mexico'
},
{
  'OrderID': 10760,
  'CustomerID': 'MAISD',
  'OrderDate': '1997-12-01T00:00:00.000Z',
  'ShippedDate': '1997-12-10T00:00:00.000Z',
  'Freight': 155.64,
  'ShipName': 'Maison Dewey',
  'ShipAddress': 'Rue Joseph-Bens 532',
  'ShipCity': 'Bruxelles',
  'ShipRegion': null,
  'ShipCountry': 'Belgium'
},
{
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  'CustomerID': 'RATTC',
  'OrderDate': '1997-12-02T00:00:00.000Z',
  'ShippedDate': '1997-12-08T00:00:00.000Z',
  'Freight': 18.66,
  'ShipName': 'Rattlesnake Canyon Grocery',
  'ShipAddress': '2817 Milton Dr.',
  'ShipCity': 'Albuquerque',
  'ShipRegion': 'NM',
  'ShipCountry': 'USA'
},
{
  'OrderID': 10762,
  'CustomerID': 'FOLKO',
  'OrderDate': '1997-12-02T00:00:00.000Z',
  'ShippedDate': '1997-12-09T00:00:00.000Z',
  'Freight': 328.74,
  'ShipName': 'Folk och fä HB',
  'ShipAddress': 'Åkergatan 24',
  'ShipCity': 'Bräcke',
  'ShipRegion': null,
  'ShipCountry': 'Sweden'
},
{
  'OrderID': 10763,
  'CustomerID': 'FOLIG',
  'OrderDate': '1997-12-03T00:00:00.000Z',
  'ShippedDate': '1997-12-08T00:00:00.000Z',
  'Freight': 37.35,
  'ShipName': 'Folies gourmandes',
  'ShipAddress': '184, chaussée de Tournai',
  'ShipCity': 'Lille',

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        'ShipRegion': null,
        'ShipCountry': 'France'
    },
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        'ShippedDate': '1997-12-08T00:00:00.000Z',
        'Freight': 145.45,
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        'ShipAddress': 'Kirchgasse 6',
        'ShipCity': 'Graz',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
        'OrderID': 10765,
        'CustomerID': 'QUICK',
        'OrderDate': '1997-12-04T00:00:00.000Z',
        'ShippedDate': '1997-12-09T00:00:00.000Z',
        'Freight': 42.74,
        'ShipName': 'QUICK-Stop',
        'ShipAddress': 'Taucherstraße 10',
        'ShipCity': 'Cunewalde',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10766,
        'CustomerID': 'OTTIK',
        'OrderDate': '1997-12-05T00:00:00.000Z',
        'ShippedDate': '1997-12-09T00:00:00.000Z',
        'Freight': 157.55,
        'ShipName': 'Ottilies Käseladen',
        'ShipAddress': 'Mehrheimerstr. 369',
        'ShipCity': 'Köln',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10767,
        'CustomerID': 'SUPRD',
        'OrderDate': '1997-12-05T00:00:00.000Z',
        'ShippedDate': '1997-12-15T00:00:00.000Z',
        'Freight': 1.59,
        'ShipName': 'Suprêmes délices',
        'ShipAddress': 'Boulevard Tirou, 255',
        'ShipCity': 'Charleroi',
        'ShipRegion': null,
        'ShipCountry': 'Belgium'
    },
    {
        'OrderID': 10768,
        'CustomerID': 'AROUT',
        'OrderDate': '1997-12-08T00:00:00.000Z',
        'ShippedDate': '1997-12-15T00:00:00.000Z',
        'Freight': 146.32,

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    'ShipCity': 'Colchester',
    'ShipRegion': 'Essex',
    'ShipCountry': 'UK'
  },
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    'CustomerID': 'VAFFE',
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    'ShippedDate': '1997-12-12T00:00:00.000Z',
    'Freight': 65.06,
    'ShipName': 'Vaffeljernet',
    'ShipAddress': 'Smagsloget 45',
    'ShipCity': 'Århus',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
    'OrderID': 10770,
    'CustomerID': 'HANAR',
    'OrderDate': '1997-12-09T00:00:00.000Z',
    'ShippedDate': '1997-12-17T00:00:00.000Z',
    'Freight': 5.32,
    'ShipName': 'Hanari Carnes',
    'ShipAddress': 'Rua do Paço, 67',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10771,
    'CustomerID': 'ERNSH',
    'OrderDate': '1997-12-10T00:00:00.000Z',
    'ShippedDate': '1998-01-02T00:00:00.000Z',
    'Freight': 11.19,
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    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10772,
    'CustomerID': 'LEHMS',
    'OrderDate': '1997-12-10T00:00:00.000Z',
    'ShippedDate': '1997-12-19T00:00:00.000Z',
    'Freight': 91.28,
    'ShipName': 'Lehmanns Marktstand',
    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10773,
    'CustomerID': 'ERNSH',

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    'OrderDate': '1997-12-11T00:00:00.000Z',
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    'Freight': 96.43,
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    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
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    'CustomerID': 'FOLKO',
    'OrderDate': '1997-12-11T00:00:00.000Z',
    'ShippedDate': '1997-12-12T00:00:00.000Z',
    'Freight': 48.2,
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    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
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    'CustomerID': 'THECR',
    'OrderDate': '1997-12-12T00:00:00.000Z',
    'ShippedDate': '1997-12-26T00:00:00.000Z',
    'Freight': 20.25,
    'ShipName': 'The Cracker Box',
    'ShipAddress': '55 Grizzly Peak Rd.',
    'ShipCity': 'Butte',
    'ShipRegion': 'MT',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10776,
    'CustomerID': 'ERNSH',
    'OrderDate': '1997-12-15T00:00:00.000Z',
    'ShippedDate': '1997-12-18T00:00:00.000Z',
    'Freight': 351.53,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10777,
    'CustomerID': 'GOURL',
    'OrderDate': '1997-12-15T00:00:00.000Z',
    'ShippedDate': '1998-01-21T00:00:00.000Z',
    'Freight': 3.01,
    'ShipName': 'Gourmet Lanchonetes',
    'ShipAddress': 'Av. Brasil, 442',
    'ShipCity': 'Campinas',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },

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{
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    'CustomerID': 'BERGS',
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    'ShippedDate': '1997-12-24T00:00:00.000Z',
    'Freight': 6.79,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
},
{
    'OrderID': 10779,
    'CustomerID': 'MORGK',
    'OrderDate': '1997-12-16T00:00:00.000Z',
    'ShippedDate': '1998-01-14T00:00:00.000Z',
    'Freight': 58.13,
    'ShipName': 'Morgenstern Gesundkost',
    'ShipAddress': 'Heerstr. 22',
    'ShipCity': 'Leipzig',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
},
{
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    'CustomerID': 'LILAS',
    'OrderDate': '1997-12-16T00:00:00.000Z',
    'ShippedDate': '1997-12-25T00:00:00.000Z',
    'Freight': 42.13,
    'ShipName': 'LILA-Supermercado',
    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
},
{
    'OrderID': 10781,
    'CustomerID': 'WARTH',
    'OrderDate': '1997-12-17T00:00:00.000Z',
    'ShippedDate': '1997-12-19T00:00:00.000Z',
    'Freight': 73.16,
    'ShipName': 'Wartian Herkku',
    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
},
{
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    'CustomerID': 'CACTU',
    'OrderDate': '1997-12-17T00:00:00.000Z',
    'ShippedDate': '1997-12-22T00:00:00.000Z',
    'Freight': 1.1,
    'ShipName': 'Cactus Comidas para llevar',
    'ShipAddress': 'Cerrito 333',
    'ShipCity': 'Buenos Aires',

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        'ShipRegion': null,
        'ShipCountry': 'Argentina'
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        'CustomerID': 'HANAR',
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        'ShippedDate': '1997-12-19T00:00:00.000Z',
        'Freight': 124.98,
        'ShipName': 'Hanari Carnes',
        'ShipAddress': 'Rua do Paço, 67',
        'ShipCity': 'Rio de Janeiro',
        'ShipRegion': 'RJ',
        'ShipCountry': 'Brazil'
    },
    {
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        'CustomerID': 'MAGAA',
        'OrderDate': '1997-12-18T00:00:00.000Z',
        'ShippedDate': '1997-12-22T00:00:00.000Z',
        'Freight': 70.09,
        'ShipName': 'Magazzini Alimentari Riuniti',
        'ShipAddress': 'Via Ludovico il Moro 22',
        'ShipCity': 'Bergamo',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
    {
        'OrderID': 10785,
        'CustomerID': 'GROSR',
        'OrderDate': '1997-12-18T00:00:00.000Z',
        'ShippedDate': '1997-12-24T00:00:00.000Z',
        'Freight': 1.51,
        'ShipName': 'GROSELLA-Restaurante',
        'ShipAddress': '5ª Ave. Los Palos Grandes',
        'ShipCity': 'Caracas',
        'ShipRegion': 'DF',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 10786,
        'CustomerID': 'QUEEN',
        'OrderDate': '1997-12-19T00:00:00.000Z',
        'ShippedDate': '1997-12-23T00:00:00.000Z',
        'Freight': 110.87,
        'ShipName': 'Queen Cozinha',
        'ShipAddress': 'Alameda dos Canários, 891',
        'ShipCity': 'Sao Paulo',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10787,
        'CustomerID': 'LAMAI',
        'OrderDate': '1997-12-19T00:00:00.000Z',
        'ShippedDate': '1997-12-26T00:00:00.000Z',
        'Freight': 249.93,

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    'ShipName': 'La maison d\'Asie',
    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10788,
    'CustomerID': 'QUICK',
    'OrderDate': '1997-12-22T00:00:00.000Z',
    'ShippedDate': '1998-01-19T00:00:00.000Z',
    'Freight': 42.7,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10789,
    'CustomerID': 'FOLIG',
    'OrderDate': '1997-12-22T00:00:00.000Z',
    'ShippedDate': '1997-12-31T00:00:00.000Z',
    'Freight': 100.6,
    'ShipName': 'Folies gourmandes',
    'ShipAddress': '184, chaussée de Tournai',
    'ShipCity': 'Lille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10790,
    'CustomerID': 'GOURL',
    'OrderDate': '1997-12-22T00:00:00.000Z',
    'ShippedDate': '1997-12-26T00:00:00.000Z',
    'Freight': 28.23,
    'ShipName': 'Gourmet Lanchonetes',
    'ShipAddress': 'Av. Brasil, 442',
    'ShipCity': 'Campinas',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10791,
    'CustomerID': 'FRANK',
    'OrderDate': '1997-12-23T00:00:00.000Z',
    'ShippedDate': '1998-01-01T00:00:00.000Z',
    'Freight': 16.85,
    'ShipName': 'Frankenversand',
    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
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    'CustomerID': 'WOLZA',

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    'ShipAddress': 'ul. Filtrowa 68',
    'ShipCity': 'Warszawa',
    'ShipRegion': null,
    'ShipCountry': 'Poland'
  },
  {
    'OrderID': 10793,
    'CustomerID': 'AROUT',
    'OrderDate': '1997-12-24T00:00:00.000Z',
    'ShippedDate': '1998-01-08T00:00:00.000Z',
    'Freight': 4.52,
    'ShipName': 'Around the Horn',
    'ShipAddress': 'Brook Farm Stratford St. Mary',
    'ShipCity': 'Colchester',
    'ShipRegion': 'Essex',
    'ShipCountry': 'UK'
  },
  {
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    'CustomerID': 'QUEDE',
    'OrderDate': '1997-12-24T00:00:00.000Z',
    'ShippedDate': '1998-01-02T00:00:00.000Z',
    'Freight': 21.49,
    'ShipName': 'Que Delícia',
    'ShipAddress': 'Rua da Panificadora, 12',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10795,
    'CustomerID': 'ERNSH',
    'OrderDate': '1997-12-24T00:00:00.000Z',
    'ShippedDate': '1998-01-20T00:00:00.000Z',
    'Freight': 126.66,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
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    'CustomerID': 'HILAA',
    'OrderDate': '1997-12-25T00:00:00.000Z',
    'ShippedDate': '1998-01-14T00:00:00.000Z',
    'Freight': 26.52,
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    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },

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{
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    'CustomerID': 'DRACD',
    'OrderDate': '1997-12-25T00:00:00.000Z',
    'ShippedDate': '1998-01-05T00:00:00.000Z',
    'Freight': 33.35,
    'ShipName': 'Drachenblut Delikatessen',
    'ShipAddress': 'Walserweg 21',
    'ShipCity': 'Aachen',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
},
{
    'OrderID': 10798,
    'CustomerID': 'ISLAT',
    'OrderDate': '1997-12-26T00:00:00.000Z',
    'ShippedDate': '1998-01-05T00:00:00.000Z',
    'Freight': 2.33,
    'ShipName': 'Island Trading',
    'ShipAddress': 'Garden House Crowther Way',
    'ShipCity': 'Cowes',
    'ShipRegion': 'Isle of Wight',
    'ShipCountry': 'UK'
},
{
    'OrderID': 10799,
    'CustomerID': 'KOENE',
    'OrderDate': '1997-12-26T00:00:00.000Z',
    'ShippedDate': '1998-01-05T00:00:00.000Z',
    'Freight': 30.76,
    'ShipName': 'Königlich Essen',
    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
},
{
    'OrderID': 10800,
    'CustomerID': 'SEVES',
    'OrderDate': '1997-12-26T00:00:00.000Z',
    'ShippedDate': '1998-01-05T00:00:00.000Z',
    'Freight': 137.44,
    'ShipName': 'Seven Seas Imports',
    'ShipAddress': '90 Wadhurst Rd.',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
},
{
    'OrderID': 10801,
    'CustomerID': 'BOLID',
    'OrderDate': '1997-12-29T00:00:00.000Z',
    'ShippedDate': '1997-12-31T00:00:00.000Z',
    'Freight': 97.09,
    'ShipName': 'Bólido Comidas preparadas',
    'ShipAddress': 'C/ Araquil, 67',
    'ShipCity': 'Madrid',

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        'ShipRegion': null,
        'ShipCountry': 'Spain'
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        'CustomerID': 'SIMOB',
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        'ShippedDate': '1998-01-02T00:00:00.000Z',
        'Freight': 257.26,
        'ShipName': 'Simons bistro',
        'ShipAddress': 'Vinbæltet 34',
        'ShipCity': 'Kobenhavn',
        'ShipRegion': null,
        'ShipCountry': 'Denmark'
    },
    {
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        'CustomerID': 'WELLI',
        'OrderDate': '1997-12-30T00:00:00.000Z',
        'ShippedDate': '1998-01-06T00:00:00.000Z',
        'Freight': 55.23,
        'ShipName': 'Wellington Importadora',
        'ShipAddress': 'Rua do Mercado, 12',
        'ShipCity': 'Resende',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10804,
        'CustomerID': 'SEVES',
        'OrderDate': '1997-12-30T00:00:00.000Z',
        'ShippedDate': '1998-01-07T00:00:00.000Z',
        'Freight': 27.33,
        'ShipName': 'Seven Seas Imports',
        'ShipAddress': '90 Wadhurst Rd.',
        'ShipCity': 'London',
        'ShipRegion': null,
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10805,
        'CustomerID': 'THEBI',
        'OrderDate': '1997-12-30T00:00:00.000Z',
        'ShippedDate': '1998-01-09T00:00:00.000Z',
        'Freight': 237.34,
        'ShipName': 'The Big Cheese',
        'ShipAddress': '89 Jefferson Way Suite 2',
        'ShipCity': 'Portland',
        'ShipRegion': 'OR',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10806,
        'CustomerID': 'VICTE',
        'OrderDate': '1997-12-31T00:00:00.000Z',
        'ShippedDate': '1998-01-05T00:00:00.000Z',
        'Freight': 22.11,

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        'ShipName': 'Victuailles en stock',
        'ShipAddress': '2, rue du Commerce',
        'ShipCity': 'Lyon',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10807,
        'CustomerID': 'FRANS',
        'OrderDate': '1997-12-31T00:00:00.000Z',
        'ShippedDate': '1998-01-30T00:00:00.000Z',
        'Freight': 1.36,
        'ShipName': 'Franchi S.p.A.',
        'ShipAddress': 'Via Monte Bianco 34',
        'ShipCity': 'Torino',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
    {
        'OrderID': 10808,
        'CustomerID': 'OLDWO',
        'OrderDate': '1998-01-01T00:00:00.000Z',
        'ShippedDate': '1998-01-09T00:00:00.000Z',
        'Freight': 45.53,
        'ShipName': 'Old World Delicatessen',
        'ShipAddress': '2743 Bering St.',
        'ShipCity': 'Anchorage',
        'ShipRegion': 'AK',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10809,
        'CustomerID': 'WELLI',
        'OrderDate': '1998-01-01T00:00:00.000Z',
        'ShippedDate': '1998-01-07T00:00:00.000Z',
        'Freight': 4.87,
        'ShipName': 'Wellington Importadora',
        'ShipAddress': 'Rua do Mercado, 12',
        'ShipCity': 'Resende',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10810,
        'CustomerID': 'LAUGB',
        'OrderDate': '1998-01-01T00:00:00.000Z',
        'ShippedDate': '1998-01-07T00:00:00.000Z',
        'Freight': 4.33,
        'ShipName': 'Laughing Bacchus Wine Cellars',
        'ShipAddress': '2319 Elm St.',
        'ShipCity': 'Vancouver',
        'ShipRegion': 'BC',
        'ShipCountry': 'Canada'
    },
    {
        'OrderID': 10811,
        'CustomerID': 'LINOD',

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    'ShippedDate': '1998-01-08T00:00:00.000Z',
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    'ShipAddress': 'Ave. 5 de Mayo Porlamar',
    'ShipCity': 'I. de Margarita',
    'ShipRegion': 'Nueva Esparta',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10812,
    'CustomerID': 'REGGC',
    'OrderDate': '1998-01-02T00:00:00.000Z',
    'ShippedDate': '1998-01-12T00:00:00.000Z',
    'Freight': 59.78,
    'ShipName': 'Reggiani Caseifici',
    'ShipAddress': 'Strada Provinciale 124',
    'ShipCity': 'Reggio Emilia',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 10813,
    'CustomerID': 'RICAR',
    'OrderDate': '1998-01-05T00:00:00.000Z',
    'ShippedDate': '1998-01-09T00:00:00.000Z',
    'Freight': 47.38,
    'ShipName': 'Ricardo Adocicados',
    'ShipAddress': 'Av. Copacabana, 267',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10814,
    'CustomerID': 'VICTE',
    'OrderDate': '1998-01-05T00:00:00.000Z',
    'ShippedDate': '1998-01-14T00:00:00.000Z',
    'Freight': 130.94,
    'ShipName': 'Victuailles en stock',
    'ShipAddress': '2, rue du Commerce',
    'ShipCity': 'Lyon',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10815,
    'CustomerID': 'SAVEA',
    'OrderDate': '1998-01-05T00:00:00.000Z',
    'ShippedDate': '1998-01-14T00:00:00.000Z',
    'Freight': 14.62,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  }
},

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{
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    'CustomerID': 'GREAL',
    'OrderDate': '1998-01-06T00:00:00.000Z',
    'ShippedDate': '1998-02-04T00:00:00.000Z',
    'Freight': 719.78,
    'ShipName': 'Great Lakes Food Market',
    'ShipAddress': '2732 Baker Blvd.',
    'ShipCity': 'Eugene',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
},
{
    'OrderID': 10817,
    'CustomerID': 'KOENE',
    'OrderDate': '1998-01-06T00:00:00.000Z',
    'ShippedDate': '1998-01-13T00:00:00.000Z',
    'Freight': 306.07,
    'ShipName': 'Königlich Essen',
    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
},
{
    'OrderID': 10818,
    'CustomerID': 'MAGAA',
    'OrderDate': '1998-01-07T00:00:00.000Z',
    'ShippedDate': '1998-01-12T00:00:00.000Z',
    'Freight': 65.48,
    'ShipName': 'Magazzini Alimentari Riuniti',
    'ShipAddress': 'Via Ludovico il Moro 22',
    'ShipCity': 'Bergamo',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
},
{
    'OrderID': 10819,
    'CustomerID': 'CACTU',
    'OrderDate': '1998-01-07T00:00:00.000Z',
    'ShippedDate': '1998-01-16T00:00:00.000Z',
    'Freight': 19.76,
    'ShipName': 'Cactus Comidas para llevar',
    'ShipAddress': 'Cerrito 333',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
},
{
    'OrderID': 10820,
    'CustomerID': 'RATTC',
    'OrderDate': '1998-01-07T00:00:00.000Z',
    'ShippedDate': '1998-01-13T00:00:00.000Z',
    'Freight': 37.52,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',

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        'ShipRegion': 'NM',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10821,
        'CustomerID': 'SPLIR',
        'OrderDate': '1998-01-08T00:00:00.000Z',
        'ShippedDate': '1998-01-15T00:00:00.000Z',
        'Freight': 36.68,
        'ShipName': 'Split Rail Beer & Ale',
        'ShipAddress': 'P.O. Box 555',
        'ShipCity': 'Lander',
        'ShipRegion': 'WY',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10822,
        'CustomerID': 'TRAIH',
        'OrderDate': '1998-01-08T00:00:00.000Z',
        'ShippedDate': '1998-01-16T00:00:00.000Z',
        'Freight': 7,
        'ShipName': 'Trail\'s Head Gourmet Provisioners',
        'ShipAddress': '722 DaVinci Blvd.',
        'ShipCity': 'Kirkland',
        'ShipRegion': 'WA',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10823,
        'CustomerID': 'LILAS',
        'OrderDate': '1998-01-09T00:00:00.000Z',
        'ShippedDate': '1998-01-13T00:00:00.000Z',
        'Freight': 163.97,
        'ShipName': 'LILA-Supermercado',
        'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
        'ShipCity': 'Barquisimeto',
        'ShipRegion': 'Lara',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 10824,
        'CustomerID': 'FOLKO',
        'OrderDate': '1998-01-09T00:00:00.000Z',
        'ShippedDate': '1998-01-30T00:00:00.000Z',
        'Freight': 1.23,
        'ShipName': 'Folk och fä HB',
        'ShipAddress': 'Åkergatan 24',
        'ShipCity': 'Bräcke',
        'ShipRegion': null,
        'ShipCountry': 'Sweden'
    },
    {
        'OrderID': 10825,
        'CustomerID': 'DRACD',
        'OrderDate': '1998-01-09T00:00:00.000Z',
        'ShippedDate': '1998-01-14T00:00:00.000Z',
        'Freight': 79.25,

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    'ShipName': 'Drachenblut Delikatessen',
    'ShipAddress': 'Walserweg 21',
    'ShipCity': 'Aachen',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10826,
    'CustomerID': 'BLONP',
    'OrderDate': '1998-01-12T00:00:00.000Z',
    'ShippedDate': '1998-02-06T00:00:00.000Z',
    'Freight': 7.09,
    'ShipName': 'Blondel père et fils',
    'ShipAddress': '24, place Kléber',
    'ShipCity': 'Strasbourg',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10827,
    'CustomerID': 'BONAP',
    'OrderDate': '1998-01-12T00:00:00.000Z',
    'ShippedDate': '1998-02-06T00:00:00.000Z',
    'Freight': 63.54,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10828,
    'CustomerID': 'RANCH',
    'OrderDate': '1998-01-13T00:00:00.000Z',
    'ShippedDate': '1998-02-04T00:00:00.000Z',
    'Freight': 90.85,
    'ShipName': 'Rancho grande',
    'ShipAddress': 'Av. del Libertador 900',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },
  {
    'OrderID': 10829,
    'CustomerID': 'ISLAT',
    'OrderDate': '1998-01-13T00:00:00.000Z',
    'ShippedDate': '1998-01-23T00:00:00.000Z',
    'Freight': 154.72,
    'ShipName': 'Island Trading',
    'ShipAddress': 'Garden House Crowther Way',
    'ShipCity': 'Cowes',
    'ShipRegion': 'Isle of Wight',
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10830,
    'CustomerID': 'TRADH',

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    'OrderDate': '1998-01-13T00:00:00.000Z',
    'ShippedDate': '1998-01-21T00:00:00.000Z',
    'Freight': 81.83,
    'ShipName': 'Tradiçao Hipermercados',
    'ShipAddress': 'Av. Inês de Castro, 414',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10831,
    'CustomerID': 'SANTG',
    'OrderDate': '1998-01-14T00:00:00.000Z',
    'ShippedDate': '1998-01-23T00:00:00.000Z',
    'Freight': 72.19,
    'ShipName': 'Santé Gourmet',
    'ShipAddress': 'Erling Skakkess gate 78',
    'ShipCity': 'Stavern',
    'ShipRegion': null,
    'ShipCountry': 'Norway'
  },
  {
    'OrderID': 10832,
    'CustomerID': 'LAMAI',
    'OrderDate': '1998-01-14T00:00:00.000Z',
    'ShippedDate': '1998-01-19T00:00:00.000Z',
    'Freight': 43.26,
    'ShipName': 'La maison d\'Asie',
    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10833,
    'CustomerID': 'OTTIK',
    'OrderDate': '1998-01-15T00:00:00.000Z',
    'ShippedDate': '1998-01-23T00:00:00.000Z',
    'Freight': 71.49,
    'ShipName': 'Ottilies Käseladen',
    'ShipAddress': 'Mehrheimerstr. 369',
    'ShipCity': 'Köln',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10834,
    'CustomerID': 'TRADH',
    'OrderDate': '1998-01-15T00:00:00.000Z',
    'ShippedDate': '1998-01-19T00:00:00.000Z',
    'Freight': 29.78,
    'ShipName': 'Tradiçao Hipermercados',
    'ShipAddress': 'Av. Inês de Castro, 414',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },

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{
  'OrderID': 10835,
  'CustomerID': 'ALFKI',
  'OrderDate': '1998-01-15T00:00:00.000Z',
  'ShippedDate': '1998-01-21T00:00:00.000Z',
  'Freight': 69.53,
  'ShipName': 'Alfred\'s Futterkiste',
  'ShipAddress': 'Obere Str. 57',
  'ShipCity': 'Berlin',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10836,
  'CustomerID': 'ERNSH',
  'OrderDate': '1998-01-16T00:00:00.000Z',
  'ShippedDate': '1998-01-21T00:00:00.000Z',
  'Freight': 411.88,
  'ShipName': 'Ernst Handel',
  'ShipAddress': 'Kirchgasse 6',
  'ShipCity': 'Graz',
  'ShipRegion': null,
  'ShipCountry': 'Austria'
},
{
  'OrderID': 10837,
  'CustomerID': 'BERGS',
  'OrderDate': '1998-01-16T00:00:00.000Z',
  'ShippedDate': '1998-01-23T00:00:00.000Z',
  'Freight': 13.32,
  'ShipName': 'Berglunds snabbköp',
  'ShipAddress': 'Berguvsvägen 8',
  'ShipCity': 'Luleå',
  'ShipRegion': null,
  'ShipCountry': 'Sweden'
},
{
  'OrderID': 10838,
  'CustomerID': 'LINOD',
  'OrderDate': '1998-01-19T00:00:00.000Z',
  'ShippedDate': '1998-01-23T00:00:00.000Z',
  'Freight': 59.28,
  'ShipName': 'LINO-Delicateses',
  'ShipAddress': 'Ave. 5 de Mayo Porlamar',
  'ShipCity': 'I. de Margarita',
  'ShipRegion': 'Nueva Esparta',
  'ShipCountry': 'Venezuela'
},
{
  'OrderID': 10839,
  'CustomerID': 'TRADH',
  'OrderDate': '1998-01-19T00:00:00.000Z',
  'ShippedDate': '1998-01-22T00:00:00.000Z',
  'Freight': 35.43,
  'ShipName': 'Tradiçao Hipermercados',
  'ShipAddress': 'Av. Inês de Castro, 414',
  'ShipCity': 'Sao Paulo',

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        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10840,
        'CustomerID': 'LINOD',
        'OrderDate': '1998-01-19T00:00:00.000Z',
        'ShippedDate': '1998-02-16T00:00:00.000Z',
        'Freight': 2.71,
        'ShipName': 'LINO-Delicateses',
        'ShipAddress': 'Ave. 5 de Mayo Porlamar',
        'ShipCity': 'I. de Margarita',
        'ShipRegion': 'Nueva Esparta',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 10841,
        'CustomerID': 'SUPRD',
        'OrderDate': '1998-01-20T00:00:00.000Z',
        'ShippedDate': '1998-01-29T00:00:00.000Z',
        'Freight': 424.3,
        'ShipName': 'Suprêmes délices',
        'ShipAddress': 'Boulevard Tirou, 255',
        'ShipCity': 'Charleroi',
        'ShipRegion': null,
        'ShipCountry': 'Belgium'
    },
    {
        'OrderID': 10842,
        'CustomerID': 'TORTU',
        'OrderDate': '1998-01-20T00:00:00.000Z',
        'ShippedDate': '1998-01-29T00:00:00.000Z',
        'Freight': 54.42,
        'ShipName': 'Tortuga Restaurante',
        'ShipAddress': 'Avda. Azteca 123',
        'ShipCity': 'México D.F.',
        'ShipRegion': null,
        'ShipCountry': 'Mexico'
    },
    {
        'OrderID': 10843,
        'CustomerID': 'VICTE',
        'OrderDate': '1998-01-21T00:00:00.000Z',
        'ShippedDate': '1998-01-26T00:00:00.000Z',
        'Freight': 9.26,
        'ShipName': 'Victuailles en stock',
        'ShipAddress': '2, rue du Commerce',
        'ShipCity': 'Lyon',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10844,
        'CustomerID': 'PICCO',
        'OrderDate': '1998-01-21T00:00:00.000Z',
        'ShippedDate': '1998-01-26T00:00:00.000Z',
        'Freight': 25.22,

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    'ShipName': 'Piccolo und mehr',
    'ShipAddress': 'Geislweg 14',
    'ShipCity': 'Salzburg',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10845,
    'CustomerID': 'QUICK',
    'OrderDate': '1998-01-21T00:00:00.000Z',
    'ShippedDate': '1998-01-30T00:00:00.000Z',
    'Freight': 212.98,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10846,
    'CustomerID': 'SUPRD',
    'OrderDate': '1998-01-22T00:00:00.000Z',
    'ShippedDate': '1998-01-23T00:00:00.000Z',
    'Freight': 56.46,
    'ShipName': 'Suprêmes délices',
    'ShipAddress': 'Boulevard Tirou, 255',
    'ShipCity': 'Charleroi',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
    'OrderID': 10847,
    'CustomerID': 'SAVEA',
    'OrderDate': '1998-01-22T00:00:00.000Z',
    'ShippedDate': '1998-02-10T00:00:00.000Z',
    'Freight': 487.57,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10848,
    'CustomerID': 'CONSH',
    'OrderDate': '1998-01-23T00:00:00.000Z',
    'ShippedDate': '1998-01-29T00:00:00.000Z',
    'Freight': 38.24,
    'ShipName': 'Consolidated Holdings',
    'ShipAddress': 'Berkeley Gardens 12 Brewery',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10849,
    'CustomerID': 'KOENE',

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    'OrderDate': '1998-01-23T00:00:00.000Z',
    'ShippedDate': '1998-01-30T00:00:00.000Z',
    'Freight': 0.56,
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    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10850,
    'CustomerID': 'VICTE',
    'OrderDate': '1998-01-23T00:00:00.000Z',
    'ShippedDate': '1998-01-30T00:00:00.000Z',
    'Freight': 49.19,
    'ShipName': 'Victuailles en stock',
    'ShipAddress': '2, rue du Commerce',
    'ShipCity': 'Lyon',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10851,
    'CustomerID': 'RICAR',
    'OrderDate': '1998-01-26T00:00:00.000Z',
    'ShippedDate': '1998-02-02T00:00:00.000Z',
    'Freight': 160.55,
    'ShipName': 'Ricardo Adocicados',
    'ShipAddress': 'Av. Copacabana, 267',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10852,
    'CustomerID': 'RATTC',
    'OrderDate': '1998-01-26T00:00:00.000Z',
    'ShippedDate': '1998-01-30T00:00:00.000Z',
    'Freight': 174.05,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10853,
    'CustomerID': 'BLAUS',
    'OrderDate': '1998-01-27T00:00:00.000Z',
    'ShippedDate': '1998-02-03T00:00:00.000Z',
    'Freight': 53.83,
    'ShipName': 'Blauer See Delikatessen',
    'ShipAddress': 'Forsterstr. 57',
    'ShipCity': 'Mannheim',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },

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{
  'OrderID': 10854,
  'CustomerID': 'ERNSH',
  'OrderDate': '1998-01-27T00:00:00.000Z',
  'ShippedDate': '1998-02-05T00:00:00.000Z',
  'Freight': 100.22,
  'ShipName': 'Ernst Handel',
  'ShipAddress': 'Kirchgasse 6',
  'ShipCity': 'Graz',
  'ShipRegion': null,
  'ShipCountry': 'Austria'
},
{
  'OrderID': 10855,
  'CustomerID': 'OLDWO',
  'OrderDate': '1998-01-27T00:00:00.000Z',
  'ShippedDate': '1998-02-04T00:00:00.000Z',
  'Freight': 170.97,
  'ShipName': 'Old World Delicatessen',
  'ShipAddress': '2743 Bering St.',
  'ShipCity': 'Anchorage',
  'ShipRegion': 'AK',
  'ShipCountry': 'USA'
},
{
  'OrderID': 10856,
  'CustomerID': 'ANTON',
  'OrderDate': '1998-01-28T00:00:00.000Z',
  'ShippedDate': '1998-02-10T00:00:00.000Z',
  'Freight': 58.43,
  'ShipName': 'Antonio Moreno Taquería',
  'ShipAddress': 'Mataderos 2312',
  'ShipCity': 'México D.F.',
  'ShipRegion': null,
  'ShipCountry': 'Mexico'
},
{
  'OrderID': 10857,
  'CustomerID': 'BERGS',
  'OrderDate': '1998-01-28T00:00:00.000Z',
  'ShippedDate': '1998-02-06T00:00:00.000Z',
  'Freight': 188.85,
  'ShipName': 'Berglunds snabbköp',
  'ShipAddress': 'Berguvsvägen 8',
  'ShipCity': 'Luleå',
  'ShipRegion': null,
  'ShipCountry': 'Sweden'
},
{
  'OrderID': 10858,
  'CustomerID': 'LACOR',
  'OrderDate': '1998-01-29T00:00:00.000Z',
  'ShippedDate': '1998-02-03T00:00:00.000Z',
  'Freight': 52.51,
  'ShipName': 'La corne d\'abondance',
  'ShipAddress': '67, avenue de l\'Europe',
  'ShipCity': 'Versailles',

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        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10859,
        'CustomerID': 'FRANK',
        'OrderDate': '1998-01-29T00:00:00.000Z',
        'ShippedDate': '1998-02-02T00:00:00.000Z',
        'Freight': 76.1,
        'ShipName': 'Frankenversand',
        'ShipAddress': 'Berliner Platz 43',
        'ShipCity': 'München',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10860,
        'CustomerID': 'FRANR',
        'OrderDate': '1998-01-29T00:00:00.000Z',
        'ShippedDate': '1998-02-04T00:00:00.000Z',
        'Freight': 19.26,
        'ShipName': 'France restauration',
        'ShipAddress': '54, rue Royale',
        'ShipCity': 'Nantes',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10861,
        'CustomerID': 'WHITC',
        'OrderDate': '1998-01-30T00:00:00.000Z',
        'ShippedDate': '1998-02-17T00:00:00.000Z',
        'Freight': 14.93,
        'ShipName': 'White Clover Markets',
        'ShipAddress': '1029 - 12th Ave. S.',
        'ShipCity': 'Seattle',
        'ShipRegion': 'WA',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10862,
        'CustomerID': 'LEHMS',
        'OrderDate': '1998-01-30T00:00:00.000Z',
        'ShippedDate': '1998-02-02T00:00:00.000Z',
        'Freight': 53.23,
        'ShipName': 'Lehmanns Marktstand',
        'ShipAddress': 'Magazinweg 7',
        'ShipCity': 'Frankfurt a.M.',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10863,
        'CustomerID': 'HILAA',
        'OrderDate': '1998-02-02T00:00:00.000Z',
        'ShippedDate': '1998-02-17T00:00:00.000Z',
        'Freight': 30.26,

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    'ShipName': 'HILARION-Abastos',
    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10864,
    'CustomerID': 'AROUT',
    'OrderDate': '1998-02-02T00:00:00.000Z',
    'ShippedDate': '1998-02-09T00:00:00.000Z',
    'Freight': 3.04,
    'ShipName': 'Around the Horn',
    'ShipAddress': 'Brook Farm Stratford St. Mary',
    'ShipCity': 'Colchester',
    'ShipRegion': 'Essex',
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10865,
    'CustomerID': 'QUICK',
    'OrderDate': '1998-02-02T00:00:00.000Z',
    'ShippedDate': '1998-02-12T00:00:00.000Z',
    'Freight': 348.14,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10866,
    'CustomerID': 'BERGS',
    'OrderDate': '1998-02-03T00:00:00.000Z',
    'ShippedDate': '1998-02-12T00:00:00.000Z',
    'Freight': 109.11,
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    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
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    'OrderDate': '1998-02-03T00:00:00.000Z',
    'ShippedDate': '1998-02-11T00:00:00.000Z',
    'Freight': 1.93,
    'ShipName': 'Lonesome Pine Restaurant',
    'ShipAddress': '89 Chiaroscuro Rd.',
    'ShipCity': 'Portland',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10868,
    'CustomerID': 'QUEEN',

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    'ShipAddress': 'Alameda dos Canários, 891',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
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    'OrderDate': '1998-02-04T00:00:00.000Z',
    'ShippedDate': '1998-02-09T00:00:00.000Z',
    'Freight': 143.28,
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    'ShipAddress': '90 Wadhurst Rd.',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
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    'CustomerID': 'WOLZA',
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    'ShippedDate': '1998-02-13T00:00:00.000Z',
    'Freight': 12.04,
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    'ShipAddress': 'ul. Filtrowa 68',
    'ShipCity': 'Warszawa',
    'ShipRegion': null,
    'ShipCountry': 'Poland'
  },
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    'CustomerID': 'BONAP',
    'OrderDate': '1998-02-05T00:00:00.000Z',
    'ShippedDate': '1998-02-10T00:00:00.000Z',
    'Freight': 112.27,
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    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10872,
    'CustomerID': 'GODOS',
    'OrderDate': '1998-02-05T00:00:00.000Z',
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    'Freight': 175.32,
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    'ShipAddress': 'C/ Romero, 33',
    'ShipCity': 'Sevilla',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
},

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{
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  'Freight': 0.82,
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  'ShipAddress': 'Keskuskatu 45',
  'ShipCity': 'Helsinki',
  'ShipRegion': null,
  'ShipCountry': 'Finland'
},
{
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  'Freight': 19.58,
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  'ShipAddress': 'C/ Romero, 33',
  'ShipCity': 'Sevilla',
  'ShipRegion': null,
  'ShipCountry': 'Spain'
},
{
  'OrderID': 10875,
  'CustomerID': 'BERGS',
  'OrderDate': '1998-02-06T00:00:00.000Z',
  'ShippedDate': '1998-03-03T00:00:00.000Z',
  'Freight': 32.37,
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  'ShipAddress': 'Berguvsvägen 8',
  'ShipCity': 'Luleå',
  'ShipRegion': null,
  'ShipCountry': 'Sweden'
},
{
  'OrderID': 10876,
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  'OrderDate': '1998-02-09T00:00:00.000Z',
  'ShippedDate': '1998-02-12T00:00:00.000Z',
  'Freight': 60.42,
  'ShipName': 'Bon app',
  'ShipAddress': '12, rue des Bouchers',
  'ShipCity': 'Marseille',
  'ShipRegion': null,
  'ShipCountry': 'France'
},
{
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  'CustomerID': 'RICAR',
  'OrderDate': '1998-02-09T00:00:00.000Z',
  'ShippedDate': '1998-02-19T00:00:00.000Z',
  'Freight': 38.06,
  'ShipName': 'Ricardo Adocicados',
  'ShipAddress': 'Av. Copacabana, 267',
  'ShipCity': 'Rio de Janeiro',

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'ShipRegion': 'RJ',
'ShipCountry': 'Brazil'
},
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  'ShippedDate': '1998-02-12T00:00:00.000Z',
  'Freight': 46.69,
  'ShipName': 'QUICK-Stop',
  'ShipAddress': 'Taucherstraße 10',
  'ShipCity': 'Cunewalde',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10879,
  'CustomerID': 'WILMK',
  'OrderDate': '1998-02-10T00:00:00.000Z',
  'ShippedDate': '1998-02-12T00:00:00.000Z',
  'Freight': 8.5,
  'ShipName': 'Wilman Kala',
  'ShipAddress': 'Keskuskatu 45',
  'ShipCity': 'Helsinki',
  'ShipRegion': null,
  'ShipCountry': 'Finland'
},
{
  'OrderID': 10880,
  'CustomerID': 'FOLKO',
  'OrderDate': '1998-02-10T00:00:00.000Z',
  'ShippedDate': '1998-02-18T00:00:00.000Z',
  'Freight': 88.01,
  'ShipName': 'Folk och fä HB',
  'ShipAddress': 'Åkergatan 24',
  'ShipCity': 'Bräcke',
  'ShipRegion': null,
  'ShipCountry': 'Sweden'
},
{
  'OrderID': 10881,
  'CustomerID': 'CACTU',
  'OrderDate': '1998-02-11T00:00:00.000Z',
  'ShippedDate': '1998-02-18T00:00:00.000Z',
  'Freight': 2.84,
  'ShipName': 'Cactus Comidas para llevar',
  'ShipAddress': 'Cerrito 333',
  'ShipCity': 'Buenos Aires',
  'ShipRegion': null,
  'ShipCountry': 'Argentina'
},
{
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  'CustomerID': 'SAVEA',
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  'Freight': 23.1,
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    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
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    'ShippedDate': '1998-02-20T00:00:00.000Z',
    'Freight': 0.53,
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    'ShipAddress': '89 Chiaroscuro Rd.',
    'ShipCity': 'Portland',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
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    'CustomerID': 'LETSS',
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    'ShippedDate': '1998-02-13T00:00:00.000Z',
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    'ShipAddress': '87 Polk St. Suite 5',
    'ShipCity': 'San Francisco',
    'ShipRegion': 'CA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10885,
    'CustomerID': 'SUPRD',
    'OrderDate': '1998-02-12T00:00:00.000Z',
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    'Freight': 5.64,
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    'ShipAddress': 'Boulevard Tirou, 255',
    'ShipCity': 'Charleroi',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
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    'CustomerID': 'HANAR',
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    'ShippedDate': '1998-03-02T00:00:00.000Z',
    'Freight': 4.99,
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    'ShipAddress': 'Rua do Paço, 67',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10887,
    'CustomerID': 'GALED',

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    'ShipAddress': 'Rambla de Cataluña, 23',
    'ShipCity': 'Barcelona',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10888,
    'CustomerID': 'GODOS',
    'OrderDate': '1998-02-16T00:00:00.000Z',
    'ShippedDate': '1998-02-23T00:00:00.000Z',
    'Freight': 51.87,
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    'ShipAddress': 'C/ Romero, 33',
    'ShipCity': 'Sevilla',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
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    'CustomerID': 'RATTC',
    'OrderDate': '1998-02-16T00:00:00.000Z',
    'ShippedDate': '1998-02-23T00:00:00.000Z',
    'Freight': 280.61,
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    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'DUMON',
    'OrderDate': '1998-02-16T00:00:00.000Z',
    'ShippedDate': '1998-02-18T00:00:00.000Z',
    'Freight': 32.76,
    'ShipName': 'Du monde entier',
    'ShipAddress': '67, rue des Cinquante Otages',
    'ShipCity': 'Nantes',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
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    'CustomerID': 'LEHMS',
    'OrderDate': '1998-02-17T00:00:00.000Z',
    'ShippedDate': '1998-02-19T00:00:00.000Z',
    'Freight': 20.37,
    'ShipName': 'Lehmanns Marktstand',
    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },

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{
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  'OrderDate': '1998-02-17T00:00:00.000Z',
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  'Freight': 120.27,
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  'ShipAddress': 'Rue Joseph-Bens 532',
  'ShipCity': 'Bruxelles',
  'ShipRegion': null,
  'ShipCountry': 'Belgium'
},
{
  'OrderID': 10893,
  'CustomerID': 'KOENE',
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  'ShippedDate': '1998-02-20T00:00:00.000Z',
  'Freight': 77.78,
  'ShipName': 'Königlich Essen',
  'ShipAddress': 'Maubelstr. 90',
  'ShipCity': 'Brandenburg',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10894,
  'CustomerID': 'SAVEA',
  'OrderDate': '1998-02-18T00:00:00.000Z',
  'ShippedDate': '1998-02-20T00:00:00.000Z',
  'Freight': 116.13,
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  'ShipAddress': '187 Suffolk Ln.',
  'ShipCity': 'Boise',
  'ShipRegion': 'ID',
  'ShipCountry': 'USA'
},
{
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  'CustomerID': 'ERNSH',
  'OrderDate': '1998-02-18T00:00:00.000Z',
  'ShippedDate': '1998-02-23T00:00:00.000Z',
  'Freight': 162.75,
  'ShipName': 'Ernst Handel',
  'ShipAddress': 'Kirchgasse 6',
  'ShipCity': 'Graz',
  'ShipRegion': null,
  'ShipCountry': 'Austria'
},
{
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  'CustomerID': 'MAISD',
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  'ShippedDate': '1998-02-27T00:00:00.000Z',
  'Freight': 32.45,
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  'ShipAddress': 'Rue Joseph-Bens 532',
  'ShipCity': 'Bruxelles',

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    'CustomerID': 'HUNGO',
    'OrderDate': '1998-02-19T00:00:00.000Z',
    'ShippedDate': '1998-02-25T00:00:00.000Z',
    'Freight': 603.54,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10898,
    'CustomerID': 'OCEAN',
    'OrderDate': '1998-02-20T00:00:00.000Z',
    'ShippedDate': '1998-03-06T00:00:00.000Z',
    'Freight': 1.27,
    'ShipName': 'Océano Atlántico Ltda.',
    'ShipAddress': 'Ing. Gustavo Moncada 8585 Piso 20-A',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },
  {
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    'CustomerID': 'LILAS',
    'OrderDate': '1998-02-20T00:00:00.000Z',
    'ShippedDate': '1998-02-26T00:00:00.000Z',
    'Freight': 1.21,
    'ShipName': 'LILA-Supermercado',
    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },
  {
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    'CustomerID': 'WELLI',
    'OrderDate': '1998-02-20T00:00:00.000Z',
    'ShippedDate': '1998-03-04T00:00:00.000Z',
    'Freight': 1.66,
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    'ShipAddress': 'Rua do Mercado, 12',
    'ShipCity': 'Resende',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10901,
    'CustomerID': 'HILAA',
    'OrderDate': '1998-02-23T00:00:00.000Z',
    'ShippedDate': '1998-02-26T00:00:00.000Z',
    'Freight': 62.09,

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    'ShipName': 'HILARION-Abastos',
    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10902,
    'CustomerID': 'FOLKO',
    'OrderDate': '1998-02-23T00:00:00.000Z',
    'ShippedDate': '1998-03-03T00:00:00.000Z',
    'Freight': 44.15,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergratan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10903,
    'CustomerID': 'HANAR',
    'OrderDate': '1998-02-24T00:00:00.000Z',
    'ShippedDate': '1998-03-04T00:00:00.000Z',
    'Freight': 36.71,
    'ShipName': 'Hanari Carnes',
    'ShipAddress': 'Rua do Paço, 67',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10904,
    'CustomerID': 'WHITC',
    'OrderDate': '1998-02-24T00:00:00.000Z',
    'ShippedDate': '1998-02-27T00:00:00.000Z',
    'Freight': 162.95,
    'ShipName': 'White Clover Markets',
    'ShipAddress': '1029 - 12th Ave. S.',
    'ShipCity': 'Seattle',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10905,
    'CustomerID': 'WELLI',
    'OrderDate': '1998-02-24T00:00:00.000Z',
    'ShippedDate': '1998-03-06T00:00:00.000Z',
    'Freight': 13.72,
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    'ShipAddress': 'Rua do Mercado, 12',
    'ShipCity': 'Resende',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
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    'CustomerID': 'WOLZA',

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    'ShipName': 'Wolski Zajazd',
    'ShipAddress': 'ul. Filtrowa 68',
    'ShipCity': 'Warszawa',
    'ShipRegion': null,
    'ShipCountry': 'Poland'
  },
  {
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    'CustomerID': 'SPECB',
    'OrderDate': '1998-02-25T00:00:00.000Z',
    'ShippedDate': '1998-02-27T00:00:00.000Z',
    'Freight': 9.19,
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    'ShipAddress': '25, rue Lauriston',
    'ShipCity': 'Paris',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10908,
    'CustomerID': 'REGGC',
    'OrderDate': '1998-02-26T00:00:00.000Z',
    'ShippedDate': '1998-03-06T00:00:00.000Z',
    'Freight': 32.96,
    'ShipName': 'Reggiani Caseifici',
    'ShipAddress': 'Strada Provinciale 124',
    'ShipCity': 'Reggio Emilia',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 10909,
    'CustomerID': 'SANTG',
    'OrderDate': '1998-02-26T00:00:00.000Z',
    'ShippedDate': '1998-03-10T00:00:00.000Z',
    'Freight': 53.05,
    'ShipName': 'Santé Gourmet',
    'ShipAddress': 'Erling Skakkes gate 78',
    'ShipCity': 'Stavern',
    'ShipRegion': null,
    'ShipCountry': 'Norway'
  },
  {
    'OrderID': 10910,
    'CustomerID': 'WILMK',
    'OrderDate': '1998-02-26T00:00:00.000Z',
    'ShippedDate': '1998-03-04T00:00:00.000Z',
    'Freight': 38.11,
    'ShipName': 'Wilman Kala',
    'ShipAddress': 'Keskuskatu 45',
    'ShipCity': 'Helsinki',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },

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{
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    'OrderDate': '1998-02-26T00:00:00.000Z',
    'ShippedDate': '1998-03-05T00:00:00.000Z',
    'Freight': 38.19,
    'ShipName': 'Godos Cocina Típica',
    'ShipAddress': 'C/ Romero, 33',
    'ShipCity': 'Sevilla',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
},
{
    'OrderID': 10912,
    'CustomerID': 'HUNGO',
    'OrderDate': '1998-02-26T00:00:00.000Z',
    'ShippedDate': '1998-03-18T00:00:00.000Z',
    'Freight': 580.91,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
},
{
    'OrderID': 10913,
    'CustomerID': 'QUEEN',
    'OrderDate': '1998-02-26T00:00:00.000Z',
    'ShippedDate': '1998-03-04T00:00:00.000Z',
    'Freight': 33.05,
    'ShipName': 'Queen Cozinha',
    'ShipAddress': 'Alameda dos Canários, 891',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
},
{
    'OrderID': 10914,
    'CustomerID': 'QUEEN',
    'OrderDate': '1998-02-27T00:00:00.000Z',
    'ShippedDate': '1998-03-02T00:00:00.000Z',
    'Freight': 21.19,
    'ShipName': 'Queen Cozinha',
    'ShipAddress': 'Alameda dos Canários, 891',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
},
{
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    'CustomerID': 'TORTU',
    'OrderDate': '1998-02-27T00:00:00.000Z',
    'ShippedDate': '1998-03-02T00:00:00.000Z',
    'Freight': 3.51,
    'ShipName': 'Tortuga Restaurante',
    'ShipAddress': 'Avda. Azteca 123',
    'ShipCity': 'México D.F.',

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    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
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    'CustomerID': 'RANCH',
    'OrderDate': '1998-02-27T00:00:00.000Z',
    'ShippedDate': '1998-03-09T00:00:00.000Z',
    'Freight': 63.77,
    'ShipName': 'Rancho grande',
    'ShipAddress': 'Av. del Libertador 900',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },
  {
    'OrderID': 10917,
    'CustomerID': 'ROMEY',
    'OrderDate': '1998-03-02T00:00:00.000Z',
    'ShippedDate': '1998-03-11T00:00:00.000Z',
    'Freight': 8.29,
    'ShipName': 'Romero y tomillo',
    'ShipAddress': 'Gran Vía, 1',
    'ShipCity': 'Madrid',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10918,
    'CustomerID': 'BOTTM',
    'OrderDate': '1998-03-02T00:00:00.000Z',
    'ShippedDate': '1998-03-11T00:00:00.000Z',
    'Freight': 48.83,
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    'ShipAddress': '23 Tsawassen Blvd.',
    'ShipCity': 'Tsawassen',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
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    'Freight': 19.8,
    'ShipName': 'LINO-Delicateses',
    'ShipAddress': 'Ave. 5 de Mayo Porlamar',
    'ShipCity': 'I. de Margarita',
    'ShipRegion': 'Nueva Esparta',
    'ShipCountry': 'Venezuela'
  },
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    'CustomerID': 'AROUT',
    'OrderDate': '1998-03-03T00:00:00.000Z',
    'ShippedDate': '1998-03-09T00:00:00.000Z',
    'Freight': 29.61,

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        'ShipCity': 'Colchester',
        'ShipRegion': 'Essex',
        'ShipCountry': 'UK'
    },
    {
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        'CustomerID': 'VAFFE',
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        'Freight': 176.48,
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        'ShipAddress': 'Smagsloget 45',
        'ShipCity': 'Århus',
        'ShipRegion': null,
        'ShipCountry': 'Denmark'
    },
    {
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        'ShippedDate': '1998-03-05T00:00:00.000Z',
        'Freight': 62.74,
        'ShipName': 'Hanari Carnes',
        'ShipAddress': 'Rua do Paço, 67',
        'ShipCity': 'Rio de Janeiro',
        'ShipRegion': 'RJ',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10923,
        'CustomerID': 'LAMAI',
        'OrderDate': '1998-03-03T00:00:00.000Z',
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        'Freight': 68.26,
        'ShipName': 'La maison d\'Asie',
        'ShipAddress': '1 rue Alsace-Lorraine',
        'ShipCity': 'Toulouse',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
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        'CustomerID': 'BERGS',
        'OrderDate': '1998-03-04T00:00:00.000Z',
        'ShippedDate': '1998-04-08T00:00:00.000Z',
        'Freight': 151.52,
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        'ShipAddress': 'Berguvsvägen 8',
        'ShipCity': 'Luleå',
        'ShipRegion': null,
        'ShipCountry': 'Sweden'
    },
    {
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        'CustomerID': 'HANAR',

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    'ShipAddress': 'Rua do Paço, 67',
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    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
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    'CustomerID': 'ANATR',
    'OrderDate': '1998-03-04T00:00:00.000Z',
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    'Freight': 39.92,
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    'ShipAddress': 'Avda. de la Constitución 2222',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
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  {
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    'CustomerID': 'LACOR',
    'OrderDate': '1998-03-05T00:00:00.000Z',
    'ShippedDate': '1998-04-08T00:00:00.000Z',
    'Freight': 19.79,
    'ShipName': 'La corne d\'abondance',
    'ShipAddress': '67, avenue de l\'Europe',
    'ShipCity': 'Versailles',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10928,
    'CustomerID': 'GALED',
    'OrderDate': '1998-03-05T00:00:00.000Z',
    'ShippedDate': '1998-03-18T00:00:00.000Z',
    'Freight': 1.36,
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    'ShipAddress': 'Rambla de Cataluña, 23',
    'ShipCity': 'Barcelona',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
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    'CustomerID': 'FRANK',
    'OrderDate': '1998-03-05T00:00:00.000Z',
    'ShippedDate': '1998-03-12T00:00:00.000Z',
    'Freight': 33.93,
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    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },

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{
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  'ShipAddress': 'Boulevard Tirou, 255',
  'ShipCity': 'Charleroi',
  'ShipRegion': null,
  'ShipCountry': 'Belgium'
},
{
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  'CustomerID': 'RICSU',
  'OrderDate': '1998-03-06T00:00:00.000Z',
  'ShippedDate': '1998-03-19T00:00:00.000Z',
  'Freight': 13.6,
  'ShipName': 'Richter Supermarkt',
  'ShipAddress': 'Starenweg 5',
  'ShipCity': 'Genève',
  'ShipRegion': null,
  'ShipCountry': 'Switzerland'
},
{
  'OrderID': 10932,
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  'OrderDate': '1998-03-06T00:00:00.000Z',
  'ShippedDate': '1998-03-24T00:00:00.000Z',
  'Freight': 134.64,
  'ShipName': 'Bon app',
  'ShipAddress': '12, rue des Bouchers',
  'ShipCity': 'Marseille',
  'ShipRegion': null,
  'ShipCountry': 'France'
},
{
  'OrderID': 10933,
  'CustomerID': 'ISLAT',
  'OrderDate': '1998-03-06T00:00:00.000Z',
  'ShippedDate': '1998-03-16T00:00:00.000Z',
  'Freight': 54.15,
  'ShipName': 'Island Trading',
  'ShipAddress': 'Garden House Crowther Way',
  'ShipCity': 'Cowes',
  'ShipRegion': 'Isle of Wight',
  'ShipCountry': 'UK'
},
{
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  'CustomerID': 'LEHMS',
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  'ShippedDate': '1998-03-12T00:00:00.000Z',
  'Freight': 32.01,
  'ShipName': 'Lehmanns Marktstand',
  'ShipAddress': 'Magazinweg 7',
  'ShipCity': 'Frankfurt a.M.',

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        'ShippedDate': '1998-03-18T00:00:00.000Z',
        'Freight': 47.59,
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        'ShipAddress': 'Rua do Mercado, 12',
        'ShipCity': 'Resende',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
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        'CustomerID': 'GREAL',
        'OrderDate': '1998-03-09T00:00:00.000Z',
        'ShippedDate': '1998-03-18T00:00:00.000Z',
        'Freight': 33.68,
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        'ShipAddress': '2732 Baker Blvd.',
        'ShipCity': 'Eugene',
        'ShipRegion': 'OR',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10937,
        'CustomerID': 'CACTU',
        'OrderDate': '1998-03-10T00:00:00.000Z',
        'ShippedDate': '1998-03-13T00:00:00.000Z',
        'Freight': 31.51,
        'ShipName': 'Cactus Comidas para llevar',
        'ShipAddress': 'Cerrito 333',
        'ShipCity': 'Buenos Aires',
        'ShipRegion': null,
        'ShipCountry': 'Argentina'
    },
    {
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        'CustomerID': 'QUICK',
        'OrderDate': '1998-03-10T00:00:00.000Z',
        'ShippedDate': '1998-03-16T00:00:00.000Z',
        'Freight': 31.89,
        'ShipName': 'QUICK-Stop',
        'ShipAddress': 'Taucherstraße 10',
        'ShipCity': 'Cunewalde',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10939,
        'CustomerID': 'MAGAA',
        'OrderDate': '1998-03-10T00:00:00.000Z',
        'ShippedDate': '1998-03-13T00:00:00.000Z',
        'Freight': 76.33,

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    'ShipName': 'Magazzini Alimentari Riuniti',
    'ShipAddress': 'Via Ludovico il Moro 22',
    'ShipCity': 'Bergamo',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
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    'CustomerID': 'BONAP',
    'OrderDate': '1998-03-11T00:00:00.000Z',
    'ShippedDate': '1998-03-23T00:00:00.000Z',
    'Freight': 19.77,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
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    'CustomerID': 'SAVEA',
    'OrderDate': '1998-03-11T00:00:00.000Z',
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    'Freight': 400.81,
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    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10942,
    'CustomerID': 'REGGC',
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    'ShippedDate': '1998-03-18T00:00:00.000Z',
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    'ShipAddress': 'Strada Provinciale 124',
    'ShipCity': 'Reggio Emilia',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
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    'CustomerID': 'BSBEV',
    'OrderDate': '1998-03-11T00:00:00.000Z',
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    'Freight': 2.17,
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    'ShipAddress': 'Fauntleroy Circus',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10944,
    'CustomerID': 'BOTTM',

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    'ShipAddress': '23 Tsawassen Blvd.',
    'ShipCity': 'Tsawassen',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
  {
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    'CustomerID': 'MORGK',
    'OrderDate': '1998-03-12T00:00:00.000Z',
    'ShippedDate': '1998-03-18T00:00:00.000Z',
    'Freight': 10.22,
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    'ShipAddress': 'Heerstr. 22',
    'ShipCity': 'Leipzig',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
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    'CustomerID': 'VAFFE',
    'OrderDate': '1998-03-12T00:00:00.000Z',
    'ShippedDate': '1998-03-19T00:00:00.000Z',
    'Freight': 27.2,
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    'ShipAddress': 'Smagsloget 45',
    'ShipCity': 'Århus',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
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    'CustomerID': 'BSBEV',
    'OrderDate': '1998-03-13T00:00:00.000Z',
    'ShippedDate': '1998-03-16T00:00:00.000Z',
    'Freight': 3.26,
    'ShipName': 'B\'s Beverages',
    'ShipAddress': 'Fauntleroy Circus',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
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    'CustomerID': 'GODOS',
    'OrderDate': '1998-03-13T00:00:00.000Z',
    'ShippedDate': '1998-03-19T00:00:00.000Z',
    'Freight': 23.39,
    'ShipName': 'Godos Cocina Típica',
    'ShipAddress': 'C/ Romero, 33',
    'ShipCity': 'Sevilla',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },

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  'Freight': 74.44,
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  'ShipAddress': '23 Tsawassen Blvd.',
  'ShipCity': 'Tsawassen',
  'ShipRegion': 'BC',
  'ShipCountry': 'Canada'
},
{
  'OrderID': 10950,
  'CustomerID': 'MAGAA',
  'OrderDate': '1998-03-16T00:00:00.000Z',
  'ShippedDate': '1998-03-23T00:00:00.000Z',
  'Freight': 2.5,
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  'ShipAddress': 'Via Ludovico il Moro 22',
  'ShipCity': 'Bergamo',
  'ShipRegion': null,
  'ShipCountry': 'Italy'
},
{
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  'CustomerID': 'RICSU',
  'OrderDate': '1998-03-16T00:00:00.000Z',
  'ShippedDate': '1998-04-07T00:00:00.000Z',
  'Freight': 30.85,
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  'ShipAddress': 'Starenweg 5',
  'ShipCity': 'Genève',
  'ShipRegion': null,
  'ShipCountry': 'Switzerland'
},
{
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  'CustomerID': 'ALFKI',
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  'ShippedDate': '1998-03-24T00:00:00.000Z',
  'Freight': 40.42,
  'ShipName': 'Alfred's Futterkiste',
  'ShipAddress': 'Obere Str. 57',
  'ShipCity': 'Berlin',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10953,
  'CustomerID': 'AROUT',
  'OrderDate': '1998-03-16T00:00:00.000Z',
  'ShippedDate': '1998-03-25T00:00:00.000Z',
  'Freight': 23.72,
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  'ShipAddress': 'Brook Farm Stratford St. Mary',
  'ShipCity': 'Colchester',

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        'ShipCountry': 'UK'
    },
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        'ShippedDate': '1998-03-20T00:00:00.000Z',
        'Freight': 27.91,
        'ShipName': 'LINO-Delicateses',
        'ShipAddress': 'Ave. 5 de Mayo Porlamar',
        'ShipCity': 'I. de Margarita',
        'ShipRegion': 'Nueva Esparta',
        'ShipCountry': 'Venezuela'
    },
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        'CustomerID': 'FOLKO',
        'OrderDate': '1998-03-17T00:00:00.000Z',
        'ShippedDate': '1998-03-20T00:00:00.000Z',
        'Freight': 3.26,
        'ShipName': 'Folk och fä HB',
        'ShipAddress': 'Åkergatan 24',
        'ShipCity': 'Bräcke',
        'ShipRegion': null,
        'ShipCountry': 'Sweden'
    },
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        'CustomerID': 'BLAUS',
        'OrderDate': '1998-03-17T00:00:00.000Z',
        'ShippedDate': '1998-03-20T00:00:00.000Z',
        'Freight': 44.65,
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        'ShipAddress': 'Forsterstr. 57',
        'ShipCity': 'Mannheim',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
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        'CustomerID': 'HILAA',
        'OrderDate': '1998-03-18T00:00:00.000Z',
        'ShippedDate': '1998-03-27T00:00:00.000Z',
        'Freight': 105.36,
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        'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
        'ShipCity': 'San Cristóbal',
        'ShipRegion': 'Táchira',
        'ShipCountry': 'Venezuela'
    },
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        'CustomerID': 'OCEAN',
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        'ShippedDate': '1998-03-27T00:00:00.000Z',
        'Freight': 49.56,

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    'ShipAddress': 'Ing. Gustavo Moncada 8585 Piso 20-A',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },
  {
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    'CustomerID': 'GOURL',
    'OrderDate': '1998-03-18T00:00:00.000Z',
    'ShippedDate': '1998-03-23T00:00:00.000Z',
    'Freight': 4.98,
    'ShipName': 'Gourmet Lanchonetes',
    'ShipAddress': 'Av. Brasil, 442',
    'ShipCity': 'Campinas',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10960,
    'CustomerID': 'HILAA',
    'OrderDate': '1998-03-19T00:00:00.000Z',
    'ShippedDate': '1998-04-08T00:00:00.000Z',
    'Freight': 2.08,
    'ShipName': 'HILARION-Abastos',
    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
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    'CustomerID': 'QUEEN',
    'OrderDate': '1998-03-19T00:00:00.000Z',
    'ShippedDate': '1998-03-30T00:00:00.000Z',
    'Freight': 104.47,
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    'ShipAddress': 'Alameda dos Canários, 891',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10962,
    'CustomerID': 'QUICK',
    'OrderDate': '1998-03-19T00:00:00.000Z',
    'ShippedDate': '1998-03-23T00:00:00.000Z',
    'Freight': 275.79,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
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    'CustomerID': 'FURIB',

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    'OrderDate': '1998-03-19T00:00:00.000Z',
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    'ShipName': 'Furia Bacalhau e Frutos do Mar',
    'ShipAddress': 'Jardim das rosas n. 32',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {
    'OrderID': 10964,
    'CustomerID': 'SPECB',
    'OrderDate': '1998-03-20T00:00:00.000Z',
    'ShippedDate': '1998-03-24T00:00:00.000Z',
    'Freight': 87.38,
    'ShipName': 'Spécialités du monde',
    'ShipAddress': '25, rue Lauriston',
    'ShipCity': 'Paris',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10965,
    'CustomerID': 'OLDWO',
    'OrderDate': '1998-03-20T00:00:00.000Z',
    'ShippedDate': '1998-03-30T00:00:00.000Z',
    'Freight': 144.38,
    'ShipName': 'Old World Delicatessen',
    'ShipAddress': '2743 Bering St.',
    'ShipCity': 'Anchorage',
    'ShipRegion': 'AK',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10966,
    'CustomerID': 'CHOPS',
    'OrderDate': '1998-03-20T00:00:00.000Z',
    'ShippedDate': '1998-04-08T00:00:00.000Z',
    'Freight': 27.19,
    'ShipName': 'Chop-suey Chinese',
    'ShipAddress': 'Hauptstr. 31',
    'ShipCity': 'Bern',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
  {
    'OrderID': 10967,
    'CustomerID': 'TOMSP',
    'OrderDate': '1998-03-23T00:00:00.000Z',
    'ShippedDate': '1998-04-02T00:00:00.000Z',
    'Freight': 62.22,
    'ShipName': 'Toms Spezialitäten',
    'ShipAddress': 'Luisenstr. 48',
    'ShipCity': 'Münster',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },

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    'CustomerID': 'ERNSH',
    'OrderDate': '1998-03-23T00:00:00.000Z',
    'ShippedDate': '1998-04-01T00:00:00.000Z',
    'Freight': 74.6,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
},
{
    'OrderID': 10969,
    'CustomerID': 'COMMI',
    'OrderDate': '1998-03-23T00:00:00.000Z',
    'ShippedDate': '1998-03-30T00:00:00.000Z',
    'Freight': 0.21,
    'ShipName': 'Comércio Mineiro',
    'ShipAddress': 'Av. dos Lusíadas, 23',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
},
{
    'OrderID': 10970,
    'CustomerID': 'BOLID',
    'OrderDate': '1998-03-24T00:00:00.000Z',
    'ShippedDate': '1998-04-24T00:00:00.000Z',
    'Freight': 16.16,
    'ShipName': 'Bólido Comidas preparadas',
    'ShipAddress': 'C/ Araquil, 67',
    'ShipCity': 'Madrid',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
},
{
    'OrderID': 10971,
    'CustomerID': 'FRANR',
    'OrderDate': '1998-03-24T00:00:00.000Z',
    'ShippedDate': '1998-04-02T00:00:00.000Z',
    'Freight': 121.82,
    'ShipName': 'France restauration',
    'ShipAddress': '54, rue Royale',
    'ShipCity': 'Nantes',
    'ShipRegion': null,
    'ShipCountry': 'France'
},
{
    'OrderID': 10972,
    'CustomerID': 'LACOR',
    'OrderDate': '1998-03-24T00:00:00.000Z',
    'ShippedDate': '1998-03-26T00:00:00.000Z',
    'Freight': 0.02,
    'ShipName': 'La corne d\'abondance',
    'ShipAddress': '67, avenue de l\'Europe',
    'ShipCity': 'Versailles',

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        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
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        'CustomerID': 'LACOR',
        'OrderDate': '1998-03-24T00:00:00.000Z',
        'ShippedDate': '1998-03-27T00:00:00.000Z',
        'Freight': 15.17,
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        'ShipAddress': '67, avenue de l\'Europe',
        'ShipCity': 'Versailles',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
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        'CustomerID': 'SPLIR',
        'OrderDate': '1998-03-25T00:00:00.000Z',
        'ShippedDate': '1998-04-03T00:00:00.000Z',
        'Freight': 12.96,
        'ShipName': 'Split Rail Beer & Ale',
        'ShipAddress': 'P.O. Box 555',
        'ShipCity': 'Lander',
        'ShipRegion': 'WY',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10975,
        'CustomerID': 'BOTTM',
        'OrderDate': '1998-03-25T00:00:00.000Z',
        'ShippedDate': '1998-03-27T00:00:00.000Z',
        'Freight': 32.27,
        'ShipName': 'Bottom-Dollar Markets',
        'ShipAddress': '23 Tsawassen Blvd.',
        'ShipCity': 'Tsawassen',
        'ShipRegion': 'BC',
        'ShipCountry': 'Canada'
    },
    {
        'OrderID': 10976,
        'CustomerID': 'HILAA',
        'OrderDate': '1998-03-25T00:00:00.000Z',
        'ShippedDate': '1998-04-03T00:00:00.000Z',
        'Freight': 37.97,
        'ShipName': 'HILARION-Abastos',
        'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
        'ShipCity': 'San Cristóbal',
        'ShipRegion': 'Táchira',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 10977,
        'CustomerID': 'FOLKO',
        'OrderDate': '1998-03-26T00:00:00.000Z',
        'ShippedDate': '1998-04-10T00:00:00.000Z',
        'Freight': 208.5,

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    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10978,
    'CustomerID': 'MAISD',
    'OrderDate': '1998-03-26T00:00:00.000Z',
    'ShippedDate': '1998-04-23T00:00:00.000Z',
    'Freight': 32.82,
    'ShipName': 'Maison Dewey',
    'ShipAddress': 'Rue Joseph-Bens 532',
    'ShipCity': 'Bruxelles',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
    'OrderID': 10979,
    'CustomerID': 'ERNSH',
    'OrderDate': '1998-03-26T00:00:00.000Z',
    'ShippedDate': '1998-03-31T00:00:00.000Z',
    'Freight': 353.07,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10980,
    'CustomerID': 'FOLKO',
    'OrderDate': '1998-03-27T00:00:00.000Z',
    'ShippedDate': '1998-04-17T00:00:00.000Z',
    'Freight': 1.26,
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    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10981,
    'CustomerID': 'HANAR',
    'OrderDate': '1998-03-27T00:00:00.000Z',
    'ShippedDate': '1998-04-02T00:00:00.000Z',
    'Freight': 193.37,
    'ShipName': 'Hanari Carnes',
    'ShipAddress': 'Rua do Paço, 67',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10982,
    'CustomerID': 'BOTTM',

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    'ShippedDate': '1998-04-08T00:00:00.000Z',
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    'ShipAddress': '23 Tsawassen Blvd.',
    'ShipCity': 'Tsawassen',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10983,
    'CustomerID': 'SAVEA',
    'OrderDate': '1998-03-27T00:00:00.000Z',
    'ShippedDate': '1998-04-06T00:00:00.000Z',
    'Freight': 657.54,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10984,
    'CustomerID': 'SAVEA',
    'OrderDate': '1998-03-30T00:00:00.000Z',
    'ShippedDate': '1998-04-03T00:00:00.000Z',
    'Freight': 211.22,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10985,
    'CustomerID': 'HUNGO',
    'OrderDate': '1998-03-30T00:00:00.000Z',
    'ShippedDate': '1998-04-02T00:00:00.000Z',
    'Freight': 91.51,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10986,
    'CustomerID': 'OCEAN',
    'OrderDate': '1998-03-30T00:00:00.000Z',
    'ShippedDate': '1998-04-21T00:00:00.000Z',
    'Freight': 217.86,
    'ShipName': 'Océano Atlántico Ltda.',
    'ShipAddress': 'Ing. Gustavo Moncada 8585 Piso 20-A',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },

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{
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  'Freight': 185.48,
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  'ShipAddress': '35 King George',
  'ShipCity': 'London',
  'ShipRegion': null,
  'ShipCountry': 'UK'
},
{
  'OrderID': 10988,
  'CustomerID': 'RATTC',
  'OrderDate': '1998-03-31T00:00:00.000Z',
  'ShippedDate': '1998-04-10T00:00:00.000Z',
  'Freight': 61.14,
  'ShipName': 'Rattlesnake Canyon Grocery',
  'ShipAddress': '2817 Milton Dr.',
  'ShipCity': 'Albuquerque',
  'ShipRegion': 'NM',
  'ShipCountry': 'USA'
},
{
  'OrderID': 10989,
  'CustomerID': 'QUEDE',
  'OrderDate': '1998-03-31T00:00:00.000Z',
  'ShippedDate': '1998-04-02T00:00:00.000Z',
  'Freight': 34.76,
  'ShipName': 'Que Delícia',
  'ShipAddress': 'Rua da Panificadora, 12',
  'ShipCity': 'Rio de Janeiro',
  'ShipRegion': 'RJ',
  'ShipCountry': 'Brazil'
},
{
  'OrderID': 10990,
  'CustomerID': 'ERNSH',
  'OrderDate': '1998-04-01T00:00:00.000Z',
  'ShippedDate': '1998-04-07T00:00:00.000Z',
  'Freight': 117.61,
  'ShipName': 'Ernst Handel',
  'ShipAddress': 'Kirchgasse 6',
  'ShipCity': 'Graz',
  'ShipRegion': null,
  'ShipCountry': 'Austria'
},
{
  'OrderID': 10991,
  'CustomerID': 'QUICK',
  'OrderDate': '1998-04-01T00:00:00.000Z',
  'ShippedDate': '1998-04-07T00:00:00.000Z',
  'Freight': 38.51,
  'ShipName': 'QUICK-Stop',
  'ShipAddress': 'Taucherstraße 10',
  'ShipCity': 'Cunewalde',

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'ShipRegion': null,
'ShipCountry': 'Germany'
},
{
  'OrderID': 10992,
  'CustomerID': 'THEBI',
  'OrderDate': '1998-04-01T00:00:00.000Z',
  'ShippedDate': '1998-04-03T00:00:00.000Z',
  'Freight': 4.27,
  'ShipName': 'The Big Cheese',
  'ShipAddress': '89 Jefferson Way Suite 2',
  'ShipCity': 'Portland',
  'ShipRegion': 'OR',
  'ShipCountry': 'USA'
},
{
  'OrderID': 10993,
  'CustomerID': 'FOLKO',
  'OrderDate': '1998-04-01T00:00:00.000Z',
  'ShippedDate': '1998-04-10T00:00:00.000Z',
  'Freight': 8.81,
  'ShipName': 'Folk och fä HB',
  'ShipAddress': 'Åkergatan 24',
  'ShipCity': 'Bräcke',
  'ShipRegion': null,
  'ShipCountry': 'Sweden'
},
{
  'OrderID': 10994,
  'CustomerID': 'VAFFE',
  'OrderDate': '1998-04-02T00:00:00.000Z',
  'ShippedDate': '1998-04-09T00:00:00.000Z',
  'Freight': 65.53,
  'ShipName': 'Vaffeljernet',
  'ShipAddress': 'Smagsloget 45',
  'ShipCity': 'Århus',
  'ShipRegion': null,
  'ShipCountry': 'Denmark'
},
{
  'OrderID': 10995,
  'CustomerID': 'PERIC',
  'OrderDate': '1998-04-02T00:00:00.000Z',
  'ShippedDate': '1998-04-06T00:00:00.000Z',
  'Freight': 46,
  'ShipName': 'Pericles Comidas clásicas',
  'ShipAddress': 'Calle Dr. Jorge Cash 321',
  'ShipCity': 'México D.F.',
  'ShipRegion': null,
  'ShipCountry': 'Mexico'
},
{
  'OrderID': 10996,
  'CustomerID': 'QUICK',
  'OrderDate': '1998-04-02T00:00:00.000Z',
  'ShippedDate': '1998-04-10T00:00:00.000Z',
  'Freight': 1.12,
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    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10997,
    'CustomerID': 'LILAS',
    'OrderDate': '1998-04-03T00:00:00.000Z',
    'ShippedDate': '1998-04-13T00:00:00.000Z',
    'Freight': 73.91,
    'ShipName': 'LILA-Supermercado',
    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10998,
    'CustomerID': 'WOLZA',
    'OrderDate': '1998-04-03T00:00:00.000Z',
    'ShippedDate': '1998-04-17T00:00:00.000Z',
    'Freight': 20.31,
    'ShipName': 'Wolski Zajazd',
    'ShipAddress': 'ul. Filtrowa 68',
    'ShipCity': 'Warszawa',
    'ShipRegion': null,
    'ShipCountry': 'Poland'
  },
  {
    'OrderID': 10999,
    'CustomerID': 'OTTIK',
    'OrderDate': '1998-04-03T00:00:00.000Z',
    'ShippedDate': '1998-04-10T00:00:00.000Z',
    'Freight': 96.35,
    'ShipName': 'Ottilies Käseladen',
    'ShipAddress': 'Mehrheimerstr. 369',
    'ShipCity': 'Köln',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 11000,
    'CustomerID': 'RATTC',
    'OrderDate': '1998-04-06T00:00:00.000Z',
    'ShippedDate': '1998-04-14T00:00:00.000Z',
    'Freight': 55.12,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 11001,
    'CustomerID': 'FOLKO',

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    'OrderDate': '1998-04-06T00:00:00.000Z',
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    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 11002,
    'CustomerID': 'SAVEA',
    'OrderDate': '1998-04-06T00:00:00.000Z',
    'ShippedDate': '1998-04-16T00:00:00.000Z',
    'Freight': 141.16,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 11003,
    'CustomerID': 'THECR',
    'OrderDate': '1998-04-06T00:00:00.000Z',
    'ShippedDate': '1998-04-08T00:00:00.000Z',
    'Freight': 14.91,
    'ShipName': 'The Cracker Box',
    'ShipAddress': '55 Grizzly Peak Rd.',
    'ShipCity': 'Butte',
    'ShipRegion': 'MT',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 11004,
    'CustomerID': 'MAISD',
    'OrderDate': '1998-04-07T00:00:00.000Z',
    'ShippedDate': '1998-04-20T00:00:00.000Z',
    'Freight': 44.84,
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    'ShipAddress': 'Rue Joseph-Bens 532',
    'ShipCity': 'Bruxelles',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
    'OrderID': 11005,
    'CustomerID': 'WILMK',
    'OrderDate': '1998-04-07T00:00:00.000Z',
    'ShippedDate': '1998-04-10T00:00:00.000Z',
    'Freight': 0.75,
    'ShipName': 'Wilman Kala',
    'ShipAddress': 'Keskuskatu 45',
    'ShipCity': 'Helsinki',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },

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{
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  'CustomerID': 'GREAL',
  'OrderDate': '1998-04-07T00:00:00.000Z',
  'ShippedDate': '1998-04-15T00:00:00.000Z',
  'Freight': 25.19,
  'ShipName': 'Great Lakes Food Market',
  'ShipAddress': '2732 Baker Blvd.',
  'ShipCity': 'Eugene',
  'ShipRegion': 'OR',
  'ShipCountry': 'USA'
},
{
  'OrderID': 11007,
  'CustomerID': 'PRINI',
  'OrderDate': '1998-04-08T00:00:00.000Z',
  'ShippedDate': '1998-04-13T00:00:00.000Z',
  'Freight': 202.24,
  'ShipName': 'Princesa Isabel Vinhos',
  'ShipAddress': 'Estrada da saúde n. 58',
  'ShipCity': 'Lisboa',
  'ShipRegion': null,
  'ShipCountry': 'Portugal'
},
{
  'OrderID': 11008,
  'CustomerID': 'ERNSH',
  'OrderDate': '1998-04-08T00:00:00.000Z',
  'ShippedDate': null,
  'Freight': 79.46,
  'ShipName': 'Ernst Handel',
  'ShipAddress': 'Kirchgasse 6',
  'ShipCity': 'Graz',
  'ShipRegion': null,
  'ShipCountry': 'Austria'
},
{
  'OrderID': 11009,
  'CustomerID': 'GODOS',
  'OrderDate': '1998-04-08T00:00:00.000Z',
  'ShippedDate': '1998-04-10T00:00:00.000Z',
  'Freight': 59.11,
  'ShipName': 'Godos Cocina Típica',
  'ShipAddress': 'C/ Romero, 33',
  'ShipCity': 'Sevilla',
  'ShipRegion': null,
  'ShipCountry': 'Spain'
},
{
  'OrderID': 11010,
  'CustomerID': 'REGGC',
  'OrderDate': '1998-04-09T00:00:00.000Z',
  'ShippedDate': '1998-04-21T00:00:00.000Z',
  'Freight': 28.71,
  'ShipName': 'Reggiani Caseifici',
  'ShipAddress': 'Strada Provinciale 124',
  'ShipCity': 'Reggio Emilia',
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        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
    {
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        'CustomerID': 'ALFKI',
        'OrderDate': '1998-04-09T00:00:00.000Z',
        'ShippedDate': '1998-04-13T00:00:00.000Z',
        'Freight': 1.21,
        'ShipName': 'Alfred\'s Futterkiste',
        'ShipAddress': 'Obere Str. 57',
        'ShipCity': 'Berlin',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 11012,
        'CustomerID': 'FRANK',
        'OrderDate': '1998-04-09T00:00:00.000Z',
        'ShippedDate': '1998-04-17T00:00:00.000Z',
        'Freight': 242.95,
        'ShipName': 'Frankenversand',
        'ShipAddress': 'Berliner Platz 43',
        'ShipCity': 'München',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 11013,
        'CustomerID': 'ROMEY',
        'OrderDate': '1998-04-09T00:00:00.000Z',
        'ShippedDate': '1998-04-10T00:00:00.000Z',
        'Freight': 32.99,
        'ShipName': 'Romero y tomillo',
        'ShipAddress': 'Gran Vía, 1',
        'ShipCity': 'Madrid',
        'ShipRegion': null,
        'ShipCountry': 'Spain'
    },
    {
        'OrderID': 11014,
        'CustomerID': 'LINOD',
        'OrderDate': '1998-04-10T00:00:00.000Z',
        'ShippedDate': '1998-04-15T00:00:00.000Z',
        'Freight': 23.6,
        'ShipName': 'LINO-Delicateses',
        'ShipAddress': 'Ave. 5 de Mayo Porlamar',
        'ShipCity': 'I. de Margarita',
        'ShipRegion': 'Nueva Esparta',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 11015,
        'CustomerID': 'SANTG',
        'OrderDate': '1998-04-10T00:00:00.000Z',
        'ShippedDate': '1998-04-20T00:00:00.000Z',
        'Freight': 4.62,

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    'ShipName': 'Santé Gourmet',
    'ShipAddress': 'Erling Skakkess gate 78',
    'ShipCity': 'Stavern',
    'ShipRegion': null,
    'ShipCountry': 'Norway'
  },
  {
    'OrderID': 11016,
    'CustomerID': 'AROUT',
    'OrderDate': '1998-04-10T00:00:00.000Z',
    'ShippedDate': '1998-04-13T00:00:00.000Z',
    'Freight': 33.8,
    'ShipName': 'Around the Horn',
    'ShipAddress': 'Brook Farm Stratford St. Mary',
    'ShipCity': 'Colchester',
    'ShipRegion': 'Essex',
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 11017,
    'CustomerID': 'ERNSH',
    'OrderDate': '1998-04-13T00:00:00.000Z',
    'ShippedDate': '1998-04-20T00:00:00.000Z',
    'Freight': 754.26,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 11018,
    'CustomerID': 'LONEP',
    'OrderDate': '1998-04-13T00:00:00.000Z',
    'ShippedDate': '1998-04-16T00:00:00.000Z',
    'Freight': 11.65,
    'ShipName': 'Lonesome Pine Restaurant',
    'ShipAddress': '89 Chiaroscuro Rd.',
    'ShipCity': 'Portland',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 11019,
    'CustomerID': 'RANCH',
    'OrderDate': '1998-04-13T00:00:00.000Z',
    'ShippedDate': null,
    'Freight': 3.17,
    'ShipName': 'Rancho grande',
    'ShipAddress': 'Av. del Libertador 900',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },
  {
    'OrderID': 11020,
    'CustomerID': 'OTTIK',

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    'OrderDate': '1998-04-14T00:00:00.000Z',
    'ShippedDate': '1998-04-16T00:00:00.000Z',
    'Freight': 43.3,
    'ShipName': 'Ottilies Käseladen',
    'ShipAddress': 'Mehrheimerstr. 369',
    'ShipCity': 'Köln',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 11021,
    'CustomerID': 'QUICK',
    'OrderDate': '1998-04-14T00:00:00.000Z',
    'ShippedDate': '1998-04-21T00:00:00.000Z',
    'Freight': 297.18,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 11022,
    'CustomerID': 'HANAR',
    'OrderDate': '1998-04-14T00:00:00.000Z',
    'ShippedDate': '1998-05-04T00:00:00.000Z',
    'Freight': 6.27,
    'ShipName': 'Hanari Carnes',
    'ShipAddress': 'Rua do Paço, 67',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
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  {
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    'ShipAddress': 'Fauntleroy Circus',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
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    'CustomerID': 'EASTC',
    'OrderDate': '1998-04-15T00:00:00.000Z',
    'ShippedDate': '1998-04-20T00:00:00.000Z',
    'Freight': 74.36,
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    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
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  'ShipAddress': 'Torikatu 38',
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  'ShipCountry': 'Finland'
},
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  'CustomerID': 'FRANS',
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  'ShippedDate': '1998-04-28T00:00:00.000Z',
  'Freight': 47.09,
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  'ShipAddress': 'Via Monte Bianco 34',
  'ShipCity': 'Torino',
  'ShipRegion': null,
  'ShipCountry': 'Italy'
},
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  'Freight': 52.52,
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  'ShipAddress': '23 Tsawassen Blvd.',
  'ShipCity': 'Tsawassen',
  'ShipRegion': 'BC',
  'ShipCountry': 'Canada'
},
{
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  'ShippedDate': '1998-04-22T00:00:00.000Z',
  'Freight': 29.59,
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  'ShipAddress': 'Maubelstr. 90',
  'ShipCity': 'Brandenburg',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
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  'Freight': 47.84,
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  'ShipAddress': 'Hauptstr. 31',
  'ShipCity': 'Bern',

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        'ShipCity': 'Boise',
        'ShipRegion': 'ID',
        'ShipCountry': 'USA'
    },
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        'ShippedDate': '1998-04-24T00:00:00.000Z',
        'Freight': 227.22,
        'ShipName': 'Save-a-lot Markets',
        'ShipAddress': '187 Suffolk Ln.',
        'ShipCity': 'Boise',
        'ShipRegion': 'ID',
        'ShipCountry': 'USA'
    },
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        'OrderDate': '1998-04-17T00:00:00.000Z',
        'ShippedDate': '1998-04-23T00:00:00.000Z',
        'Freight': 606.19,
        'ShipName': 'White Clover Markets',
        'ShipAddress': '1029 - 12th Ave. S.',
        'ShipCity': 'Seattle',
        'ShipRegion': 'WA',
        'ShipCountry': 'USA'
    },
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        'CustomerID': 'RICSU',
        'OrderDate': '1998-04-17T00:00:00.000Z',
        'ShippedDate': '1998-04-23T00:00:00.000Z',
        'Freight': 84.74,
        'ShipName': 'Richter Supermarkt',
        'ShipAddress': 'Starenweg 5',
        'ShipCity': 'Genève',
        'ShipRegion': null,
        'ShipCountry': 'Switzerland'
    },
    {
        'OrderID': 11034,
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        'OrderDate': '1998-04-20T00:00:00.000Z',
        'ShippedDate': '1998-04-27T00:00:00.000Z',
        'Freight': 40.32,

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    'ShipAddress': '2743 Bering St.',
    'ShipCity': 'Anchorage',
    'ShipRegion': 'AK',
    'ShipCountry': 'USA'
  },
  {
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    'OrderDate': '1998-04-20T00:00:00.000Z',
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    'ShipAddress': 'Boulevard Tirou, 255',
    'ShipCity': 'Charleroi',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
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    'OrderDate': '1998-04-20T00:00:00.000Z',
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    'ShipAddress': 'Walserweg 21',
    'ShipCity': 'Aachen',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
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    'ShipCity': 'Sevilla',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
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    'CustomerID': 'SUPRD',
    'OrderDate': '1998-04-21T00:00:00.000Z',
    'ShippedDate': '1998-04-30T00:00:00.000Z',
    'Freight': 29.59,
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    'ShipAddress': 'Boulevard Tirou, 255',
    'ShipCity': 'Charleroi',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
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    'CustomerID': 'LINOD',

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    'ShipCity': 'I. de Margarita',
    'ShipRegion': 'Nueva Esparta',
    'ShipCountry': 'Venezuela'
  },
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    'ShippedDate': null,
    'Freight': 18.84,
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    'ShipAddress': '2732 Baker Blvd.',
    'ShipCity': 'Eugene',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 11041,
    'CustomerID': 'CHOPS',
    'OrderDate': '1998-04-22T00:00:00.000Z',
    'ShippedDate': '1998-04-28T00:00:00.000Z',
    'Freight': 48.22,
    'ShipName': 'Chop-suey Chinese',
    'ShipAddress': 'Hauptstr. 31',
    'ShipCity': 'Bern',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
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    'CustomerID': 'COMMI',
    'OrderDate': '1998-04-22T00:00:00.000Z',
    'ShippedDate': '1998-05-01T00:00:00.000Z',
    'Freight': 29.99,
    'ShipName': 'Comércio Mineiro',
    'ShipAddress': 'Av. dos Lusíadas, 23',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
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    'CustomerID': 'SPECB',
    'OrderDate': '1998-04-22T00:00:00.000Z',
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    'ShipAddress': '25, rue Lauriston',
    'ShipCity': 'Paris',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },

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  'ShipAddress': 'ul. Filtrowa 68',
  'ShipCity': 'Warszawa',
  'ShipRegion': null,
  'ShipCountry': 'Poland'
},
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  'OrderDate': '1998-04-23T00:00:00.000Z',
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  'ShipAddress': '23 Tsawassen Blvd.',
  'ShipCity': 'Tsawassen',
  'ShipRegion': 'BC',
  'ShipCountry': 'Canada'
},
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  'CustomerID': 'WANDK',
  'OrderDate': '1998-04-23T00:00:00.000Z',
  'ShippedDate': '1998-04-24T00:00:00.000Z',
  'Freight': 71.64,
  'ShipName': 'Die Wandernde Kuh',
  'ShipAddress': 'Adenauerallee 900',
  'ShipCity': 'Stuttgart',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 11047,
  'CustomerID': 'EASTC',
  'OrderDate': '1998-04-24T00:00:00.000Z',
  'ShippedDate': '1998-05-01T00:00:00.000Z',
  'Freight': 46.62,
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  'ShipAddress': '35 King George',
  'ShipCity': 'London',
  'ShipRegion': null,
  'ShipCountry': 'UK'
},
{
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  'OrderDate': '1998-04-24T00:00:00.000Z',
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  'Freight': 24.12,
  'ShipName': 'Bottom-Dollar Markets',
  'ShipAddress': '23 Tsawassen Blvd.',
  'ShipCity': 'Tsawassen',
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'ShipRegion': 'BC',
'ShipCountry': 'Canada'
},
{
  'OrderID': 11049,
  'CustomerID': 'GOURL',
  'OrderDate': '1998-04-24T00:00:00.000Z',
  'ShippedDate': '1998-05-04T00:00:00.000Z',
  'Freight': 8.34,
  'ShipName': 'Gourmet Lanchonetes',
  'ShipAddress': 'Av. Brasil, 442',
  'ShipCity': 'Campinas',
  'ShipRegion': 'SP',
  'ShipCountry': 'Brazil'
},
{
  'OrderID': 11050,
  'CustomerID': 'FOLKO',
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  'ShippedDate': '1998-05-05T00:00:00.000Z',
  'Freight': 59.41,
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  'ShipAddress': 'Åkergatan 24',
  'ShipCity': 'Bräcke',
  'ShipRegion': null,
  'ShipCountry': 'Sweden'
},
{
  'OrderID': 11051,
  'CustomerID': 'LAMAI',
  'OrderDate': '1998-04-27T00:00:00.000Z',
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  'Freight': 2.79,
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  'ShipAddress': '1 rue Alsace-Lorraine',
  'ShipCity': 'Toulouse',
  'ShipRegion': null,
  'ShipCountry': 'France'
},
{
  'OrderID': 11052,
  'CustomerID': 'HANAR',
  'OrderDate': '1998-04-27T00:00:00.000Z',
  'ShippedDate': '1998-05-01T00:00:00.000Z',
  'Freight': 67.26,
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  'ShipAddress': 'Rua do Paço, 67',
  'ShipCity': 'Rio de Janeiro',
  'ShipRegion': 'RJ',
  'ShipCountry': 'Brazil'
},
{
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  'CustomerID': 'PICCO',
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  'ShippedDate': '1998-04-29T00:00:00.000Z',
  'Freight': 53.05,
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    'ShipAddress': 'Geislweg 14',
    'ShipCity': 'Salzburg',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 11054,
    'CustomerID': 'CACTU',
    'OrderDate': '1998-04-28T00:00:00.000Z',
    'ShippedDate': '1998-04-29T00:00:00.000Z',
    'Freight': 0.33,
    'ShipName': 'Cactus Comidas para llevar',
    'ShipAddress': 'Cerrito 333',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },
  {
    'OrderID': 11055,
    'CustomerID': 'HILAA',
    'OrderDate': '1998-04-28T00:00:00.000Z',
    'ShippedDate': '1998-05-05T00:00:00.000Z',
    'Freight': 120.92,
    'ShipName': 'HILARION-Abastos',
    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 11056,
    'CustomerID': 'EASTC',
    'OrderDate': '1998-04-28T00:00:00.000Z',
    'ShippedDate': '1998-05-01T00:00:00.000Z',
    'Freight': 278.96,
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    'ShipAddress': '35 King George',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
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    'CustomerID': 'NORTS',
    'OrderDate': '1998-04-29T00:00:00.000Z',
    'ShippedDate': '1998-05-01T00:00:00.000Z',
    'Freight': 4.13,
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    'ShipAddress': 'South House 300 Queensbridge',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
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    'ShipCity': 'Mannheim',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
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    'CustomerID': 'RICAR',
    'OrderDate': '1998-04-29T00:00:00.000Z',
    'ShippedDate': null,
    'Freight': 85.8,
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    'ShipAddress': 'Av. Copacabana, 267',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
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    'CustomerID': 'FRANS',
    'OrderDate': '1998-04-30T00:00:00.000Z',
    'ShippedDate': '1998-05-04T00:00:00.000Z',
    'Freight': 10.98,
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    'ShipAddress': 'Via Monte Bianco 34',
    'ShipCity': 'Torino',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
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    'CustomerID': 'GREAL',
    'OrderDate': '1998-04-30T00:00:00.000Z',
    'ShippedDate': null,
    'Freight': 14.01,
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    'ShipAddress': '2732 Baker Blvd.',
    'ShipCity': 'Eugene',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
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    'CustomerID': 'REGGC',
    'OrderDate': '1998-04-30T00:00:00.000Z',
    'ShippedDate': null,
    'Freight': 29.93,
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    'ShipAddress': 'Strada Provinciale 124',
    'ShipCity': 'Reggio Emilia',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },

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  'CustomerID': 'HUNGO',
  'OrderDate': '1998-04-30T00:00:00.000Z',
  'ShippedDate': '1998-05-06T00:00:00.000Z',
  'Freight': 81.73,
  'ShipName': 'Hungry Owl All-Night Grocers',
  'ShipAddress': '8 Johnstown Road',
  'ShipCity': 'Cork',
  'ShipRegion': 'Co. Cork',
  'ShipCountry': 'Ireland'
},
{
  'OrderID': 11064,
  'CustomerID': 'SAVEA',
  'OrderDate': '1998-05-01T00:00:00.000Z',
  'ShippedDate': '1998-05-04T00:00:00.000Z',
  'Freight': 30.09,
  'ShipName': 'Save-a-lot Markets',
  'ShipAddress': '187 Suffolk Ln.',
  'ShipCity': 'Boise',
  'ShipRegion': 'ID',
  'ShipCountry': 'USA'
},
{
  'OrderID': 11065,
  'CustomerID': 'LILAS',
  'OrderDate': '1998-05-01T00:00:00.000Z',
  'ShippedDate': null,
  'Freight': 12.91,
  'ShipName': 'LILA-Supermercado',
  'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
  'ShipCity': 'Barquisimeto',
  'ShipRegion': 'Lara',
  'ShipCountry': 'Venezuela'
},
{
  'OrderID': 11066,
  'CustomerID': 'WHITC',
  'OrderDate': '1998-05-01T00:00:00.000Z',
  'ShippedDate': '1998-05-04T00:00:00.000Z',
  'Freight': 44.72,
  'ShipName': 'White Clover Markets',
  'ShipAddress': '1029 - 12th Ave. S.',
  'ShipCity': 'Seattle',
  'ShipRegion': 'WA',
  'ShipCountry': 'USA'
},
{
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  'CustomerID': 'DRACD',
  'OrderDate': '1998-05-04T00:00:00.000Z',
  'ShippedDate': '1998-05-06T00:00:00.000Z',
  'Freight': 7.98,
  'ShipName': 'Drachenblut Delikatessen',
  'ShipAddress': 'Walserweg 21',
  'ShipCity': 'Aachen',

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        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
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        'CustomerID': 'QUEEN',
        'OrderDate': '1998-05-04T00:00:00.000Z',
        'ShippedDate': null,
        'Freight': 81.75,
        'ShipName': 'Queen Cozinha',
        'ShipAddress': 'Alameda dos Canários, 891',
        'ShipCity': 'Sao Paulo',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 11069,
        'CustomerID': 'TORTU',
        'OrderDate': '1998-05-04T00:00:00.000Z',
        'ShippedDate': '1998-05-06T00:00:00.000Z',
        'Freight': 15.67,
        'ShipName': 'Tortuga Restaurante',
        'ShipAddress': 'Avda. Azteca 123',
        'ShipCity': 'México D.F.',
        'ShipRegion': null,
        'ShipCountry': 'Mexico'
    },
    {
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        'CustomerID': 'LEHMS',
        'OrderDate': '1998-05-05T00:00:00.000Z',
        'ShippedDate': null,
        'Freight': 136,
        'ShipName': 'Lehmanns Marktstand',
        'ShipAddress': 'Magazinweg 7',
        'ShipCity': 'Frankfurt a.M.',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
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        'CustomerID': 'LILAS',
        'OrderDate': '1998-05-05T00:00:00.000Z',
        'ShippedDate': null,
        'Freight': 0.93,
        'ShipName': 'LILA-Supermercado',
        'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
        'ShipCity': 'Barquisimeto',
        'ShipRegion': 'Lara',
        'ShipCountry': 'Venezuela'
    },
    {
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        'CustomerID': 'ERNSH',
        'OrderDate': '1998-05-05T00:00:00.000Z',
        'ShippedDate': null,
        'Freight': 258.64,

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    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 11073,
    'CustomerID': 'PERIC',
    'OrderDate': '1998-05-05T00:00:00.000Z',
    'ShippedDate': null,
    'Freight': 24.95,
    'ShipName': 'Pericles Comidas clásicas',
    'ShipAddress': 'Calle Dr. Jorge Cash 321',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 11074,
    'CustomerID': 'SIMOB',
    'OrderDate': '1998-05-06T00:00:00.000Z',
    'ShippedDate': null,
    'Freight': 18.44,
    'ShipName': 'Simons bistro',
    'ShipAddress': 'Vinbæltet 34',
    'ShipCity': 'Kobenhavn',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
    'OrderID': 11075,
    'CustomerID': 'RICSU',
    'OrderDate': '1998-05-06T00:00:00.000Z',
    'ShippedDate': null,
    'Freight': 6.19,
    'ShipName': 'Richter Supermarkt',
    'ShipAddress': 'Starenweg 5',
    'ShipCity': 'Genève',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
  {
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    'CustomerID': 'BONAP',
    'OrderDate': '1998-05-06T00:00:00.000Z',
    'ShippedDate': null,
    'Freight': 38.28,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 11077,
    'CustomerID': 'RATTC',

```

```

        'OrderDate': '1998-05-06T00:00:00.000Z',
        'ShippedDate': null,
        'Freight': 8.53,
        'ShipName': 'Rattlesnake Canyon Grocery',
        'ShipAddress': '2817 Milton Dr.',
        'ShipCity': 'Albuquerque',
        'ShipRegion': 'NM',
        'ShipCountry': 'USA'
    }
});
exports.orderData = JSON.parse(stringData, function (field, value) {
    var dupValue = value;
    if (typeof value === 'string' && /^(\d{4}\-\d\d\-\d\d)([tT](\d:\.)*){1}([zZ]|([+\-])(\d\d):?(\d\d)?$/).test(value)) {
        var arr = dupValue.split(/^[^0-9]/);
        var arg = parseInt(arr[4], 10);
        var arg1 = parseInt(arr[5], 10);
        value = new Date(parseInt(arr[0], 10), parseInt(arr[1], 10) - 1,
            parseInt(arr[2], 10), parseInt(arr[3], 10), arg, arg1);
    }
    return value;
});
exports.customerData = [
    {
        'CustomerID': 'ALFKI',
        'ContactName': 'Maria ',
        'CompanyName': 'Alfreds Futterkiste',
        'Address': 'Obere Str. 57',
        'Country': 'Germany'
    },
    {
        'CustomerID': 'ANATR',
        'ContactName': 'Ana Trujillo',
        'CompanyName': 'Ana Trujillo Emparedados y helados',
        'Address': 'Avda. de la Constitución 2222',
        'Country': 'Mexico'
    },
    {
        'CustomerID': 'ANTON',
        'ContactName': 'Antonio Moreno',
        'CompanyName': 'Antonio Moreno Taquería',
        'Address': 'Mataderos 2312',
        'Country': 'Mexico'
    },
    {
        'CustomerID': 'AROUT',
        'ContactName': 'Thomas Hardy',
        'CompanyName': 'Around the Horn',
        'Address': '120 Hanover Sq.',
        'Country': 'UK'
    },
    {
        'CustomerID': 'BERGS',
        'ContactName': 'Christina Berglund',
        'CompanyName': 'Berglunds snabbköp',
        'Address': 'Berguvsvägen 8',
        'Country': 'Sweden'
    }
];

```

```
},
{
  'CustomerID': 'BLAUS',
  'ContactName': 'Hanna Moos',
  'CompanyName': 'Blauer See Delikatessen',
  'Address': 'Forsterstr. 57',
  'Country': 'Germany'
},
{
  'CustomerID': 'BLONP',
  'ContactName': 'Frédérique Citeaux',
  'CompanyName': 'Blondesddsl père et fils',
  'Address': '24, place Kléber',
  'Country': 'France'
},
{
  'CustomerID': 'BOLID',
  'ContactName': 'Martín Sommer',
  'CompanyName': 'Bólido Comidas preparadas',
  'Address': 'C/ Araquil, 67',
  'Country': 'Spain'
},
{
  'CustomerID': 'BONAP',
  'ContactName': 'Laurence Lebihan',
  'CompanyName': 'Bon app',
  'Address': '12, rue des Bouchers',
  'Country': 'France'
},
{
  'CustomerID': 'BOTTM',
  'ContactName': 'Elizabeth Lincoln',
  'CompanyName': 'Bottom-Dollar Markets',
  'Address': '23 Tsawassen Blvd.',
  'Country': 'Canada'
},
{
  'CustomerID': 'BSBEV',
  'ContactName': 'Victoria Ashworth',
  'CompanyName': 'B\'s Beverages',
  'Address': 'Fauntleroy Circus',
  'Country': 'UK'
},
{
  'CustomerID': 'CACTU',
  'ContactName': 'Patricio Simpson',
  'CompanyName': 'Cactus Comidas para llevar',
  'Address': 'Cerrito 333',
  'Country': 'Argentina'
},
{
  'CustomerID': 'CENTC',
  'ContactName': 'Francisco Chang',
  'CompanyName': 'Centro comercial Moctezuma',
  'Address': 'Sierras de Granada 9993',
  'Country': 'Mexico'
},
}
```



```
{
  {
    'CustomerID': 'CHOPS',
    'ContactName': 'Yang Wang',
    'CompanyName': 'Chop-suey Chinese',
    'Address': 'Hauptstr. 29',
    'Country': 'Switzerland'
  },
  {
    'CustomerID': 'COMMI',
    'ContactName': 'Pedro Afonso',
    'CompanyName': 'Comércio Mineiro',
    'Address': 'Av. dos Lusíadas, 23',
    'Country': 'Brazil'
  },
  {
    'CustomerID': 'CONSH',
    'ContactName': 'Elizabeth Brown',
    'CompanyName': 'Consolidated Holdings',
    'Address': 'Berkeley Gardens 12 Brewery',
    'Country': 'UK'
  },
  {
    'CustomerID': 'DRACD',
    'ContactName': 'Sven Ottlieb',
    'CompanyName': 'Drachenblut Delikatessen',
    'Address': 'Walserweg 21',
    'Country': 'Germany'
  },
  {
    'CustomerID': 'DUMON',
    'ContactName': 'Janine Labrune',
    'CompanyName': 'Du monde entier',
    'Address': '67, rue des Cinquante Otages',
    'Country': 'France'
  },
  {
    'CustomerID': 'EASTC',
    'ContactName': 'Ann Devon',
    'CompanyName': 'Eastern Connection',
    'Address': '35 King George',
    'Country': 'UK'
  },
  {
    'CustomerID': 'ERNSH',
    'ContactName': 'Roland Mendel',
    'CompanyName': 'Ernst Handel',
    'Address': 'Kirchgasse 6',
    'Country': 'Austria'
  },
  {
    'CustomerID': 'FAMIA',
    'ContactName': 'Aria Cruz',
    'CompanyName': 'Familia Arquibaldo',
    'Address': 'Rua Orós, 92',
    'Country': 'Brazil'
  }
}
```

```
'CustomerID': 'FISSA',
'ContactName': 'Diego Roel',
'CompanyName': 'FISSA Fabrica Inter. Salchichas S.A.',
'Address': 'C/ Moralarzal, 86',
'Country': 'Spain'
},
{
  'CustomerID': 'FOLIG',
  'ContactName': 'Martine Rancé',
  'CompanyName': 'Folies gourmandes',
  'Address': '184, chaussée de Tournai',
  'Country': 'France'
},
{
  'CustomerID': 'FOLKO',
  'ContactName': 'Maria Larsson',
  'CompanyName': 'Folk och fä HB',
  'Address': 'Åkergatan 24',
  'Country': 'Sweden'
},
{
  'CustomerID': 'FRANK',
  'ContactName': 'Peter Franken',
  'CompanyName': 'Frankenversand',
  'Address': 'Berliner Platz 43',
  'Country': 'Germany'
},
{
  'CustomerID': 'FRANR',
  'ContactName': 'Carine Schmitt',
  'CompanyName': 'France restauration',
  'Address': '54, rue Royale',
  'Country': 'France'
},
{
  'CustomerID': 'FRANS',
  'ContactName': 'Paolo Accorti',
  'CompanyName': 'Franchi S.p.A.',
  'Address': 'Via Monte Bianco 34',
  'Country': 'Italy'
},
{
  'CustomerID': 'FURIB',
  'ContactName': 'Lino Rodriguez',
  'CompanyName': 'Furia Bacalhau e Frutos do Mar',
  'Address': 'Jardim das rosas n. 32',
  'Country': 'Portugal'
},
{
  'CustomerID': 'GALED',
  'ContactName': 'Eduardo Saavedra',
  'CompanyName': 'Galería del gastrónomo',
  'Address': 'Rambla de Cataluña, 23',
  'Country': 'Spain'
},
{
  'CustomerID': 'GODOS',
```

```
'ContactName': 'José Pedro Freyre',
'CompanyName': 'Godos Cocina Típica',
'Address': 'C/ Romero, 33',
'Country': 'Spain'
},
{
  'CustomerID': 'GOURL',
  'ContactName': 'André Fonseca',
  'CompanyName': 'Gourmet Lanchonetes',
  'Address': 'Av. Brasil, 442',
  'Country': 'Brazil'
},
{
  'CustomerID': 'GREAL',
  'ContactName': 'Howard Snyder',
  'CompanyName': 'Great Lakes Food Market',
  'Address': '2732 Baker Blvd.',
  'Country': 'USA'
},
{
  'CustomerID': 'GROSR',
  'ContactName': 'Manuel Pereira',
  'CompanyName': 'GROSELLA-Restaurante',
  'Address': '5ª Ave. Los Palos Grandes',
  'Country': 'Venezuela'
},
{
  'CustomerID': 'HANAR',
  'ContactName': 'Mario Pontes',
  'CompanyName': 'Hanari Carnes',
  'Address': 'Rua do Paço, 67',
  'Country': 'Brazil'
},
{
  'CustomerID': 'HILAA',
  'ContactName': 'Carlos Hernández',
  'CompanyName': 'HILARION-Abastos',
  'Address': 'Carrera 22 con Ave. Carlos Soublette #8-35',
  'Country': 'Venezuela'
},
{
  'CustomerID': 'HUNGC',
  'ContactName': 'Yoshi Latimer',
  'CompanyName': 'Hungry Coyote Import Store',
  'Address': 'City Center Plaza 516 Main St.',
  'Country': 'USA'
},
{
  'CustomerID': 'HUNGO',
  'ContactName': 'Patricia McKenna',
  'CompanyName': 'Hungry Owl All-Night Grocers',
  'Address': '8 Johnstown Road',
  'Country': 'Ireland'
},
{
  'CustomerID': 'ISLAT',
  'ContactName': 'Helen Bennett',
```

```
'CompanyName': 'Island Trading',
'Address': 'Garden House Crowther Way',
'Country': 'UK'
},
{
  'CustomerID': 'KOENE',
  'ContactName': 'Philip Cramer',
  'CompanyName': 'Königlich Essen',
  'Address': 'Maubelstr. 90',
  'Country': 'Germany'
},
{
  'CustomerID': 'LACOR',
  'ContactName': 'Daniel Tonini',
  'CompanyName': 'La corne d\'abondance',
  'Address': '67, avenue de l\'Europe',
  'Country': 'France'
},
{
  'CustomerID': 'LAMAI',
  'ContactName': 'Annette Roulet',
  'CompanyName': 'La maison d\'Asie',
  'Address': '1 rue Alsace-Lorraine',
  'Country': 'France'
},
{
  'CustomerID': 'LAUGB',
  'ContactName': 'Yoshi Tannamuri',
  'CompanyName': 'Laughing Bacchus Wine Cellars',
  'Address': '1900 Oak St.',
  'Country': 'Canada'
},
{
  'CustomerID': 'LAZYK',
  'ContactName': 'John Steel',
  'CompanyName': 'Lazy K Kountry Store',
  'Address': '12 Orchestra Terrace',
  'Country': 'USA'
},
{
  'CustomerID': 'LEHMS',
  'ContactName': 'Renate Messner',
  'CompanyName': 'Lehmanns Marktstand',
  'Address': 'Magazinweg 7',
  'Country': 'Germany'
},
{
  'CustomerID': 'LETSS',
  'ContactName': 'Jaime Yorres',
  'CompanyName': 'Let\'s Stop N Shop',
  'Address': '87 Polk St. Suite 5',
  'Country': 'USA'
},
{
  'CustomerID': 'LILAS',
  'ContactName': 'Carlos González',
  'CompanyName': 'LILA-Supermercado',
```

```
'Address': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
'Country': 'Venezuela'
},
{
  'CustomerID': 'LINOD',
  'ContactName': 'Felipe Izquierdo',
  'CompanyName': 'LINO-Delicateses',
  'Address': 'Ave. 5 de Mayo Porlamar',
  'Country': 'Venezuela'
},
{
  'CustomerID': 'LONEP',
  'ContactName': 'Fran Wilson',
  'CompanyName': 'Lonesome Pine Restaurant',
  'Address': '89 Chiaroscuro Rd.',
  'Country': 'USA'
},
{
  'CustomerID': 'MAGAA',
  'ContactName': 'Giovanni Rovelli',
  'CompanyName': 'Magazzini Alimentari Riuniti',
  'Address': 'Via Ludovico il Moro 22',
  'Country': 'Italy'
},
{
  'CustomerID': 'MAISD',
  'ContactName': 'Catherine Dewey',
  'CompanyName': 'Maison Dewey',
  'Address': 'Rue Joseph-Bens 532',
  'Country': 'Belgium'
},
{
  'CustomerID': 'MEREP',
  'ContactName': 'Jean Fresnière',
  'CompanyName': 'Mère Paillarde',
  'Address': '43 rue St. Laurent',
  'Country': 'Canada'
},
{
  'CustomerID': 'MORGK',
  'ContactName': 'Alexander Feuer',
  'CompanyName': 'Morgenstern Gesundkost',
  'Address': 'Heerstr. 22',
  'Country': 'Germany'
},
{
  'CustomerID': 'NORTS',
  'ContactName': 'Simon Crowther',
  'CompanyName': 'North/South',
  'Address': 'South House 300 Queensbridge',
  'Country': 'UK'
},
{
  'CustomerID': 'OCEAN',
  'ContactName': 'Yvonne Moncada',
  'CompanyName': 'Océano Atlántico Ltda.',
  'Address': 'Ing. Gustavo Moncada 8585 Piso 20-A',
```

```
    'Country': 'Argentina'
  },
  {
    'CustomerID': 'OLDWO',
    'ContactName': 'Rene Phillips',
    'CompanyName': 'Old World Delicatessen',
    'Address': '2743 Bering St.',
    'Country': 'USA'
  },
  {
    'CustomerID': 'OTTIK',
    'ContactName': 'Henriette Pfalzheim',
    'CompanyName': 'Ottilies Käseladen',
    'Address': 'Mehrheimerstr. 369',
    'Country': 'Germany'
  },
  {
    'CustomerID': 'PARIS',
    'ContactName': 'Marie Bertrand',
    'CompanyName': 'Paris spécialités',
    'Address': '265, boulevard Charonne',
    'Country': 'France'
  },
  {
    'CustomerID': 'PERIC',
    'ContactName': 'Guillermo Fernández',
    'CompanyName': 'Pericles Comidas clásicas',
    'Address': 'Calle Dr. Jorge Cash 321',
    'Country': 'Mexico'
  },
  {
    'CustomerID': 'PICCO',
    'ContactName': 'Georg Pipps',
    'CompanyName': 'Piccolo und mehr',
    'Address': 'Geislweg 14',
    'Country': 'Austria'
  },
  {
    'CustomerID': 'PRINI',
    'ContactName': 'Isabel de Castro',
    'CompanyName': 'Princesa Isabel Vinhos',
    'Address': 'Estrada da saúde n. 58',
    'Country': 'Portugal'
  },
  {
    'CustomerID': 'QUEDE',
    'ContactName': 'Bernardo Batista',
    'CompanyName': 'Que Delícia',
    'Address': 'Rua da Panificadora, 12',
    'Country': 'Brazil'
  },
  {
    'CustomerID': 'QUEEN',
    'ContactName': 'Lúcia Carvalho',
    'CompanyName': 'Queen Cozinha',
    'Address': 'Alameda dos Canários, 891',
    'Country': 'Brazil'
  }
```

```
},
{
  'CustomerID': 'QUICK',
  'ContactName': 'Horst Kloss',
  'CompanyName': 'QUICK-Stop',
  'Address': 'Taucherstraße 10',
  'Country': 'Germany'
},
{
  'CustomerID': 'RANCH',
  'ContactName': 'Sergio Gutiérrez',
  'CompanyName': 'Rancho grande',
  'Address': 'Av. del Libertador 900',
  'Country': 'Argentina'
},
{
  'CustomerID': 'RATTC',
  'ContactName': 'Paula Wilson',
  'CompanyName': 'Rattlesnake Canyon Grocery',
  'Address': '2817 Milton Dr.',
  'Country': 'USA'
},
{
  'CustomerID': 'REGGC',
  'ContactName': 'Maurizio Moroni',
  'CompanyName': 'Reggiani Caseifici',
  'Address': 'Strada Provinciale 124',
  'Country': 'Italy'
},
{
  'CustomerID': 'RICAR',
  'ContactName': 'Janete Limeira',
  'CompanyName': 'Ricardo Adocicados',
  'Address': 'Av. Copacabana, 267',
  'Country': 'Brazil'
},
{
  'CustomerID': 'RICSU',
  'ContactName': 'Michael Holz',
  'CompanyName': 'Richter Supermarkt',
  'Address': 'Grenzacherweg 237',
  'Country': 'Switzerland'
},
{
  'CustomerID': 'ROMEY',
  'ContactName': 'Alejandra Camino',
  'CompanyName': 'Romero y tomillo',
  'Address': 'Gran Vía, 1',
  'Country': 'Spain'
},
{
  'CustomerID': 'SANTG',
  'ContactName': 'Jonas Bergulfsen',
  'CompanyName': 'Santé Gourmet',
  'Address': 'Erling Skakkes gate 78',
  'Country': 'Norway'
},
},
```

```
{
  'CustomerID': 'SAVEA',
  'ContactName': 'Jose Pavarotti',
  'CompanyName': 'Save-a-lot Markets',
  'Address': '187 Suffolk Ln.',
  'Country': 'USA'
},
{
  'CustomerID': 'SEVES',
  'ContactName': 'Hari Kumar',
  'CompanyName': 'Seven Seas Imports',
  'Address': '90 Wadhurst Rd.',
  'Country': 'UK'
},
{
  'CustomerID': 'SIMOB',
  'ContactName': 'Jytte Petersen',
  'CompanyName': 'Simons bistro',
  'Address': 'Vinbæltet 34',
  'Country': 'Denmark'
},
{
  'CustomerID': 'SPECB',
  'ContactName': 'Dominique Perrier',
  'CompanyName': 'Spécialités du monde',
  'Address': '25, rue Lauriston',
  'Country': 'France'
},
{
  'CustomerID': 'SPLIR',
  'ContactName': 'Art Braunschweiger',
  'CompanyName': 'Split Rail Beer & Ale',
  'Address': 'P.O. Box 555',
  'Country': 'USA'
},
{
  'CustomerID': 'SUPRD',
  'ContactName': 'Pascale Cartrain',
  'CompanyName': 'Suprêmes délices',
  'Address': 'Boulevard Tirou, 255',
  'Country': 'Belgium'
},
{
  'CustomerID': 'THEBI',
  'ContactName': 'Liz Nixon',
  'CompanyName': 'The Big Cheese',
  'Address': '89 Jefferson Way Suite 2',
  'Country': 'USA'
},
{
  'CustomerID': 'THECR',
  'ContactName': 'Liu Wong',
  'CompanyName': 'The Cracker Box',
  'Address': '55 Grizzly Peak Rd.',
  'Country': 'USA'
},
{
```



```
'CustomerID': 'TOMSP',
'ContactName': 'Karin Josephs',
'CompanyName': 'Toms Spezialitäten',
'Address': 'Luisenstr. 48',
'Country': 'Germany'
},
{
  'CustomerID': 'TORTU',
  'ContactName': 'Miguel Angel Paolino',
  'CompanyName': 'Tortuga Restaurante',
  'Address': 'Avda. Azteca 123',
  'Country': 'Mexico'
},
{
  'CustomerID': 'TRADH',
  'ContactName': 'Anabela Domingues',
  'CompanyName': 'Tradição Hipermercados',
  'Address': 'Av. Inês de Castro, 414',
  'Country': 'Brazil'
},
{
  'CustomerID': 'TRAIH',
  'ContactName': 'Helvetius Nagy',
  'CompanyName': 'Trail\'s Head Gourmet Provisioners',
  'Address': '722 DaVinci Blvd.',
  'Country': 'USA'
},
{
  'CustomerID': 'VAFPE',
  'ContactName': 'Palle Ibsen',
  'CompanyName': 'Vaffeljernet',
  'Address': 'Smagsloget 45',
  'Country': 'Denmark'
},
{
  'CustomerID': 'VICTE',
  'ContactName': 'Mary Saveley',
  'CompanyName': 'Victuailles en stock',
  'Address': '2, rue du Commerce',
  'Country': 'France'
},
{
  'CustomerID': 'VINET',
  'ContactName': 'Paul Henriot',
  'CompanyName': 'Vins et alcools Chevalier',
  'Address': '59 rue de l\'Abbaye',
  'Country': 'France'
},
{
  'CustomerID': 'WANDK',
  'ContactName': 'Rita Müller',
  'CompanyName': 'Die Wandernde Kuh',
  'Address': 'Adenauerallee 900',
  'Country': 'Germany'
},
{
  'CustomerID': 'WARTH',
```

```

        'ContactName': 'Pirkko Koskitalo',
        'CompanyName': 'Wartian Herkku',
        'Address': 'Torikatu 38',
        'Country': 'Finland'
    },
    {
        'CustomerID': 'WELLI',
        'ContactName': 'Paula Parente',
        'CompanyName': 'Wellington Importadora',
        'Address': 'Rua do Mercado, 12',
        'Country': 'Brazil'
    },
    {
        'CustomerID': 'WHITC',
        'ContactName': 'Karl Jablonski',
        'CompanyName': 'White Clover Markets',
        'Address': '305 - 14th Ave. S. Suite 3B',
        'Country': 'USA'
    },
    {
        'CustomerID': 'WILMK',
        'ContactName': 'Matti Karttunen',
        'CompanyName': 'Wilman Kala',
        'Address': 'Keskuskatu 45',
        'Country': 'Finland'
    },
    {
        'CustomerID': 'WOLZA',
        'ContactName': 'Zbyszek Piestrzeniewicz',
        'CompanyName': 'Wolski Zajazd',
        'Address': 'ul. Filtrowa 68',
        'Country': 'Poland'
    }
];
exports.data = exports.orderData.map(function (item) {
    var name = exports.customerData.filter(function (cItem) {
        return cItem.CustomerID === item.CustomerID;
    })[0];
    item.CustomerName = (name || {}).ContactName;
    return item;
});

```

DATASOURCE.TSX

```

export let customerData = [
    {
        'CustomerID': 'ALFKI',
        'ContactName': 'Maria ',
        'CompanyName': 'Alfreds Futterkiste',
        'Address': 'Obere Str. 57',
        'Country': 'Germany'
    },
    {
        'CustomerID': 'ANATR',
        'ContactName': 'Ana Trujillo',
        'CompanyName': 'Ana Trujillo Emparedados y helados',
    }
];

```

```
'Address': 'Avda. de la Constitución 2222',
'Country': 'Mexico'
},
{
  'CustomerID': 'ANTON',
  'ContactName': 'Antonio Moreno',
  'CompanyName': 'Antonio Moreno Taquería',
  'Address': 'Mataderos 2312',
  'Country': 'Mexico'
},
{
  'CustomerID': 'AROUT',
  'ContactName': 'Thomas Hardy',
  'CompanyName': 'Around the Horn',
  'Address': '120 Hanover Sq.',
  'Country': 'UK'
},
{
  'CustomerID': 'BERGS',
  'ContactName': 'Christina Berglund',
  'CompanyName': 'Berglunds snabbköp',
  'Address': 'Berguvsvägen 8',
  'Country': 'Sweden'
},
{
  'CustomerID': 'BLAUS',
  'ContactName': 'Hanna Moos',
  'CompanyName': 'Blauer See Delikatessen',
  'Address': 'Forsterstr. 57',
  'Country': 'Germany'
},
{
  'CustomerID': 'BLONP',
  'ContactName': 'Frédérique Citeaux',
  'CompanyName': 'Blondesddsl père et fils',
  'Address': '24, place Kléber',
  'Country': 'France'
},
{
  'CustomerID': 'BOLID',
  'ContactName': 'Martín Sommer',
  'CompanyName': 'Bólido Comidas preparadas',
  'Address': 'C/ Araquil, 67',
  'Country': 'Spain'
},
{
  'CustomerID': 'BONAP',
  'ContactName': 'Laurence Lebihan',
  'CompanyName': 'Bon app',
  'Address': '12, rue des Bouchers',
  'Country': 'France'
},
{
  'CustomerID': 'BOTTM',
  'ContactName': 'Elizabeth Lincoln',
  'CompanyName': 'Bottom-Dollar Markets',
  'Address': '23 Tsawassen Blvd.'
```

```

    'Country': 'Canada'
  },
  {
    'CustomerID': 'BSBEV',
    'ContactName': 'Victoria Ashworth',
    'CompanyName': 'B\'s Beverages',
    'Address': 'Fauntleroy Circus',
    'Country': 'UK'
  },
  {
    'CustomerID': 'CACTU',
    'ContactName': 'Patricio Simpson',
    'CompanyName': 'Cactus Comidas para llevar',
    'Address': 'Cerrito 333',
    'Country': 'Argentina'
  },
  {
    'CustomerID': 'CENTC',
    'ContactName': 'Francisco Chang',
    'CompanyName': 'Centro comercial Moctezuma',
    'Address': 'Sierras de Granada 9993',
    'Country': 'Mexico'
  },
  {
    'CustomerID': 'CHOPS',
    'ContactName': 'Yang Wang',
    'CompanyName': 'Chop-suey Chinese',
    'Address': 'Hauptstr. 29',
    'Country': 'Switzerland'
  },
  {
    'CustomerID': 'COMMI',
    'ContactName': 'Pedro Afonso',
    'CompanyName': 'Comércio Mineiro',
    'Address': 'Av. dos Lusíadas, 23',
    'Country': 'Brazil'
  },
  {
    'CustomerID': 'CONSH',
    'ContactName': 'Elizabeth Brown',
    'CompanyName': 'Consolidated Holdings',
    'Address': 'Berkeley Gardens 12 Brewery',
    'Country': 'UK'
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    'CompanyName': 'Drachenblut Delikatessen',
    'Address': 'Walserweg 21',
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  },
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    'CompanyName': 'Du monde entier',
    'Address': '67, rue des Cinquante Otages',
    'Country': 'France'
  }

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},
{
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  'ContactName': 'Ann Devon',
  'CompanyName': 'Eastern Connection',
  'Address': '35 King George',
  'Country': 'UK'
},
{
  'CustomerID': 'ERNSH',
  'ContactName': 'Roland Mendel',
  'CompanyName': 'Ernst Handel',
  'Address': 'Kirchgasse 6',
  'Country': 'Austria'
},
{
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  'ContactName': 'Aria Cruz',
  'CompanyName': 'Familia Arquibaldo',
  'Address': 'Rua Orós, 92',
  'Country': 'Brazil'
},
{
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  'ContactName': 'Diego Roel',
  'CompanyName': 'FISSA Fabrica Inter. Salchichas S.A.',
  'Address': 'C/ Moralarzal, 86',
  'Country': 'Spain'
},
{
  'CustomerID': 'FOLIG',
  'ContactName': 'Martine Rancé',
  'CompanyName': 'Folies gourmandes',
  'Address': '184, chaussée de Tournai',
  'Country': 'France'
},
{
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  'ContactName': 'Maria Larsson',
  'CompanyName': 'Folk och fä HB',
  'Address': 'Åkergatan 24',
  'Country': 'Sweden'
},
{
  'CustomerID': 'FRANK',
  'ContactName': 'Peter Franken',
  'CompanyName': 'Frankenversand',
  'Address': 'Berliner Platz 43',
  'Country': 'Germany'
},
{
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  'ContactName': 'Carine Schmitt',
  'CompanyName': 'France restauration',
  'Address': '54, rue Royale',
  'Country': 'France'
},
},
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{
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  'Country': 'Italy'
},
{
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  'ContactName': 'Lino Rodriguez',
  'CompanyName': 'Furia Bacalhau e Frutos do Mar',
  'Address': 'Jardim das rosas n. 32',
  'Country': 'Portugal'
},
{
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  'CompanyName': 'Galería del gastrónomo',
  'Address': 'Rambla de Cataluña, 23',
  'Country': 'Spain'
},
{
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  'ContactName': 'José Pedro Freyre',
  'CompanyName': 'Godos Cocina Típica',
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  'Country': 'Spain'
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  'ContactName': 'André Fonseca',
  'CompanyName': 'Gourmet Lanchonetes',
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  'Country': 'Brazil'
},
{
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  'ContactName': 'Howard Snyder',
  'CompanyName': 'Great Lakes Food Market',
  'Address': '2732 Baker Blvd.',
  'Country': 'USA'
},
{
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  'CompanyName': 'GROSELLA-Restaurante',
  'Address': '5ª Ave. Los Palos Grandes',
  'Country': 'Venezuela'
},
{
  'CustomerID': 'HANAR',
  'ContactName': 'Mario Pontes',
  'CompanyName': 'Hanari Carnes',
  'Address': 'Rua do Paço, 67',
  'Country': 'Brazil'
},
{
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    'CompanyName': 'HILARION-Abastos',
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    'Country': 'Venezuela'
  },
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    'ContactName': 'Yoshi Latimer',
    'CompanyName': 'Hungry Coyote Import Store',
    'Address': 'City Center Plaza 516 Main St.',
    'Country': 'USA'
  },
  {
    'CustomerID': 'HUNGO',
    'ContactName': 'Patricia McKenna',
    'CompanyName': 'Hungry Owl All-Night Grocers',
    'Address': '8 Johnstown Road',
    'Country': 'Ireland'
  },
  {
    'CustomerID': 'ISLAT',
    'ContactName': 'Helen Bennett',
    'CompanyName': 'Island Trading',
    'Address': 'Garden House Crowther Way',
    'Country': 'UK'
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  {
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    'ContactName': 'Philip Cramer',
    'CompanyName': 'Königlich Essen',
    'Address': 'Maubelstr. 90',
    'Country': 'Germany'
  },
  {
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    'ContactName': 'Daniel Tonini',
    'CompanyName': 'La corne d\'abondance',
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    'Country': 'France'
  },
  {
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    'ContactName': 'Annette Roulet',
    'CompanyName': 'La maison d\'Asie',
    'Address': '1 rue Alsace-Lorraine',
    'Country': 'France'
  },
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    'Address': '1900 Oak St.',
    'Country': 'Canada'
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    'Country': 'USA'
  },
  {
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    'Country': 'Venezuela'
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    'Country': 'Venezuela'
  },
  {
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    'CompanyName': 'Lonesome Pine Restaurant',
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    'Country': 'USA'
  },
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    'ContactName': 'Giovanni Rovelli',
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  'CompanyName': 'North/South',
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  'Country': 'UK'
},
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  'ContactName': 'Yvonne Moncada',
  'CompanyName': 'Océano Atlántico Ltda.',
  'Address': 'Ing. Gustavo Moncada 8585 Piso 20-A',
  'Country': 'Argentina'
},
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  'ContactName': 'Rene Phillips',
  'CompanyName': 'Old World Delicatessen',
  'Address': '2743 Bering St.',
  'Country': 'USA'
},
{
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  'ContactName': 'Henriette Pfalzheim',
  'CompanyName': 'Ottilies Käseladen',
  'Address': 'Mehrheimerstr. 369',
  'Country': 'Germany'
},
{
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  'ContactName': 'Marie Bertrand',
  'CompanyName': 'Paris spécialités',
  'Address': '265, boulevard Charonne',
  'Country': 'France'
},
{
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  'CompanyName': 'Pericles Comidas clásicas',
  'Address': 'Calle Dr. Jorge Cash 321',
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},
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  'CompanyName': 'Piccolo und mehr',
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},
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  'Country': 'Portugal'
},
{
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  'ContactName': 'Bernardo Batista',
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  'Address': 'Rua da Panificadora, 12',
  'Country': 'Brazil'
},
{
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  'CompanyName': 'Queen Cozinha',
  'Address': 'Alameda dos Canários, 891',
  'Country': 'Brazil'
},
{
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  'Country': 'Germany'
},
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  'Country': 'Argentina'
},
{
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  'ContactName': 'Paula Wilson',
  'CompanyName': 'Rattlesnake Canyon Grocery',
  'Address': '2817 Milton Dr.',
  'Country': 'USA'
},
{
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},
{
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    'Address': 'Grenzacherweg 237',
    'Country': 'Switzerland'
  },
  {
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    'CompanyName': 'Romero y tomillo',
    'Address': 'Gran Vía, 1',
    'Country': 'Spain'
  },
  {
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    'ContactName': 'Jonas Bergulfsen',
    'CompanyName': 'Santé Gourmet',
    'Address': 'Erling Skakkes gate 78',
    'Country': 'Norway'
  },
  {
    'CustomerID': 'SAVEA',
    'ContactName': 'Jose Pavarotti',
    'CompanyName': 'Save-a-lot Markets',
    'Address': '187 Suffolk Ln.',
    'Country': 'USA'
  },
  {
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    'ContactName': 'Hari Kumar',
    'CompanyName': 'Seven Seas Imports',
    'Address': '90 Wadhurst Rd.',
    'Country': 'UK'
  },
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    'CompanyName': 'Simons bistro',
    'Address': 'Vinbæltet 34',
    'Country': 'Denmark'
  },
  {
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    'CompanyName': 'Spécialités du monde',
    'Address': '25, rue Lauriston',
    'Country': 'France'
  },
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    'ContactName': 'Art Braunschweiger',
    'CompanyName': 'Split Rail Beer & Ale',
    'Address': 'P.O. Box 555',
    'Country': 'USA'
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},
{
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  'ContactName': 'Pascale Cartrain',
  'CompanyName': 'Suprêmes délices',
  'Address': 'Boulevard Tirou, 255',
  'Country': 'Belgium'
},
{
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  'ContactName': 'Liz Nixon',
  'CompanyName': 'The Big Cheese',
  'Address': '89 Jefferson Way Suite 2',
  'Country': 'USA'
},
{
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  'ContactName': 'Liu Wong',
  'CompanyName': 'The Cracker Box',
  'Address': '55 Grizzly Peak Rd.',
  'Country': 'USA'
},
{
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  'ContactName': 'Karin Josephs',
  'CompanyName': 'Toms Spezialitäten',
  'Address': 'Luisenstr. 48',
  'Country': 'Germany'
},
{
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  'ContactName': 'Miguel Angel Paolino',
  'CompanyName': 'Tortuga Restaurante',
  'Address': 'Avda. Azteca 123',
  'Country': 'Mexico'
},
{
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  'ContactName': 'Anabela Domingues',
  'CompanyName': 'Tradição Hipermercados',
  'Address': 'Av. Inês de Castro, 414',
  'Country': 'Brazil'
},
{
  'CustomerID': 'TRAIH',
  'ContactName': 'Helvetius Nagy',
  'CompanyName': 'Trail\'s Head Gourmet Provisioners',
  'Address': '722 DaVinci Blvd.',
  'Country': 'USA'
},
{
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  'ContactName': 'Palle Ibsen',
  'CompanyName': 'Vaffeljernet',
  'Address': 'Smagsloget 45',
  'Country': 'Denmark'
},
},
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{
  'CustomerID': 'VICTE',
  'ContactName': 'Mary Saveley',
  'CompanyName': 'Victuailles en stock',
  'Address': '2, rue du Commerce',
  'Country': 'France'
},
{
  'CustomerID': 'VINET',
  'ContactName': 'Paul Henriot',
  'CompanyName': 'Vins et alcools Chevalier',
  'Address': '59 rue de l\'Abbaye',
  'Country': 'France'
},
{
  'CustomerID': 'WANDK',
  'ContactName': 'Rita Müller',
  'CompanyName': 'Die Wandernde Kuh',
  'Address': 'Adenauerallee 900',
  'Country': 'Germany'
},
{
  'CustomerID': 'WARTH',
  'ContactName': 'Pirkko Koskitalo',
  'CompanyName': 'Wartian Herkku',
  'Address': 'Torikatu 38',
  'Country': 'Finland'
},
{
  'CustomerID': 'WELLI',
  'ContactName': 'Paula Parente',
  'CompanyName': 'Wellington Importadora',
  'Address': 'Rua do Mercado, 12',
  'Country': 'Brazil'
},
{
  'CustomerID': 'WHITC',
  'ContactName': 'Karl Jablonski',
  'CompanyName': 'White Clover Markets',
  'Address': '305 - 14th Ave. S. Suite 3B',
  'Country': 'USA'
},
{
  'CustomerID': 'WILMK',
  'ContactName': 'Matti Karttunen',
  'CompanyName': 'Wilman Kala',
  'Address': 'Keskuskatu 45',
  'Country': 'Finland'
},
{
  'CustomerID': 'WOLZA',
  'ContactName': 'Zbyszek Piestrzeniewicz',
  'CompanyName': 'Wolski Zajazd',
  'Address': 'ul. Filtrowa 68',
  'Country': 'Poland'
}
];
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var stringData = JSON.stringify([
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    'ShipAddress': '59 rue de l\'Abbaye',
    'ShipCity': 'Reims',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
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    'ShipAddress': 'Luisenstr. 48',
    'ShipCity': 'Münster',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
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    'ShipAddress': 'Rua do Paço, 67',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
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    'ShipAddress': '2, rue du Commerce',
    'ShipCity': 'Lyon',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
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    'Freight': 51.3,
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    'ShipAddress': 'Boulevard Tirou, 255',
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  },
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    'ShipAddress': 'Rua do Paço, 67',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
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    'ShipAddress': 'Hauptstr. 31',
    'ShipCity': 'Bern',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
  {
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    'ShipName': 'Richter Supermarkt',
    'ShipAddress': 'Starenweg 5',
    'ShipCity': 'Genève',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
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    'ShipCity': 'Resende',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
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    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
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    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
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    'Freight': 3.25,
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    'ShipAddress': 'Sierras de Granada 9993',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
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    'Freight': 55.09,
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    'ShipAddress': 'Mehrheimerstr. 369',
    'ShipCity': 'Köln',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
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    'ShipAddress': 'Rua da Panificadora, 12',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10262,

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    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
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    'OrderDate': '1996-07-23T00:00:00.000Z',
    'ShippedDate': '1996-07-31T00:00:00.000Z',
    'Freight': 146.06,
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    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
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    'OrderDate': '1996-07-24T00:00:00.000Z',
    'ShippedDate': '1996-08-23T00:00:00.000Z',
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    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
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    'CustomerID': 'BLONP',
    'OrderDate': '1996-07-25T00:00:00.000Z',
    'ShippedDate': '1996-08-12T00:00:00.000Z',
    'Freight': 55.28,
    'ShipName': 'Blondel père et fils',
    'ShipAddress': '24, place Kléber',
    'ShipCity': 'Strasbourg',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10266,
    'CustomerID': 'WARTH',
    'OrderDate': '1996-07-26T00:00:00.000Z',
    'ShippedDate': '1996-07-31T00:00:00.000Z',
    'Freight': 25.73,
    'ShipName': 'Wartian Herkku',
    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  }

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},
{
  'OrderID': 10267,
  'CustomerID': 'FRANK',
  'OrderDate': '1996-07-29T00:00:00.000Z',
  'ShippedDate': '1996-08-06T00:00:00.000Z',
  'Freight': 208.58,
  'ShipName': 'Frankenversand',
  'ShipAddress': 'Berliner Platz 43',
  'ShipCity': 'München',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10268,
  'CustomerID': 'GROSR',
  'OrderDate': '1996-07-30T00:00:00.000Z',
  'ShippedDate': '1996-08-02T00:00:00.000Z',
  'Freight': 66.29,
  'ShipName': 'GROSELLA-Restaurante',
  'ShipAddress': '5a Ave. Los Palos Grandes',
  'ShipCity': 'Caracas',
  'ShipRegion': 'DF',
  'ShipCountry': 'Venezuela'
},
{
  'OrderID': 10269,
  'CustomerID': 'WHITC',
  'OrderDate': '1996-07-31T00:00:00.000Z',
  'ShippedDate': '1996-08-09T00:00:00.000Z',
  'Freight': 4.56,
  'ShipName': 'White Clover Markets',
  'ShipAddress': '1029 - 12th Ave. S.',
  'ShipCity': 'Seattle',
  'ShipRegion': 'WA',
  'ShipCountry': 'USA'
},
{
  'OrderID': 10270,
  'CustomerID': 'WARTH',
  'OrderDate': '1996-08-01T00:00:00.000Z',
  'ShippedDate': '1996-08-02T00:00:00.000Z',
  'Freight': 136.54,
  'ShipName': 'Wartian Herkku',
  'ShipAddress': 'Torikatu 38',
  'ShipCity': 'Oulu',
  'ShipRegion': null,
  'ShipCountry': 'Finland'
},
{
  'OrderID': 10271,
  'CustomerID': 'SPLIR',
  'OrderDate': '1996-08-01T00:00:00.000Z',
  'ShippedDate': '1996-08-30T00:00:00.000Z',
  'Freight': 4.54,
  'ShipName': 'Split Rail Beer & Ale',
  'ShipAddress': 'P.O. Box 555',
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        'ShipCity': 'Lander',
        'ShipRegion': 'WY',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10272,
        'CustomerID': 'RATTC',
        'OrderDate': '1996-08-02T00:00:00.000Z',
        'ShippedDate': '1996-08-06T00:00:00.000Z',
        'Freight': 98.03,
        'ShipName': 'Rattlesnake Canyon Grocery',
        'ShipAddress': '2817 Milton Dr.',
        'ShipCity': 'Albuquerque',
        'ShipRegion': 'NM',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10273,
        'CustomerID': 'QUICK',
        'OrderDate': '1996-08-05T00:00:00.000Z',
        'ShippedDate': '1996-08-12T00:00:00.000Z',
        'Freight': 76.07,
        'ShipName': 'QUICK-Stop',
        'ShipAddress': 'Taucherstraße 10',
        'ShipCity': 'Cunewalde',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10274,
        'CustomerID': 'VINET',
        'OrderDate': '1996-08-06T00:00:00.000Z',
        'ShippedDate': '1996-08-16T00:00:00.000Z',
        'Freight': 6.01,
        'ShipName': 'Vins et alcools Chevalier',
        'ShipAddress': '59 rue de l\'Abbaye',
        'ShipCity': 'Reims',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10275,
        'CustomerID': 'MAGAA',
        'OrderDate': '1996-08-07T00:00:00.000Z',
        'ShippedDate': '1996-08-09T00:00:00.000Z',
        'Freight': 26.93,
        'ShipName': 'Magazzini Alimentari Riuniti',
        'ShipAddress': 'Via Ludovico il Moro 22',
        'ShipCity': 'Bergamo',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
    {
        'OrderID': 10276,
        'CustomerID': 'TORTU',
        'OrderDate': '1996-08-08T00:00:00.000Z',
        'ShippedDate': '1996-08-14T00:00:00.000Z',

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    'Freight': 13.84,
    'ShipName': 'Tortuga Restaurante',
    'ShipAddress': 'Avda. Azteca 123',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10277,
    'CustomerID': 'MORGK',
    'OrderDate': '1996-08-09T00:00:00.000Z',
    'ShippedDate': '1996-08-13T00:00:00.000Z',
    'Freight': 125.77,
    'ShipName': 'Morgenstern Gesundkost',
    'ShipAddress': 'Heerstr. 22',
    'ShipCity': 'Leipzig',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10278,
    'CustomerID': 'BERGS',
    'OrderDate': '1996-08-12T00:00:00.000Z',
    'ShippedDate': '1996-08-16T00:00:00.000Z',
    'Freight': 92.69,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10279,
    'CustomerID': 'LEHMS',
    'OrderDate': '1996-08-13T00:00:00.000Z',
    'ShippedDate': '1996-08-16T00:00:00.000Z',
    'Freight': 25.83,
    'ShipName': 'Lehmanns Marktstand',
    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10280,
    'CustomerID': 'BERGS',
    'OrderDate': '1996-08-14T00:00:00.000Z',
    'ShippedDate': '1996-09-12T00:00:00.000Z',
    'Freight': 8.98,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10281,

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    'CustomerID': 'ROMEY',
    'OrderDate': '1996-08-14T00:00:00.000Z',
    'ShippedDate': '1996-08-21T00:00:00.000Z',
    'Freight': 2.94,
    'ShipName': 'Romero y tomillo',
    'ShipAddress': 'Gran Vía, 1',
    'ShipCity': 'Madrid',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10282,
    'CustomerID': 'ROMEY',
    'OrderDate': '1996-08-15T00:00:00.000Z',
    'ShippedDate': '1996-08-21T00:00:00.000Z',
    'Freight': 12.69,
    'ShipName': 'Romero y tomillo',
    'ShipAddress': 'Gran Vía, 1',
    'ShipCity': 'Madrid',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10283,
    'CustomerID': 'LILAS',
    'OrderDate': '1996-08-16T00:00:00.000Z',
    'ShippedDate': '1996-08-23T00:00:00.000Z',
    'Freight': 84.81,
    'ShipName': 'LILA-Supermercado',
    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10284,
    'CustomerID': 'LEHMS',
    'OrderDate': '1996-08-19T00:00:00.000Z',
    'ShippedDate': '1996-08-27T00:00:00.000Z',
    'Freight': 76.56,
    'ShipName': 'Lehmanns Marktstand',
    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10285,
    'CustomerID': 'QUICK',
    'OrderDate': '1996-08-20T00:00:00.000Z',
    'ShippedDate': '1996-08-26T00:00:00.000Z',
    'Freight': 76.83,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  }

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},
{
  'OrderID': 10286,
  'CustomerID': 'QUICK',
  'OrderDate': '1996-08-21T00:00:00.000Z',
  'ShippedDate': '1996-08-30T00:00:00.000Z',
  'Freight': 229.24,
  'ShipName': 'QUICK-Stop',
  'ShipAddress': 'Taucherstraße 10',
  'ShipCity': 'Cunewalde',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10287,
  'CustomerID': 'RICAR',
  'OrderDate': '1996-08-22T00:00:00.000Z',
  'ShippedDate': '1996-08-28T00:00:00.000Z',
  'Freight': 12.76,
  'ShipName': 'Ricardo Adocicados',
  'ShipAddress': 'Av. Copacabana, 267',
  'ShipCity': 'Rio de Janeiro',
  'ShipRegion': 'RJ',
  'ShipCountry': 'Brazil'
},
{
  'OrderID': 10288,
  'CustomerID': 'REGGC',
  'OrderDate': '1996-08-23T00:00:00.000Z',
  'ShippedDate': '1996-09-03T00:00:00.000Z',
  'Freight': 7.45,
  'ShipName': 'Reggiani Caseifici',
  'ShipAddress': 'Strada Provinciale 124',
  'ShipCity': 'Reggio Emilia',
  'ShipRegion': null,
  'ShipCountry': 'Italy'
},
{
  'OrderID': 10289,
  'CustomerID': 'BSBEV',
  'OrderDate': '1996-08-26T00:00:00.000Z',
  'ShippedDate': '1996-08-28T00:00:00.000Z',
  'Freight': 22.77,
  'ShipName': 'B\'s Beverages',
  'ShipAddress': 'Fauntleroy Circus',
  'ShipCity': 'London',
  'ShipRegion': null,
  'ShipCountry': 'UK'
},
{
  'OrderID': 10290,
  'CustomerID': 'COMMI',
  'OrderDate': '1996-08-27T00:00:00.000Z',
  'ShippedDate': '1996-09-03T00:00:00.000Z',
  'Freight': 79.7,
  'ShipName': 'Comércio Mineiro',
  'ShipAddress': 'Av. dos Lusíadas, 23',
```

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    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10291,
    'CustomerID': 'QUEDE',
    'OrderDate': '1996-08-27T00:00:00.000Z',
    'ShippedDate': '1996-09-04T00:00:00.000Z',
    'Freight': 6.4,
    'ShipName': 'Que Delícia',
    'ShipAddress': 'Rua da Panificadora, 12',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10292,
    'CustomerID': 'TRADH',
    'OrderDate': '1996-08-28T00:00:00.000Z',
    'ShippedDate': '1996-09-02T00:00:00.000Z',
    'Freight': 1.35,
    'ShipName': 'Tradição Hipermercados',
    'ShipAddress': 'Av. Inês de Castro, 414',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10293,
    'CustomerID': 'TORTU',
    'OrderDate': '1996-08-29T00:00:00.000Z',
    'ShippedDate': '1996-09-11T00:00:00.000Z',
    'Freight': 21.18,
    'ShipName': 'Tortuga Restaurante',
    'ShipAddress': 'Avda. Azteca 123',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10294,
    'CustomerID': 'RATTC',
    'OrderDate': '1996-08-30T00:00:00.000Z',
    'ShippedDate': '1996-09-05T00:00:00.000Z',
    'Freight': 147.26,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10295,
    'CustomerID': 'VINET',
    'OrderDate': '1996-09-02T00:00:00.000Z',
    'ShippedDate': '1996-09-10T00:00:00.000Z',

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    'Freight': 1.15,
    'ShipName': 'Vins et alcools Chevalier',
    'ShipAddress': '59 rue de l\'Abbaye',
    'ShipCity': 'Reims',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10296,
    'CustomerID': 'LILAS',
    'OrderDate': '1996-09-03T00:00:00.000Z',
    'ShippedDate': '1996-09-11T00:00:00.000Z',
    'Freight': 0.12,
    'ShipName': 'LILA-Supermercado',
    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10297,
    'CustomerID': 'BLONP',
    'OrderDate': '1996-09-04T00:00:00.000Z',
    'ShippedDate': '1996-09-10T00:00:00.000Z',
    'Freight': 5.74,
    'ShipName': 'Blondel père et fils',
    'ShipAddress': '24, place Kléber',
    'ShipCity': 'Strasbourg',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10298,
    'CustomerID': 'HUNGO',
    'OrderDate': '1996-09-05T00:00:00.000Z',
    'ShippedDate': '1996-09-11T00:00:00.000Z',
    'Freight': 168.22,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10299,
    'CustomerID': 'RICAR',
    'OrderDate': '1996-09-06T00:00:00.000Z',
    'ShippedDate': '1996-09-13T00:00:00.000Z',
    'Freight': 29.76,
    'ShipName': 'Ricardo Adocicados',
    'ShipAddress': 'Av. Copacabana, 267',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10300,

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    'CustomerID': 'MAGAA',
    'OrderDate': '1996-09-09T00:00:00.000Z',
    'ShippedDate': '1996-09-18T00:00:00.000Z',
    'Freight': 17.68,
    'ShipName': 'Magazzini Alimentari Riuniti',
    'ShipAddress': 'Via Ludovico il Moro 22',
    'ShipCity': 'Bergamo',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 10301,
    'CustomerID': 'WANDK',
    'OrderDate': '1996-09-09T00:00:00.000Z',
    'ShippedDate': '1996-09-17T00:00:00.000Z',
    'Freight': 45.08,
    'ShipName': 'Die Wandernde Kuh',
    'ShipAddress': 'Adenauerallee 900',
    'ShipCity': 'Stuttgart',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10302,
    'CustomerID': 'SUPRD',
    'OrderDate': '1996-09-10T00:00:00.000Z',
    'ShippedDate': '1996-10-09T00:00:00.000Z',
    'Freight': 6.27,
    'ShipName': 'Suprêmes délices',
    'ShipAddress': 'Boulevard Tirou, 255',
    'ShipCity': 'Charleroi',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
    'OrderID': 10303,
    'CustomerID': 'GODOS',
    'OrderDate': '1996-09-11T00:00:00.000Z',
    'ShippedDate': '1996-09-18T00:00:00.000Z',
    'Freight': 107.83,
    'ShipName': 'Godos Cocina Típica',
    'ShipAddress': 'C/ Romero, 33',
    'ShipCity': 'Sevilla',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10304,
    'CustomerID': 'TORTU',
    'OrderDate': '1996-09-12T00:00:00.000Z',
    'ShippedDate': '1996-09-17T00:00:00.000Z',
    'Freight': 63.79,
    'ShipName': 'Tortuga Restaurante',
    'ShipAddress': 'Avda. Azteca 123',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  }

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    },
    {
        'OrderID': 10305,
        'CustomerID': 'OLDWO',
        'OrderDate': '1996-09-13T00:00:00.000Z',
        'ShippedDate': '1996-10-09T00:00:00.000Z',
        'Freight': 257.62,
        'ShipName': 'Old World Delicatessen',
        'ShipAddress': '2743 Bering St.',
        'ShipCity': 'Anchorage',
        'ShipRegion': 'AK',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10306,
        'CustomerID': 'ROMEY',
        'OrderDate': '1996-09-16T00:00:00.000Z',
        'ShippedDate': '1996-09-23T00:00:00.000Z',
        'Freight': 7.56,
        'ShipName': 'Romero y tomillo',
        'ShipAddress': 'Gran Vía, 1',
        'ShipCity': 'Madrid',
        'ShipRegion': null,
        'ShipCountry': 'Spain'
    },
    {
        'OrderID': 10307,
        'CustomerID': 'LONEP',
        'OrderDate': '1996-09-17T00:00:00.000Z',
        'ShippedDate': '1996-09-25T00:00:00.000Z',
        'Freight': 0.56,
        'ShipName': 'Lonesome Pine Restaurant',
        'ShipAddress': '89 Chiaroscuro Rd.',
        'ShipCity': 'Portland',
        'ShipRegion': 'OR',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10308,
        'CustomerID': 'ANATR',
        'OrderDate': '1996-09-18T00:00:00.000Z',
        'ShippedDate': '1996-09-24T00:00:00.000Z',
        'Freight': 1.61,
        'ShipName': 'Ana Trujillo Emparedados y helados',
        'ShipAddress': 'Avda. de la Constitución 2222',
        'ShipCity': 'México D.F.',
        'ShipRegion': null,
        'ShipCountry': 'Mexico'
    },
    {
        'OrderID': 10309,
        'CustomerID': 'HUNGO',
        'OrderDate': '1996-09-19T00:00:00.000Z',
        'ShippedDate': '1996-10-23T00:00:00.000Z',
        'Freight': 47.3,
        'ShipName': 'Hungry Owl All-Night Grocers',
        'ShipAddress': '8 Johnstown Road',

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        'ShipCity': 'Cork',
        'ShipRegion': 'Co. Cork',
        'ShipCountry': 'Ireland'
    },
    {
        'OrderID': 10310,
        'CustomerID': 'THEBI',
        'OrderDate': '1996-09-20T00:00:00.000Z',
        'ShippedDate': '1996-09-27T00:00:00.000Z',
        'Freight': 17.52,
        'ShipName': 'The Big Cheese',
        'ShipAddress': '89 Jefferson Way Suite 2',
        'ShipCity': 'Portland',
        'ShipRegion': 'OR',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10311,
        'CustomerID': 'DUMON',
        'OrderDate': '1996-09-20T00:00:00.000Z',
        'ShippedDate': '1996-09-26T00:00:00.000Z',
        'Freight': 24.69,
        'ShipName': 'Du monde entier',
        'ShipAddress': '67, rue des Cinquante Otages',
        'ShipCity': 'Nantes',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10312,
        'CustomerID': 'WANDK',
        'OrderDate': '1996-09-23T00:00:00.000Z',
        'ShippedDate': '1996-10-03T00:00:00.000Z',
        'Freight': 40.26,
        'ShipName': 'Die Wandernde Kuh',
        'ShipAddress': 'Adenauerallee 900',
        'ShipCity': 'Stuttgart',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10313,
        'CustomerID': 'QUICK',
        'OrderDate': '1996-09-24T00:00:00.000Z',
        'ShippedDate': '1996-10-04T00:00:00.000Z',
        'Freight': 1.96,
        'ShipName': 'QUICK-Stop',
        'ShipAddress': 'Taucherstraße 10',
        'ShipCity': 'Cunewalde',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10314,
        'CustomerID': 'RATTC',
        'OrderDate': '1996-09-25T00:00:00.000Z',
        'ShippedDate': '1996-10-04T00:00:00.000Z',

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    'Freight': 74.16,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10315,
    'CustomerID': 'ISLAT',
    'OrderDate': '1996-09-26T00:00:00.000Z',
    'ShippedDate': '1996-10-03T00:00:00.000Z',
    'Freight': 41.76,
    'ShipName': 'Island Trading',
    'ShipAddress': 'Garden House Crowther Way',
    'ShipCity': 'Cowes',
    'ShipRegion': 'Isle of Wight',
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10316,
    'CustomerID': 'RATTC',
    'OrderDate': '1996-09-27T00:00:00.000Z',
    'ShippedDate': '1996-10-08T00:00:00.000Z',
    'Freight': 150.15,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10317,
    'CustomerID': 'LONEP',
    'OrderDate': '1996-09-30T00:00:00.000Z',
    'ShippedDate': '1996-10-10T00:00:00.000Z',
    'Freight': 12.69,
    'ShipName': 'Lonesome Pine Restaurant',
    'ShipAddress': '89 Chiaroscuro Rd.',
    'ShipCity': 'Portland',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10318,
    'CustomerID': 'ISLAT',
    'OrderDate': '1996-10-01T00:00:00.000Z',
    'ShippedDate': '1996-10-04T00:00:00.000Z',
    'Freight': 4.73,
    'ShipName': 'Island Trading',
    'ShipAddress': 'Garden House Crowther Way',
    'ShipCity': 'Cowes',
    'ShipRegion': 'Isle of Wight',
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10319,

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      'CustomerID': 'TORTU',
      'OrderDate': '1996-10-02T00:00:00.000Z',
      'ShippedDate': '1996-10-11T00:00:00.000Z',
      'Freight': 64.5,
      'ShipName': 'Tortuga Restaurante',
      'ShipAddress': 'Avda. Azteca 123',
      'ShipCity': 'México D.F.',
      'ShipRegion': null,
      'ShipCountry': 'Mexico'
    },
    {
      'OrderID': 10320,
      'CustomerID': 'WARTH',
      'OrderDate': '1996-10-03T00:00:00.000Z',
      'ShippedDate': '1996-10-18T00:00:00.000Z',
      'Freight': 34.57,
      'ShipName': 'Wartian Herkku',
      'ShipAddress': 'Torikatu 38',
      'ShipCity': 'Oulu',
      'ShipRegion': null,
      'ShipCountry': 'Finland'
    },
    {
      'OrderID': 10321,
      'CustomerID': 'ISLAT',
      'OrderDate': '1996-10-03T00:00:00.000Z',
      'ShippedDate': '1996-10-11T00:00:00.000Z',
      'Freight': 3.43,
      'ShipName': 'Island Trading',
      'ShipAddress': 'Garden House Crowther Way',
      'ShipCity': 'Cowes',
      'ShipRegion': 'Isle of Wight',
      'ShipCountry': 'UK'
    },
    {
      'OrderID': 10322,
      'CustomerID': 'PERIC',
      'OrderDate': '1996-10-04T00:00:00.000Z',
      'ShippedDate': '1996-10-23T00:00:00.000Z',
      'Freight': 0.4,
      'ShipName': 'Pericles Comidas clásicas',
      'ShipAddress': 'Calle Dr. Jorge Cash 321',
      'ShipCity': 'México D.F.',
      'ShipRegion': null,
      'ShipCountry': 'Mexico'
    },
    {
      'OrderID': 10323,
      'CustomerID': 'KOENE',
      'OrderDate': '1996-10-07T00:00:00.000Z',
      'ShippedDate': '1996-10-14T00:00:00.000Z',
      'Freight': 4.88,
      'ShipName': 'Königlich Essen',
      'ShipAddress': 'Maubelstr. 90',
      'ShipCity': 'Brandenburg',
      'ShipRegion': null,
      'ShipCountry': 'Germany'
    }
  ]

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},
{
  'OrderID': 10324,
  'CustomerID': 'SAVEA',
  'OrderDate': '1996-10-08T00:00:00.000Z',
  'ShippedDate': '1996-10-10T00:00:00.000Z',
  'Freight': 214.27,
  'ShipName': 'Save-a-lot Markets',
  'ShipAddress': '187 Suffolk Ln.',
  'ShipCity': 'Boise',
  'ShipRegion': 'ID',
  'ShipCountry': 'USA'
},
{
  'OrderID': 10325,
  'CustomerID': 'KOENE',
  'OrderDate': '1996-10-09T00:00:00.000Z',
  'ShippedDate': '1996-10-14T00:00:00.000Z',
  'Freight': 64.86,
  'ShipName': 'Königlich Essen',
  'ShipAddress': 'Maubelstr. 90',
  'ShipCity': 'Brandenburg',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10326,
  'CustomerID': 'BOLID',
  'OrderDate': '1996-10-10T00:00:00.000Z',
  'ShippedDate': '1996-10-14T00:00:00.000Z',
  'Freight': 77.92,
  'ShipName': 'Bólido Comidas preparadas',
  'ShipAddress': 'C/ Araquil, 67',
  'ShipCity': 'Madrid',
  'ShipRegion': null,
  'ShipCountry': 'Spain'
},
{
  'OrderID': 10327,
  'CustomerID': 'FOLKO',
  'OrderDate': '1996-10-11T00:00:00.000Z',
  'ShippedDate': '1996-10-14T00:00:00.000Z',
  'Freight': 63.36,
  'ShipName': 'Folk och fä HB',
  'ShipAddress': 'Åkergatan 24',
  'ShipCity': 'Bräcke',
  'ShipRegion': null,
  'ShipCountry': 'Sweden'
},
{
  'OrderID': 10328,
  'CustomerID': 'FURIB',
  'OrderDate': '1996-10-14T00:00:00.000Z',
  'ShippedDate': '1996-10-17T00:00:00.000Z',
  'Freight': 87.03,
  'ShipName': 'Furia Bacalhau e Frutos do Mar',
  'ShipAddress': 'Jardim das rosas n. 32',
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        'ShipCity': 'Lisboa',
        'ShipRegion': null,
        'ShipCountry': 'Portugal'
    },
    {
        'OrderID': 10329,
        'CustomerID': 'SPLIR',
        'OrderDate': '1996-10-15T00:00:00.000Z',
        'ShippedDate': '1996-10-23T00:00:00.000Z',
        'Freight': 191.67,
        'ShipName': 'Split Rail Beer & Ale',
        'ShipAddress': 'P.O. Box 555',
        'ShipCity': 'Lander',
        'ShipRegion': 'WY',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10330,
        'CustomerID': 'LILAS',
        'OrderDate': '1996-10-16T00:00:00.000Z',
        'ShippedDate': '1996-10-28T00:00:00.000Z',
        'Freight': 12.75,
        'ShipName': 'LILA-Supermercado',
        'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
        'ShipCity': 'Barquisimeto',
        'ShipRegion': 'Lara',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 10331,
        'CustomerID': 'BONAP',
        'OrderDate': '1996-10-16T00:00:00.000Z',
        'ShippedDate': '1996-10-21T00:00:00.000Z',
        'Freight': 10.19,
        'ShipName': 'Bon app',
        'ShipAddress': '12, rue des Bouchers',
        'ShipCity': 'Marseille',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10332,
        'CustomerID': 'MEREP',
        'OrderDate': '1996-10-17T00:00:00.000Z',
        'ShippedDate': '1996-10-21T00:00:00.000Z',
        'Freight': 52.84,
        'ShipName': 'Mère Paillarde',
        'ShipAddress': '43 rue St. Laurent',
        'ShipCity': 'Montréal',
        'ShipRegion': 'Québec',
        'ShipCountry': 'Canada'
    },
    {
        'OrderID': 10333,
        'CustomerID': 'WARTH',
        'OrderDate': '1996-10-18T00:00:00.000Z',
        'ShippedDate': '1996-10-25T00:00:00.000Z',

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    'Freight': 0.59,
    'ShipName': 'Wartian Herkku',
    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 10334,
    'CustomerID': 'VICTE',
    'OrderDate': '1996-10-21T00:00:00.000Z',
    'ShippedDate': '1996-10-28T00:00:00.000Z',
    'Freight': 8.56,
    'ShipName': 'Victuailles en stock',
    'ShipAddress': '2, rue du Commerce',
    'ShipCity': 'Lyon',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10335,
    'CustomerID': 'HUNGO',
    'OrderDate': '1996-10-22T00:00:00.000Z',
    'ShippedDate': '1996-10-24T00:00:00.000Z',
    'Freight': 42.11,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10336,
    'CustomerID': 'PRINI',
    'OrderDate': '1996-10-23T00:00:00.000Z',
    'ShippedDate': '1996-10-25T00:00:00.000Z',
    'Freight': 15.51,
    'ShipName': 'Princesa Isabel Vinhos',
    'ShipAddress': 'Estrada da saúde n. 58',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {
    'OrderID': 10337,
    'CustomerID': 'FRANK',
    'OrderDate': '1996-10-24T00:00:00.000Z',
    'ShippedDate': '1996-10-29T00:00:00.000Z',
    'Freight': 108.26,
    'ShipName': 'Frankenversand',
    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10338,

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    'CustomerID': 'OLDWO',
    'OrderDate': '1996-10-25T00:00:00.000Z',
    'ShippedDate': '1996-10-29T00:00:00.000Z',
    'Freight': 84.21,
    'ShipName': 'Old World Delicatessen',
    'ShipAddress': '2743 Bering St.',
    'ShipCity': 'Anchorage',
    'ShipRegion': 'AK',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10339,
    'CustomerID': 'MEREP',
    'OrderDate': '1996-10-28T00:00:00.000Z',
    'ShippedDate': '1996-11-04T00:00:00.000Z',
    'Freight': 15.66,
    'ShipName': 'Mère Paillarde',
    'ShipAddress': '43 rue St. Laurent',
    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10340,
    'CustomerID': 'BONAP',
    'OrderDate': '1996-10-29T00:00:00.000Z',
    'ShippedDate': '1996-11-08T00:00:00.000Z',
    'Freight': 166.31,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10341,
    'CustomerID': 'SIMOB',
    'OrderDate': '1996-10-29T00:00:00.000Z',
    'ShippedDate': '1996-11-05T00:00:00.000Z',
    'Freight': 26.78,
    'ShipName': 'Simons bistro',
    'ShipAddress': 'Vinbæltet 34',
    'ShipCity': 'Kobenhavn',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
    'OrderID': 10342,
    'CustomerID': 'FRANK',
    'OrderDate': '1996-10-30T00:00:00.000Z',
    'ShippedDate': '1996-11-04T00:00:00.000Z',
    'Freight': 54.83,
    'ShipName': 'Frankenversand',
    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  }

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},
{
  'OrderID': 10343,
  'CustomerID': 'LEHMS',
  'OrderDate': '1996-10-31T00:00:00.000Z',
  'ShippedDate': '1996-11-06T00:00:00.000Z',
  'Freight': 110.37,
  'ShipName': 'Lehmanns Marktstand',
  'ShipAddress': 'Magazinweg 7',
  'ShipCity': 'Frankfurt a.M.',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10344,
  'CustomerID': 'WHITC',
  'OrderDate': '1996-11-01T00:00:00.000Z',
  'ShippedDate': '1996-11-05T00:00:00.000Z',
  'Freight': 23.29,
  'ShipName': 'White Clover Markets',
  'ShipAddress': '1029 - 12th Ave. S.',
  'ShipCity': 'Seattle',
  'ShipRegion': 'WA',
  'ShipCountry': 'USA'
},
{
  'OrderID': 10345,
  'CustomerID': 'QUICK',
  'OrderDate': '1996-11-04T00:00:00.000Z',
  'ShippedDate': '1996-11-11T00:00:00.000Z',
  'Freight': 249.06,
  'ShipName': 'QUICK-Stop',
  'ShipAddress': 'Taucherstraße 10',
  'ShipCity': 'Cunewalde',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10346,
  'CustomerID': 'RATTC',
  'OrderDate': '1996-11-05T00:00:00.000Z',
  'ShippedDate': '1996-11-08T00:00:00.000Z',
  'Freight': 142.08,
  'ShipName': 'Rattlesnake Canyon Grocery',
  'ShipAddress': '2817 Milton Dr.',
  'ShipCity': 'Albuquerque',
  'ShipRegion': 'NM',
  'ShipCountry': 'USA'
},
{
  'OrderID': 10347,
  'CustomerID': 'FAMIA',
  'OrderDate': '1996-11-06T00:00:00.000Z',
  'ShippedDate': '1996-11-08T00:00:00.000Z',
  'Freight': 3.1,
  'ShipName': 'Familia Arquibaldo',
  'ShipAddress': 'Rua Orós, 92',
```

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    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10348,
    'CustomerID': 'WANDK',
    'OrderDate': '1996-11-07T00:00:00.000Z',
    'ShippedDate': '1996-11-15T00:00:00.000Z',
    'Freight': 0.78,
    'ShipName': 'Die Wandernde Kuh',
    'ShipAddress': 'Adenauerallee 900',
    'ShipCity': 'Stuttgart',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10349,
    'CustomerID': 'SPLIR',
    'OrderDate': '1996-11-08T00:00:00.000Z',
    'ShippedDate': '1996-11-15T00:00:00.000Z',
    'Freight': 8.63,
    'ShipName': 'Split Rail Beer & Ale',
    'ShipAddress': 'P.O. Box 555',
    'ShipCity': 'Lander',
    'ShipRegion': 'WY',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10350,
    'CustomerID': 'LAMAI',
    'OrderDate': '1996-11-11T00:00:00.000Z',
    'ShippedDate': '1996-12-03T00:00:00.000Z',
    'Freight': 64.19,
    'ShipName': 'La maison d\'Asie',
    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10351,
    'CustomerID': 'ERNSH',
    'OrderDate': '1996-11-11T00:00:00.000Z',
    'ShippedDate': '1996-11-20T00:00:00.000Z',
    'Freight': 162.33,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10352,
    'CustomerID': 'FURIB',
    'OrderDate': '1996-11-12T00:00:00.000Z',
    'ShippedDate': '1996-11-18T00:00:00.000Z',

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    'Freight': 1.3,
    'ShipName': 'Furia Bacalhau e Frutos do Mar',
    'ShipAddress': 'Jardim das rosas n. 32',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {
    'OrderID': 10353,
    'CustomerID': 'PICCO',
    'OrderDate': '1996-11-13T00:00:00.000Z',
    'ShippedDate': '1996-11-25T00:00:00.000Z',
    'Freight': 360.63,
    'ShipName': 'Piccolo und mehr',
    'ShipAddress': 'Geislweg 14',
    'ShipCity': 'Salzburg',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10354,
    'CustomerID': 'PERIC',
    'OrderDate': '1996-11-14T00:00:00.000Z',
    'ShippedDate': '1996-11-20T00:00:00.000Z',
    'Freight': 53.8,
    'ShipName': 'Pericles Comidas clásicas',
    'ShipAddress': 'Calle Dr. Jorge Cash 321',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10355,
    'CustomerID': 'AROUT',
    'OrderDate': '1996-11-15T00:00:00.000Z',
    'ShippedDate': '1996-11-20T00:00:00.000Z',
    'Freight': 41.95,
    'ShipName': 'Around the Horn',
    'ShipAddress': 'Brook Farm Stratford St. Mary',
    'ShipCity': 'Colchester',
    'ShipRegion': 'Essex',
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10356,
    'CustomerID': 'WANDK',
    'OrderDate': '1996-11-18T00:00:00.000Z',
    'ShippedDate': '1996-11-27T00:00:00.000Z',
    'Freight': 36.71,
    'ShipName': 'Die Wandernde Kuh',
    'ShipAddress': 'Adenauerallee 900',
    'ShipCity': 'Stuttgart',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10357,

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```

    'CustomerID': 'LILAS',
    'OrderDate': '1996-11-19T00:00:00.000Z',
    'ShippedDate': '1996-12-02T00:00:00.000Z',
    'Freight': 34.88,
    'ShipName': 'LILA-Supermercado',
    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10358,
    'CustomerID': 'LAMAI',
    'OrderDate': '1996-11-20T00:00:00.000Z',
    'ShippedDate': '1996-11-27T00:00:00.000Z',
    'Freight': 19.64,
    'ShipName': 'La maison d\'Asie',
    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10359,
    'CustomerID': 'SEVES',
    'OrderDate': '1996-11-21T00:00:00.000Z',
    'ShippedDate': '1996-11-26T00:00:00.000Z',
    'Freight': 288.43,
    'ShipName': 'Seven Seas Imports',
    'ShipAddress': '90 Wadhurst Rd.',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10360,
    'CustomerID': 'BLONP',
    'OrderDate': '1996-11-22T00:00:00.000Z',
    'ShippedDate': '1996-12-02T00:00:00.000Z',
    'Freight': 131.7,
    'ShipName': 'Blondel père et fils',
    'ShipAddress': '24, place Kléber',
    'ShipCity': 'Strasbourg',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10361,
    'CustomerID': 'QUICK',
    'OrderDate': '1996-11-22T00:00:00.000Z',
    'ShippedDate': '1996-12-03T00:00:00.000Z',
    'Freight': 183.17,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  }

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    },
    {
        'OrderID': 10362,
        'CustomerID': 'BONAP',
        'OrderDate': '1996-11-25T00:00:00.000Z',
        'ShippedDate': '1996-11-28T00:00:00.000Z',
        'Freight': 96.04,
        'ShipName': 'Bon app',
        'ShipAddress': '12, rue des Bouchers',
        'ShipCity': 'Marseille',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10363,
        'CustomerID': 'DRACD',
        'OrderDate': '1996-11-26T00:00:00.000Z',
        'ShippedDate': '1996-12-04T00:00:00.000Z',
        'Freight': 30.54,
        'ShipName': 'Drachenblut Delikatessen',
        'ShipAddress': 'Walserweg 21',
        'ShipCity': 'Aachen',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10364,
        'CustomerID': 'EASTC',
        'OrderDate': '1996-11-26T00:00:00.000Z',
        'ShippedDate': '1996-12-04T00:00:00.000Z',
        'Freight': 71.97,
        'ShipName': 'Eastern Connection',
        'ShipAddress': '35 King George',
        'ShipCity': 'London',
        'ShipRegion': null,
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10365,
        'CustomerID': 'ANTON',
        'OrderDate': '1996-11-27T00:00:00.000Z',
        'ShippedDate': '1996-12-02T00:00:00.000Z',
        'Freight': 22,
        'ShipName': 'Antonio Moreno Taquería',
        'ShipAddress': 'Mataderos 2312',
        'ShipCity': 'México D.F.',
        'ShipRegion': null,
        'ShipCountry': 'Mexico'
    },
    {
        'OrderID': 10366,
        'CustomerID': 'GALED',
        'OrderDate': '1996-11-28T00:00:00.000Z',
        'ShippedDate': '1996-12-30T00:00:00.000Z',
        'Freight': 10.14,
        'ShipName': 'Galería del gastronómo',
        'ShipAddress': 'Rambla de Cataluña, 23',
    }

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    'ShipCity': 'Barcelona',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10367,
    'CustomerID': 'VAFFE',
    'OrderDate': '1996-11-28T00:00:00.000Z',
    'ShippedDate': '1996-12-02T00:00:00.000Z',
    'Freight': 13.55,
    'ShipName': 'Vaffeljernet',
    'ShipAddress': 'Smagsloget 45',
    'ShipCity': 'Århus',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
    'OrderID': 10368,
    'CustomerID': 'ERNSH',
    'OrderDate': '1996-11-29T00:00:00.000Z',
    'ShippedDate': '1996-12-02T00:00:00.000Z',
    'Freight': 101.95,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10369,
    'CustomerID': 'SPLIR',
    'OrderDate': '1996-12-02T00:00:00.000Z',
    'ShippedDate': '1996-12-09T00:00:00.000Z',
    'Freight': 195.68,
    'ShipName': 'Split Rail Beer & Ale',
    'ShipAddress': 'P.O. Box 555',
    'ShipCity': 'Lander',
    'ShipRegion': 'WY',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10370,
    'CustomerID': 'CHOPS',
    'OrderDate': '1996-12-03T00:00:00.000Z',
    'ShippedDate': '1996-12-27T00:00:00.000Z',
    'Freight': 1.17,
    'ShipName': 'Chop-suey Chinese',
    'ShipAddress': 'Hauptstr. 31',
    'ShipCity': 'Bern',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
  {
    'OrderID': 10371,
    'CustomerID': 'LAMAI',
    'OrderDate': '1996-12-03T00:00:00.000Z',
    'ShippedDate': '1996-12-24T00:00:00.000Z',

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    'Freight': 0.45,
    'ShipName': 'La maison d\'Asie',
    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10372,
    'CustomerID': 'QUEEN',
    'OrderDate': '1996-12-04T00:00:00.000Z',
    'ShippedDate': '1996-12-09T00:00:00.000Z',
    'Freight': 890.78,
    'ShipName': 'Queen Cozinha',
    'ShipAddress': 'Alameda dos Canários, 891',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10373,
    'CustomerID': 'HUNGO',
    'OrderDate': '1996-12-05T00:00:00.000Z',
    'ShippedDate': '1996-12-11T00:00:00.000Z',
    'Freight': 124.12,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10374,
    'CustomerID': 'WOLZA',
    'OrderDate': '1996-12-05T00:00:00.000Z',
    'ShippedDate': '1996-12-09T00:00:00.000Z',
    'Freight': 3.94,
    'ShipName': 'Wolski Zajazd',
    'ShipAddress': 'ul. Filtrowa 68',
    'ShipCity': 'Warszawa',
    'ShipRegion': null,
    'ShipCountry': 'Poland'
  },
  {
    'OrderID': 10375,
    'CustomerID': 'HUNGC',
    'OrderDate': '1996-12-06T00:00:00.000Z',
    'ShippedDate': '1996-12-09T00:00:00.000Z',
    'Freight': 20.12,
    'ShipName': 'Hungry Coyote Import Store',
    'ShipAddress': 'City Center Plaza 516 Main St.',
    'ShipCity': 'Elgin',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10376,

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    'CustomerID': 'MEREP',
    'OrderDate': '1996-12-09T00:00:00.000Z',
    'ShippedDate': '1996-12-13T00:00:00.000Z',
    'Freight': 20.39,
    'ShipName': 'Mère Paillarde',
    'ShipAddress': '43 rue St. Laurent',
    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10377,
    'CustomerID': 'SEVES',
    'OrderDate': '1996-12-09T00:00:00.000Z',
    'ShippedDate': '1996-12-13T00:00:00.000Z',
    'Freight': 22.21,
    'ShipName': 'Seven Seas Imports',
    'ShipAddress': '90 Wadhurst Rd.',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10378,
    'CustomerID': 'FOLKO',
    'OrderDate': '1996-12-10T00:00:00.000Z',
    'ShippedDate': '1996-12-19T00:00:00.000Z',
    'Freight': 5.44,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10379,
    'CustomerID': 'QUEDE',
    'OrderDate': '1996-12-11T00:00:00.000Z',
    'ShippedDate': '1996-12-13T00:00:00.000Z',
    'Freight': 45.03,
    'ShipName': 'Que Delícia',
    'ShipAddress': 'Rua da Panificadora, 12',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10380,
    'CustomerID': 'HUNGO',
    'OrderDate': '1996-12-12T00:00:00.000Z',
    'ShippedDate': '1997-01-16T00:00:00.000Z',
    'Freight': 35.03,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  }

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},
{
  'OrderID': 10381,
  'CustomerID': 'LILAS',
  'OrderDate': '1996-12-12T00:00:00.000Z',
  'ShippedDate': '1996-12-13T00:00:00.000Z',
  'Freight': 7.99,
  'ShipName': 'LILA-Supermercado',
  'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
  'ShipCity': 'Barquisimeto',
  'ShipRegion': 'Lara',
  'ShipCountry': 'Venezuela'
},
{
  'OrderID': 10382,
  'CustomerID': 'ERNSH',
  'OrderDate': '1996-12-13T00:00:00.000Z',
  'ShippedDate': '1996-12-16T00:00:00.000Z',
  'Freight': 94.77,
  'ShipName': 'Ernst Handel',
  'ShipAddress': 'Kirchgasse 6',
  'ShipCity': 'Graz',
  'ShipRegion': null,
  'ShipCountry': 'Austria'
},
{
  'OrderID': 10383,
  'CustomerID': 'AROUT',
  'OrderDate': '1996-12-16T00:00:00.000Z',
  'ShippedDate': '1996-12-18T00:00:00.000Z',
  'Freight': 34.24,
  'ShipName': 'Around the Horn',
  'ShipAddress': 'Brook Farm Stratford St. Mary',
  'ShipCity': 'Colchester',
  'ShipRegion': 'Essex',
  'ShipCountry': 'UK'
},
{
  'OrderID': 10384,
  'CustomerID': 'BERGS',
  'OrderDate': '1996-12-16T00:00:00.000Z',
  'ShippedDate': '1996-12-20T00:00:00.000Z',
  'Freight': 168.64,
  'ShipName': 'Berglunds snabbköp',
  'ShipAddress': 'Berguvsvägen 8',
  'ShipCity': 'Luleå',
  'ShipRegion': null,
  'ShipCountry': 'Sweden'
},
{
  'OrderID': 10385,
  'CustomerID': 'SPLIR',
  'OrderDate': '1996-12-17T00:00:00.000Z',
  'ShippedDate': '1996-12-23T00:00:00.000Z',
  'Freight': 30.96,
  'ShipName': 'Split Rail Beer & Ale',
  'ShipAddress': 'P.O. Box 555',
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        'ShipCity': 'Lander',
        'ShipRegion': 'WY',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10386,
        'CustomerID': 'FAMIA',
        'OrderDate': '1996-12-18T00:00:00.000Z',
        'ShippedDate': '1996-12-25T00:00:00.000Z',
        'Freight': 13.99,
        'ShipName': 'Familia Arquibaldo',
        'ShipAddress': 'Rua Orós, 92',
        'ShipCity': 'Sao Paulo',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10387,
        'CustomerID': 'SANTG',
        'OrderDate': '1996-12-18T00:00:00.000Z',
        'ShippedDate': '1996-12-20T00:00:00.000Z',
        'Freight': 93.63,
        'ShipName': 'Santé Gourmet',
        'ShipAddress': 'Erling Skakkes gate 78',
        'ShipCity': 'Stavern',
        'ShipRegion': null,
        'ShipCountry': 'Norway'
    },
    {
        'OrderID': 10388,
        'CustomerID': 'SEVES',
        'OrderDate': '1996-12-19T00:00:00.000Z',
        'ShippedDate': '1996-12-20T00:00:00.000Z',
        'Freight': 34.86,
        'ShipName': 'Seven Seas Imports',
        'ShipAddress': '90 Wadhurst Rd.',
        'ShipCity': 'London',
        'ShipRegion': null,
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10389,
        'CustomerID': 'BOTTM',
        'OrderDate': '1996-12-20T00:00:00.000Z',
        'ShippedDate': '1996-12-24T00:00:00.000Z',
        'Freight': 47.42,
        'ShipName': 'Bottom-Dollar Markets',
        'ShipAddress': '23 Tsawassen Blvd.',
        'ShipCity': 'Tsawassen',
        'ShipRegion': 'BC',
        'ShipCountry': 'Canada'
    },
    {
        'OrderID': 10390,
        'CustomerID': 'ERNSH',
        'OrderDate': '1996-12-23T00:00:00.000Z',
        'ShippedDate': '1996-12-26T00:00:00.000Z',

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    'Freight': 126.38,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10391,
    'CustomerID': 'DRACD',
    'OrderDate': '1996-12-23T00:00:00.000Z',
    'ShippedDate': '1996-12-31T00:00:00.000Z',
    'Freight': 5.45,
    'ShipName': 'Drachenblut Delikatessen',
    'ShipAddress': 'Walserweg 21',
    'ShipCity': 'Aachen',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10392,
    'CustomerID': 'PICCO',
    'OrderDate': '1996-12-24T00:00:00.000Z',
    'ShippedDate': '1997-01-01T00:00:00.000Z',
    'Freight': 122.46,
    'ShipName': 'Piccolo und mehr',
    'ShipAddress': 'Geislweg 14',
    'ShipCity': 'Salzburg',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10393,
    'CustomerID': 'SAVEA',
    'OrderDate': '1996-12-25T00:00:00.000Z',
    'ShippedDate': '1997-01-03T00:00:00.000Z',
    'Freight': 126.56,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10394,
    'CustomerID': 'HUNGC',
    'OrderDate': '1996-12-25T00:00:00.000Z',
    'ShippedDate': '1997-01-03T00:00:00.000Z',
    'Freight': 30.34,
    'ShipName': 'Hungry Coyote Import Store',
    'ShipAddress': 'City Center Plaza 516 Main St.',
    'ShipCity': 'Elgin',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10395,

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    'CustomerID': 'HILAA',
    'OrderDate': '1996-12-26T00:00:00.000Z',
    'ShippedDate': '1997-01-03T00:00:00.000Z',
    'Freight': 184.41,
    'ShipName': 'HILARION-Abastos',
    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10396,
    'CustomerID': 'FRANK',
    'OrderDate': '1996-12-27T00:00:00.000Z',
    'ShippedDate': '1997-01-06T00:00:00.000Z',
    'Freight': 135.35,
    'ShipName': 'Frankenversand',
    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10397,
    'CustomerID': 'PRINI',
    'OrderDate': '1996-12-27T00:00:00.000Z',
    'ShippedDate': '1997-01-02T00:00:00.000Z',
    'Freight': 60.26,
    'ShipName': 'Princesa Isabel Vinhos',
    'ShipAddress': 'Estrada da saúde n. 58',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {
    'OrderID': 10398,
    'CustomerID': 'SAVEA',
    'OrderDate': '1996-12-30T00:00:00.000Z',
    'ShippedDate': '1997-01-09T00:00:00.000Z',
    'Freight': 89.16,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10399,
    'CustomerID': 'VAFFE',
    'OrderDate': '1996-12-31T00:00:00.000Z',
    'ShippedDate': '1997-01-08T00:00:00.000Z',
    'Freight': 27.36,
    'ShipName': 'Vaffeljernet',
    'ShipAddress': 'Smagsloget 45',
    'ShipCity': 'Århus',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  }

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},
{
  'OrderID': 10400,
  'CustomerID': 'EASTC',
  'OrderDate': '1997-01-01T00:00:00.000Z',
  'ShippedDate': '1997-01-16T00:00:00.000Z',
  'Freight': 83.93,
  'ShipName': 'Eastern Connection',
  'ShipAddress': '35 King George',
  'ShipCity': 'London',
  'ShipRegion': null,
  'ShipCountry': 'UK'
},
{
  'OrderID': 10401,
  'CustomerID': 'RATTC',
  'OrderDate': '1997-01-01T00:00:00.000Z',
  'ShippedDate': '1997-01-10T00:00:00.000Z',
  'Freight': 12.51,
  'ShipName': 'Rattlesnake Canyon Grocery',
  'ShipAddress': '2817 Milton Dr.',
  'ShipCity': 'Albuquerque',
  'ShipRegion': 'NM',
  'ShipCountry': 'USA'
},
{
  'OrderID': 10402,
  'CustomerID': 'ERNSH',
  'OrderDate': '1997-01-02T00:00:00.000Z',
  'ShippedDate': '1997-01-10T00:00:00.000Z',
  'Freight': 67.88,
  'ShipName': 'Ernst Handel',
  'ShipAddress': 'Kirchgasse 6',
  'ShipCity': 'Graz',
  'ShipRegion': null,
  'ShipCountry': 'Austria'
},
{
  'OrderID': 10403,
  'CustomerID': 'ERNSH',
  'OrderDate': '1997-01-03T00:00:00.000Z',
  'ShippedDate': '1997-01-09T00:00:00.000Z',
  'Freight': 73.79,
  'ShipName': 'Ernst Handel',
  'ShipAddress': 'Kirchgasse 6',
  'ShipCity': 'Graz',
  'ShipRegion': null,
  'ShipCountry': 'Austria'
},
{
  'OrderID': 10404,
  'CustomerID': 'MAGAA',
  'OrderDate': '1997-01-03T00:00:00.000Z',
  'ShippedDate': '1997-01-08T00:00:00.000Z',
  'Freight': 155.97,
  'ShipName': 'Magazzini Alimentari Riuniti',
  'ShipAddress': 'Via Ludovico il Moro 22',
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        'ShipCity': 'Bergamo',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
    {
        'OrderID': 10405,
        'CustomerID': 'LINOD',
        'OrderDate': '1997-01-06T00:00:00.000Z',
        'ShippedDate': '1997-01-22T00:00:00.000Z',
        'Freight': 34.82,
        'ShipName': 'LINO-Delicateses',
        'ShipAddress': 'Ave. 5 de Mayo Porlamar',
        'ShipCity': 'I. de Margarita',
        'ShipRegion': 'Nueva Esparta',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 10406,
        'CustomerID': 'QUEEN',
        'OrderDate': '1997-01-07T00:00:00.000Z',
        'ShippedDate': '1997-01-13T00:00:00.000Z',
        'Freight': 108.04,
        'ShipName': 'Queen Cozinha',
        'ShipAddress': 'Alameda dos Canários, 891',
        'ShipCity': 'Sao Paulo',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10407,
        'CustomerID': 'OTTIK',
        'OrderDate': '1997-01-07T00:00:00.000Z',
        'ShippedDate': '1997-01-30T00:00:00.000Z',
        'Freight': 91.48,
        'ShipName': 'Ottilies Käseladen',
        'ShipAddress': 'Mehrheimerstr. 369',
        'ShipCity': 'Köln',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10408,
        'CustomerID': 'FOLIG',
        'OrderDate': '1997-01-08T00:00:00.000Z',
        'ShippedDate': '1997-01-14T00:00:00.000Z',
        'Freight': 11.26,
        'ShipName': 'Folies gourmandes',
        'ShipAddress': '184, chaussée de Tournai',
        'ShipCity': 'Lille',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10409,
        'CustomerID': 'OCEAN',
        'OrderDate': '1997-01-09T00:00:00.000Z',
        'ShippedDate': '1997-01-14T00:00:00.000Z',

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    'Freight': 29.83,
    'ShipName': 'Océano Atlántico Ltda.',
    'ShipAddress': 'Ing. Gustavo Moncada 8585 Piso 20-A',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },
  {
    'OrderID': 10410,
    'CustomerID': 'BOTTM',
    'OrderDate': '1997-01-10T00:00:00.000Z',
    'ShippedDate': '1997-01-15T00:00:00.000Z',
    'Freight': 2.4,
    'ShipName': 'Bottom-Dollar Markets',
    'ShipAddress': '23 Tsawassen Blvd.',
    'ShipCity': 'Tsawassen',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10411,
    'CustomerID': 'BOTTM',
    'OrderDate': '1997-01-10T00:00:00.000Z',
    'ShippedDate': '1997-01-21T00:00:00.000Z',
    'Freight': 23.65,
    'ShipName': 'Bottom-Dollar Markets',
    'ShipAddress': '23 Tsawassen Blvd.',
    'ShipCity': 'Tsawassen',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10412,
    'CustomerID': 'WARTH',
    'OrderDate': '1997-01-13T00:00:00.000Z',
    'ShippedDate': '1997-01-15T00:00:00.000Z',
    'Freight': 3.77,
    'ShipName': 'Wartian Herkku',
    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 10413,
    'CustomerID': 'LAMAI',
    'OrderDate': '1997-01-14T00:00:00.000Z',
    'ShippedDate': '1997-01-16T00:00:00.000Z',
    'Freight': 95.66,
    'ShipName': 'La maison d\'Asie',
    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10414,

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    'CustomerID': 'FAMIA',
    'OrderDate': '1997-01-14T00:00:00.000Z',
    'ShippedDate': '1997-01-17T00:00:00.000Z',
    'Freight': 21.48,
    'ShipName': 'Familia Arquibaldo',
    'ShipAddress': 'Rua Orós, 92',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10415,
    'CustomerID': 'HUNGC',
    'OrderDate': '1997-01-15T00:00:00.000Z',
    'ShippedDate': '1997-01-24T00:00:00.000Z',
    'Freight': 0.2,
    'ShipName': 'Hungry Coyote Import Store',
    'ShipAddress': 'City Center Plaza 516 Main St.',
    'ShipCity': 'Elgin',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10416,
    'CustomerID': 'WARTH',
    'OrderDate': '1997-01-16T00:00:00.000Z',
    'ShippedDate': '1997-01-27T00:00:00.000Z',
    'Freight': 22.72,
    'ShipName': 'Wartian Herkku',
    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 10417,
    'CustomerID': 'SIMOB',
    'OrderDate': '1997-01-16T00:00:00.000Z',
    'ShippedDate': '1997-01-28T00:00:00.000Z',
    'Freight': 70.29,
    'ShipName': 'Simons bistro',
    'ShipAddress': 'Vinbæltet 34',
    'ShipCity': 'Kobenhavn',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
    'OrderID': 10418,
    'CustomerID': 'QUICK',
    'OrderDate': '1997-01-17T00:00:00.000Z',
    'ShippedDate': '1997-01-24T00:00:00.000Z',
    'Freight': 17.55,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  }

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},
{
  'OrderID': 10419,
  'CustomerID': 'RICSU',
  'OrderDate': '1997-01-20T00:00:00.000Z',
  'ShippedDate': '1997-01-30T00:00:00.000Z',
  'Freight': 137.35,
  'ShipName': 'Richter Supermarkt',
  'ShipAddress': 'Starenweg 5',
  'ShipCity': 'Genève',
  'ShipRegion': null,
  'ShipCountry': 'Switzerland'
},
{
  'OrderID': 10420,
  'CustomerID': 'WELLI',
  'OrderDate': '1997-01-21T00:00:00.000Z',
  'ShippedDate': '1997-01-27T00:00:00.000Z',
  'Freight': 44.12,
  'ShipName': 'Wellington Importadora',
  'ShipAddress': 'Rua do Mercado, 12',
  'ShipCity': 'Resende',
  'ShipRegion': 'SP',
  'ShipCountry': 'Brazil'
},
{
  'OrderID': 10421,
  'CustomerID': 'QUEDE',
  'OrderDate': '1997-01-21T00:00:00.000Z',
  'ShippedDate': '1997-01-27T00:00:00.000Z',
  'Freight': 99.23,
  'ShipName': 'Que Delícia',
  'ShipAddress': 'Rua da Panificadora, 12',
  'ShipCity': 'Rio de Janeiro',
  'ShipRegion': 'RJ',
  'ShipCountry': 'Brazil'
},
{
  'OrderID': 10422,
  'CustomerID': 'FRANS',
  'OrderDate': '1997-01-22T00:00:00.000Z',
  'ShippedDate': '1997-01-31T00:00:00.000Z',
  'Freight': 3.02,
  'ShipName': 'Franchi S.p.A.',
  'ShipAddress': 'Via Monte Bianco 34',
  'ShipCity': 'Torino',
  'ShipRegion': null,
  'ShipCountry': 'Italy'
},
{
  'OrderID': 10423,
  'CustomerID': 'GOURL',
  'OrderDate': '1997-01-23T00:00:00.000Z',
  'ShippedDate': '1997-02-24T00:00:00.000Z',
  'Freight': 24.5,
  'ShipName': 'Gourmet Lanchonetes',
  'ShipAddress': 'Av. Brasil, 442',
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    'ShipCity': 'Campinas',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
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    'CustomerID': 'MEREP',
    'OrderDate': '1997-01-23T00:00:00.000Z',
    'ShippedDate': '1997-01-27T00:00:00.000Z',
    'Freight': 370.61,
    'ShipName': 'Mère Paillarde',
    'ShipAddress': '43 rue St. Laurent',
    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10425,
    'CustomerID': 'LAMAI',
    'OrderDate': '1997-01-24T00:00:00.000Z',
    'ShippedDate': '1997-02-14T00:00:00.000Z',
    'Freight': 7.93,
    'ShipName': 'La maison d\'Asie',
    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10426,
    'CustomerID': 'GALED',
    'OrderDate': '1997-01-27T00:00:00.000Z',
    'ShippedDate': '1997-02-06T00:00:00.000Z',
    'Freight': 18.69,
    'ShipName': 'Galería del gastronómo',
    'ShipAddress': 'Rambla de Cataluña, 23',
    'ShipCity': 'Barcelona',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10427,
    'CustomerID': 'PICCO',
    'OrderDate': '1997-01-27T00:00:00.000Z',
    'ShippedDate': '1997-03-03T00:00:00.000Z',
    'Freight': 31.29,
    'ShipName': 'Piccolo und mehr',
    'ShipAddress': 'Geislweg 14',
    'ShipCity': 'Salzburg',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10428,
    'CustomerID': 'REGGC',
    'OrderDate': '1997-01-28T00:00:00.000Z',
    'ShippedDate': '1997-02-04T00:00:00.000Z',

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    'Freight': 11.09,
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    'ShipAddress': 'Strada Provinciale 124',
    'ShipCity': 'Reggio Emilia',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
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    'CustomerID': 'HUNGO',
    'OrderDate': '1997-01-29T00:00:00.000Z',
    'ShippedDate': '1997-02-07T00:00:00.000Z',
    'Freight': 56.63,
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    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10430,
    'CustomerID': 'ERNSH',
    'OrderDate': '1997-01-30T00:00:00.000Z',
    'ShippedDate': '1997-02-03T00:00:00.000Z',
    'Freight': 458.78,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10431,
    'CustomerID': 'BOTTM',
    'OrderDate': '1997-01-30T00:00:00.000Z',
    'ShippedDate': '1997-02-07T00:00:00.000Z',
    'Freight': 44.17,
    'ShipName': 'Bottom-Dollar Markets',
    'ShipAddress': '23 Tsawassen Blvd.',
    'ShipCity': 'Tsawassen',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10432,
    'CustomerID': 'SPLIR',
    'OrderDate': '1997-01-31T00:00:00.000Z',
    'ShippedDate': '1997-02-07T00:00:00.000Z',
    'Freight': 4.34,
    'ShipName': 'Split Rail Beer & Ale',
    'ShipAddress': 'P.O. Box 555',
    'ShipCity': 'Lander',
    'ShipRegion': 'WY',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10433,

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    'CustomerID': 'PRINI',
    'OrderDate': '1997-02-03T00:00:00.000Z',
    'ShippedDate': '1997-03-04T00:00:00.000Z',
    'Freight': 73.83,
    'ShipName': 'Princesa Isabel Vinhos',
    'ShipAddress': 'Estrada da saúde n. 58',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {
    'OrderID': 10434,
    'CustomerID': 'FOLKO',
    'OrderDate': '1997-02-03T00:00:00.000Z',
    'ShippedDate': '1997-02-13T00:00:00.000Z',
    'Freight': 17.92,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10435,
    'CustomerID': 'CONSH',
    'OrderDate': '1997-02-04T00:00:00.000Z',
    'ShippedDate': '1997-02-07T00:00:00.000Z',
    'Freight': 9.21,
    'ShipName': 'Consolidated Holdings',
    'ShipAddress': 'Berkeley Gardens 12 Brewery',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10436,
    'CustomerID': 'BLONP',
    'OrderDate': '1997-02-05T00:00:00.000Z',
    'ShippedDate': '1997-02-11T00:00:00.000Z',
    'Freight': 156.66,
    'ShipName': 'Blondel père et fils',
    'ShipAddress': '24, place Kléber',
    'ShipCity': 'Strasbourg',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10437,
    'CustomerID': 'WARTH',
    'OrderDate': '1997-02-05T00:00:00.000Z',
    'ShippedDate': '1997-02-12T00:00:00.000Z',
    'Freight': 19.97,
    'ShipName': 'Wartian Herkku',
    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  }

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},
{
  'OrderID': 10438,
  'CustomerID': 'TOMSP',
  'OrderDate': '1997-02-06T00:00:00.000Z',
  'ShippedDate': '1997-02-14T00:00:00.000Z',
  'Freight': 8.24,
  'ShipName': 'Toms Spezialitäten',
  'ShipAddress': 'Luisenstr. 48',
  'ShipCity': 'Münster',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10439,
  'CustomerID': 'MEREP',
  'OrderDate': '1997-02-07T00:00:00.000Z',
  'ShippedDate': '1997-02-10T00:00:00.000Z',
  'Freight': 4.07,
  'ShipName': 'Mère Paillarde',
  'ShipAddress': '43 rue St. Laurent',
  'ShipCity': 'Montréal',
  'ShipRegion': 'Québec',
  'ShipCountry': 'Canada'
},
{
  'OrderID': 10440,
  'CustomerID': 'SAVEA',
  'OrderDate': '1997-02-10T00:00:00.000Z',
  'ShippedDate': '1997-02-28T00:00:00.000Z',
  'Freight': 86.53,
  'ShipName': 'Save-a-lot Markets',
  'ShipAddress': '187 Suffolk Ln.',
  'ShipCity': 'Boise',
  'ShipRegion': 'ID',
  'ShipCountry': 'USA'
},
{
  'OrderID': 10441,
  'CustomerID': 'OLDWO',
  'OrderDate': '1997-02-10T00:00:00.000Z',
  'ShippedDate': '1997-03-14T00:00:00.000Z',
  'Freight': 73.02,
  'ShipName': 'Old World Delicatessen',
  'ShipAddress': '2743 Bering St.',
  'ShipCity': 'Anchorage',
  'ShipRegion': 'AK',
  'ShipCountry': 'USA'
},
{
  'OrderID': 10442,
  'CustomerID': 'ERNSH',
  'OrderDate': '1997-02-11T00:00:00.000Z',
  'ShippedDate': '1997-02-18T00:00:00.000Z',
  'Freight': 47.94,
  'ShipName': 'Ernst Handel',
  'ShipAddress': 'Kirchgasse 6',
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'ShipCity': 'Graz',
'ShipRegion': null,
'ShipCountry': 'Austria'
},
{
  'OrderID': 10443,
  'CustomerID': 'REGGC',
  'OrderDate': '1997-02-12T00:00:00.000Z',
  'ShippedDate': '1997-02-14T00:00:00.000Z',
  'Freight': 13.95,
  'ShipName': 'Reggiani Caseifici',
  'ShipAddress': 'Strada Provinciale 124',
  'ShipCity': 'Reggio Emilia',
  'ShipRegion': null,
  'ShipCountry': 'Italy'
},
{
  'OrderID': 10444,
  'CustomerID': 'BERGS',
  'OrderDate': '1997-02-12T00:00:00.000Z',
  'ShippedDate': '1997-02-21T00:00:00.000Z',
  'Freight': 3.5,
  'ShipName': 'Berglunds snabbköp',
  'ShipAddress': 'Berguvsvägen 8',
  'ShipCity': 'Luleå',
  'ShipRegion': null,
  'ShipCountry': 'Sweden'
},
{
  'OrderID': 10445,
  'CustomerID': 'BERGS',
  'OrderDate': '1997-02-13T00:00:00.000Z',
  'ShippedDate': '1997-02-20T00:00:00.000Z',
  'Freight': 9.3,
  'ShipName': 'Berglunds snabbköp',
  'ShipAddress': 'Berguvsvägen 8',
  'ShipCity': 'Luleå',
  'ShipRegion': null,
  'ShipCountry': 'Sweden'
},
{
  'OrderID': 10446,
  'CustomerID': 'TOMSP',
  'OrderDate': '1997-02-14T00:00:00.000Z',
  'ShippedDate': '1997-02-19T00:00:00.000Z',
  'Freight': 14.68,
  'ShipName': 'Toms Spezialitäten',
  'ShipAddress': 'Luisenstr. 48',
  'ShipCity': 'Münster',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10447,
  'CustomerID': 'RICAR',
  'OrderDate': '1997-02-14T00:00:00.000Z',
  'ShippedDate': '1997-03-07T00:00:00.000Z',
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    'Freight': 68.66,
    'ShipName': 'Ricardo Adocicados',
    'ShipAddress': 'Av. Copacabana, 267',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10448,
    'CustomerID': 'RANCH',
    'OrderDate': '1997-02-17T00:00:00.000Z',
    'ShippedDate': '1997-02-24T00:00:00.000Z',
    'Freight': 38.82,
    'ShipName': 'Rancho grande',
    'ShipAddress': 'Av. del Libertador 900',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },
  {
    'OrderID': 10449,
    'CustomerID': 'BLONP',
    'OrderDate': '1997-02-18T00:00:00.000Z',
    'ShippedDate': '1997-02-27T00:00:00.000Z',
    'Freight': 53.3,
    'ShipName': 'Blondel père et fils',
    'ShipAddress': '24, place Kléber',
    'ShipCity': 'Strasbourg',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10450,
    'CustomerID': 'VICTE',
    'OrderDate': '1997-02-19T00:00:00.000Z',
    'ShippedDate': '1997-03-11T00:00:00.000Z',
    'Freight': 7.23,
    'ShipName': 'Victuailles en stock',
    'ShipAddress': '2, rue du Commerce',
    'ShipCity': 'Lyon',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10451,
    'CustomerID': 'QUICK',
    'OrderDate': '1997-02-19T00:00:00.000Z',
    'ShippedDate': '1997-03-12T00:00:00.000Z',
    'Freight': 189.09,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10452,

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    'CustomerID': 'SAVEA',
    'OrderDate': '1997-02-20T00:00:00.000Z',
    'ShippedDate': '1997-02-26T00:00:00.000Z',
    'Freight': 140.26,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10453,
    'CustomerID': 'AROUT',
    'OrderDate': '1997-02-21T00:00:00.000Z',
    'ShippedDate': '1997-02-26T00:00:00.000Z',
    'Freight': 25.36,
    'ShipName': 'Around the Horn',
    'ShipAddress': 'Brook Farm Stratford St. Mary',
    'ShipCity': 'Colchester',
    'ShipRegion': 'Essex',
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10454,
    'CustomerID': 'LAMAI',
    'OrderDate': '1997-02-21T00:00:00.000Z',
    'ShippedDate': '1997-02-25T00:00:00.000Z',
    'Freight': 2.74,
    'ShipName': 'La maison d\'Asie',
    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10455,
    'CustomerID': 'WARTH',
    'OrderDate': '1997-02-24T00:00:00.000Z',
    'ShippedDate': '1997-03-03T00:00:00.000Z',
    'Freight': 180.45,
    'ShipName': 'Wartian Herkku',
    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 10456,
    'CustomerID': 'KOENE',
    'OrderDate': '1997-02-25T00:00:00.000Z',
    'ShippedDate': '1997-02-28T00:00:00.000Z',
    'Freight': 8.12,
    'ShipName': 'Königlich Essen',
    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  }

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    },
    {
        'OrderID': 10457,
        'CustomerID': 'KOENE',
        'OrderDate': '1997-02-25T00:00:00.000Z',
        'ShippedDate': '1997-03-03T00:00:00.000Z',
        'Freight': 11.57,
        'ShipName': 'Königlich Essen',
        'ShipAddress': 'Maubelstr. 90',
        'ShipCity': 'Brandenburg',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10458,
        'CustomerID': 'SUPRD',
        'OrderDate': '1997-02-26T00:00:00.000Z',
        'ShippedDate': '1997-03-04T00:00:00.000Z',
        'Freight': 147.06,
        'ShipName': 'Suprêmes délices',
        'ShipAddress': 'Boulevard Tirou, 255',
        'ShipCity': 'Charleroi',
        'ShipRegion': null,
        'ShipCountry': 'Belgium'
    },
    {
        'OrderID': 10459,
        'CustomerID': 'VICTE',
        'OrderDate': '1997-02-27T00:00:00.000Z',
        'ShippedDate': '1997-02-28T00:00:00.000Z',
        'Freight': 25.09,
        'ShipName': 'Victuailles en stock',
        'ShipAddress': '2, rue du Commerce',
        'ShipCity': 'Lyon',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10460,
        'CustomerID': 'FOLKO',
        'OrderDate': '1997-02-28T00:00:00.000Z',
        'ShippedDate': '1997-03-03T00:00:00.000Z',
        'Freight': 16.27,
        'ShipName': 'Folk och fä HB',
        'ShipAddress': 'Åkergatan 24',
        'ShipCity': 'Bräcke',
        'ShipRegion': null,
        'ShipCountry': 'Sweden'
    },
    {
        'OrderID': 10461,
        'CustomerID': 'LILAS',
        'OrderDate': '1997-02-28T00:00:00.000Z',
        'ShippedDate': '1997-03-05T00:00:00.000Z',
        'Freight': 148.61,
        'ShipName': 'LILA-Supermercado',
        'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    }

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    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10462,
    'CustomerID': 'CONSH',
    'OrderDate': '1997-03-03T00:00:00.000Z',
    'ShippedDate': '1997-03-18T00:00:00.000Z',
    'Freight': 6.17,
    'ShipName': 'Consolidated Holdings',
    'ShipAddress': 'Berkeley Gardens 12 Brewery',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10463,
    'CustomerID': 'SUPRD',
    'OrderDate': '1997-03-04T00:00:00.000Z',
    'ShippedDate': '1997-03-06T00:00:00.000Z',
    'Freight': 14.78,
    'ShipName': 'Suprêmes délices',
    'ShipAddress': 'Boulevard Tirou, 255',
    'ShipCity': 'Charleroi',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
    'OrderID': 10464,
    'CustomerID': 'FURIB',
    'OrderDate': '1997-03-04T00:00:00.000Z',
    'ShippedDate': '1997-03-14T00:00:00.000Z',
    'Freight': 89,
    'ShipName': 'Furia Bacalhau e Frutos do Mar',
    'ShipAddress': 'Jardim das rosas n. 32',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {
    'OrderID': 10465,
    'CustomerID': 'VAFFE',
    'OrderDate': '1997-03-05T00:00:00.000Z',
    'ShippedDate': '1997-03-14T00:00:00.000Z',
    'Freight': 145.04,
    'ShipName': 'Vaffeljernet',
    'ShipAddress': 'Smagsloget 45',
    'ShipCity': 'Århus',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
    'OrderID': 10466,
    'CustomerID': 'COMMI',
    'OrderDate': '1997-03-06T00:00:00.000Z',
    'ShippedDate': '1997-03-13T00:00:00.000Z',

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    'Freight': 11.93,
    'ShipName': 'Comércio Mineiro',
    'ShipAddress': 'Av. dos Lusíadas, 23',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10467,
    'CustomerID': 'MAGAA',
    'OrderDate': '1997-03-06T00:00:00.000Z',
    'ShippedDate': '1997-03-11T00:00:00.000Z',
    'Freight': 4.93,
    'ShipName': 'Magazzini Alimentari Riuniti',
    'ShipAddress': 'Via Ludovico il Moro 22',
    'ShipCity': 'Bergamo',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 10468,
    'CustomerID': 'KOENE',
    'OrderDate': '1997-03-07T00:00:00.000Z',
    'ShippedDate': '1997-03-12T00:00:00.000Z',
    'Freight': 44.12,
    'ShipName': 'Königlich Essen',
    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10469,
    'CustomerID': 'WHITC',
    'OrderDate': '1997-03-10T00:00:00.000Z',
    'ShippedDate': '1997-03-14T00:00:00.000Z',
    'Freight': 60.18,
    'ShipName': 'White Clover Markets',
    'ShipAddress': '1029 - 12th Ave. S.',
    'ShipCity': 'Seattle',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10470,
    'CustomerID': 'BONAP',
    'OrderDate': '1997-03-11T00:00:00.000Z',
    'ShippedDate': '1997-03-14T00:00:00.000Z',
    'Freight': 64.56,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10471,

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    'CustomerID': 'BSBEV',
    'OrderDate': '1997-03-11T00:00:00.000Z',
    'ShippedDate': '1997-03-18T00:00:00.000Z',
    'Freight': 45.59,
    'ShipName': 'B\'s Beverages',
    'ShipAddress': 'Fauntleroy Circus',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10472,
    'CustomerID': 'SEVES',
    'OrderDate': '1997-03-12T00:00:00.000Z',
    'ShippedDate': '1997-03-19T00:00:00.000Z',
    'Freight': 4.2,
    'ShipName': 'Seven Seas Imports',
    'ShipAddress': '90 Wadhurst Rd.',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10473,
    'CustomerID': 'ISLAT',
    'OrderDate': '1997-03-13T00:00:00.000Z',
    'ShippedDate': '1997-03-21T00:00:00.000Z',
    'Freight': 16.37,
    'ShipName': 'Island Trading',
    'ShipAddress': 'Garden House Crowther Way',
    'ShipCity': 'Cowes',
    'ShipRegion': 'Isle of Wight',
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10474,
    'CustomerID': 'PERIC',
    'OrderDate': '1997-03-13T00:00:00.000Z',
    'ShippedDate': '1997-03-21T00:00:00.000Z',
    'Freight': 83.49,
    'ShipName': 'Pericles Comidas clásicas',
    'ShipAddress': 'Calle Dr. Jorge Cash 321',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10475,
    'CustomerID': 'SUPRD',
    'OrderDate': '1997-03-14T00:00:00.000Z',
    'ShippedDate': '1997-04-04T00:00:00.000Z',
    'Freight': 68.52,
    'ShipName': 'Suprêmes délices',
    'ShipAddress': 'Boulevard Tirou, 255',
    'ShipCity': 'Charleroi',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  }

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    },
    {
        'OrderID': 10476,
        'CustomerID': 'HILAA',
        'OrderDate': '1997-03-17T00:00:00.000Z',
        'ShippedDate': '1997-03-24T00:00:00.000Z',
        'Freight': 4.41,
        'ShipName': 'HILARION-Abastos',
        'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
        'ShipCity': 'San Cristóbal',
        'ShipRegion': 'Táchira',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 10477,
        'CustomerID': 'PRINI',
        'OrderDate': '1997-03-17T00:00:00.000Z',
        'ShippedDate': '1997-03-25T00:00:00.000Z',
        'Freight': 13.02,
        'ShipName': 'Princesa Isabel Vinhos',
        'ShipAddress': 'Estrada da saúde n. 58',
        'ShipCity': 'Lisboa',
        'ShipRegion': null,
        'ShipCountry': 'Portugal'
    },
    {
        'OrderID': 10478,
        'CustomerID': 'VICTE',
        'OrderDate': '1997-03-18T00:00:00.000Z',
        'ShippedDate': '1997-03-26T00:00:00.000Z',
        'Freight': 4.81,
        'ShipName': 'Victuailles en stock',
        'ShipAddress': '2, rue du Commerce',
        'ShipCity': 'Lyon',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10479,
        'CustomerID': 'RATTC',
        'OrderDate': '1997-03-19T00:00:00.000Z',
        'ShippedDate': '1997-03-21T00:00:00.000Z',
        'Freight': 708.95,
        'ShipName': 'Rattlesnake Canyon Grocery',
        'ShipAddress': '2817 Milton Dr.',
        'ShipCity': 'Albuquerque',
        'ShipRegion': 'NM',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10480,
        'CustomerID': 'FOLIG',
        'OrderDate': '1997-03-20T00:00:00.000Z',
        'ShippedDate': '1997-03-24T00:00:00.000Z',
        'Freight': 1.35,
        'ShipName': 'Folies gourmandes',
        'ShipAddress': '184, chaussée de Tournai',
    }

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    'ShipCity': 'Lille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10481,
    'CustomerID': 'RICAR',
    'OrderDate': '1997-03-20T00:00:00.000Z',
    'ShippedDate': '1997-03-25T00:00:00.000Z',
    'Freight': 64.33,
    'ShipName': 'Ricardo Adocicados',
    'ShipAddress': 'Av. Copacabana, 267',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10482,
    'CustomerID': 'LAZYK',
    'OrderDate': '1997-03-21T00:00:00.000Z',
    'ShippedDate': '1997-04-10T00:00:00.000Z',
    'Freight': 7.48,
    'ShipName': 'Lazy K Kountry Store',
    'ShipAddress': '12 Orchestra Terrace',
    'ShipCity': 'Walla Walla',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10483,
    'CustomerID': 'WHITC',
    'OrderDate': '1997-03-24T00:00:00.000Z',
    'ShippedDate': '1997-04-25T00:00:00.000Z',
    'Freight': 15.28,
    'ShipName': 'White Clover Markets',
    'ShipAddress': '1029 - 12th Ave. S.',
    'ShipCity': 'Seattle',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10484,
    'CustomerID': 'BSBEV',
    'OrderDate': '1997-03-24T00:00:00.000Z',
    'ShippedDate': '1997-04-01T00:00:00.000Z',
    'Freight': 6.88,
    'ShipName': 'B\'s Beverages',
    'ShipAddress': 'Fauntleroy Circus',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10485,
    'CustomerID': 'LINOD',
    'OrderDate': '1997-03-25T00:00:00.000Z',
    'ShippedDate': '1997-03-31T00:00:00.000Z',

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    'Freight': 64.45,
    'ShipName': 'LINO-Delicateses',
    'ShipAddress': 'Ave. 5 de Mayo Porlamar',
    'ShipCity': 'I. de Margarita',
    'ShipRegion': 'Nueva Esparta',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10486,
    'CustomerID': 'HILAA',
    'OrderDate': '1997-03-26T00:00:00.000Z',
    'ShippedDate': '1997-04-02T00:00:00.000Z',
    'Freight': 30.53,
    'ShipName': 'HILARION-Abastos',
    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10487,
    'CustomerID': 'QUEEN',
    'OrderDate': '1997-03-26T00:00:00.000Z',
    'ShippedDate': '1997-03-28T00:00:00.000Z',
    'Freight': 71.07,
    'ShipName': 'Queen Cozinha',
    'ShipAddress': 'Alameda dos Canários, 891',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10488,
    'CustomerID': 'FRANK',
    'OrderDate': '1997-03-27T00:00:00.000Z',
    'ShippedDate': '1997-04-02T00:00:00.000Z',
    'Freight': 4.93,
    'ShipName': 'Frankenversand',
    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10489,
    'CustomerID': 'PICCO',
    'OrderDate': '1997-03-28T00:00:00.000Z',
    'ShippedDate': '1997-04-09T00:00:00.000Z',
    'Freight': 5.29,
    'ShipName': 'Piccolo und mehr',
    'ShipAddress': 'Geislweg 14',
    'ShipCity': 'Salzburg',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10490,

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    'CustomerID': 'HILAA',
    'OrderDate': '1997-03-31T00:00:00.000Z',
    'ShippedDate': '1997-04-03T00:00:00.000Z',
    'Freight': 210.19,
    'ShipName': 'HILARION-Abastos',
    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10491,
    'CustomerID': 'FURIB',
    'OrderDate': '1997-03-31T00:00:00.000Z',
    'ShippedDate': '1997-04-08T00:00:00.000Z',
    'Freight': 16.96,
    'ShipName': 'Furia Bacalhau e Frutos do Mar',
    'ShipAddress': 'Jardim das rosas n. 32',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {
    'OrderID': 10492,
    'CustomerID': 'BOTTM',
    'OrderDate': '1997-04-01T00:00:00.000Z',
    'ShippedDate': '1997-04-11T00:00:00.000Z',
    'Freight': 62.89,
    'ShipName': 'Bottom-Dollar Markets',
    'ShipAddress': '23 Tsawassen Blvd.',
    'ShipCity': 'Tsawassen',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10493,
    'CustomerID': 'LAMAI',
    'OrderDate': '1997-04-02T00:00:00.000Z',
    'ShippedDate': '1997-04-10T00:00:00.000Z',
    'Freight': 10.64,
    'ShipName': 'La maison d\'Asie',
    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10494,
    'CustomerID': 'COMMI',
    'OrderDate': '1997-04-02T00:00:00.000Z',
    'ShippedDate': '1997-04-09T00:00:00.000Z',
    'Freight': 65.99,
    'ShipName': 'Comércio Mineiro',
    'ShipAddress': 'Av. dos Lusíadas, 23',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  }

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},
{
  'OrderID': 10495,
  'CustomerID': 'LAUGB',
  'OrderDate': '1997-04-03T00:00:00.000Z',
  'ShippedDate': '1997-04-11T00:00:00.000Z',
  'Freight': 4.65,
  'ShipName': 'Laughing Bacchus Wine Cellars',
  'ShipAddress': '2319 Elm St.',
  'ShipCity': 'Vancouver',
  'ShipRegion': 'BC',
  'ShipCountry': 'Canada'
},
{
  'OrderID': 10496,
  'CustomerID': 'TRADH',
  'OrderDate': '1997-04-04T00:00:00.000Z',
  'ShippedDate': '1997-04-07T00:00:00.000Z',
  'Freight': 46.77,
  'ShipName': 'Tradição Hipermercados',
  'ShipAddress': 'Av. Inês de Castro, 414',
  'ShipCity': 'Sao Paulo',
  'ShipRegion': 'SP',
  'ShipCountry': 'Brazil'
},
{
  'OrderID': 10497,
  'CustomerID': 'LEHMS',
  'OrderDate': '1997-04-04T00:00:00.000Z',
  'ShippedDate': '1997-04-07T00:00:00.000Z',
  'Freight': 36.21,
  'ShipName': 'Lehmanns Marktstand',
  'ShipAddress': 'Magazinweg 7',
  'ShipCity': 'Frankfurt a.M.',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10498,
  'CustomerID': 'HILAA',
  'OrderDate': '1997-04-07T00:00:00.000Z',
  'ShippedDate': '1997-04-11T00:00:00.000Z',
  'Freight': 29.75,
  'ShipName': 'HILARION-Abastos',
  'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
  'ShipCity': 'San Cristóbal',
  'ShipRegion': 'Táchira',
  'ShipCountry': 'Venezuela'
},
{
  'OrderID': 10499,
  'CustomerID': 'LILAS',
  'OrderDate': '1997-04-08T00:00:00.000Z',
  'ShippedDate': '1997-04-16T00:00:00.000Z',
  'Freight': 102.02,
  'ShipName': 'LILA-Supermercado',
  'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',

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    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10500,
    'CustomerID': 'LAMAI',
    'OrderDate': '1997-04-09T00:00:00.000Z',
    'ShippedDate': '1997-04-17T00:00:00.000Z',
    'Freight': 42.68,
    'ShipName': 'La maison d\'Asie',
    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10501,
    'CustomerID': 'BLAUS',
    'OrderDate': '1997-04-09T00:00:00.000Z',
    'ShippedDate': '1997-04-16T00:00:00.000Z',
    'Freight': 8.85,
    'ShipName': 'Blauer See Delikatessen',
    'ShipAddress': 'Forsterstr. 57',
    'ShipCity': 'Mannheim',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10502,
    'CustomerID': 'PERIC',
    'OrderDate': '1997-04-10T00:00:00.000Z',
    'ShippedDate': '1997-04-29T00:00:00.000Z',
    'Freight': 69.32,
    'ShipName': 'Pericles Comidas clásicas',
    'ShipAddress': 'Calle Dr. Jorge Cash 321',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10503,
    'CustomerID': 'HUNGO',
    'OrderDate': '1997-04-11T00:00:00.000Z',
    'ShippedDate': '1997-04-16T00:00:00.000Z',
    'Freight': 16.74,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10504,
    'CustomerID': 'WHITC',
    'OrderDate': '1997-04-11T00:00:00.000Z',
    'ShippedDate': '1997-04-18T00:00:00.000Z',

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    'Freight': 59.13,
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    'ShipAddress': '1029 - 12th Ave. S.',
    'ShipCity': 'Seattle',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10505,
    'CustomerID': 'MEREP',
    'OrderDate': '1997-04-14T00:00:00.000Z',
    'ShippedDate': '1997-04-21T00:00:00.000Z',
    'Freight': 7.13,
    'ShipName': 'Mère Paillarde',
    'ShipAddress': '43 rue St. Laurent',
    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10506,
    'CustomerID': 'KOENE',
    'OrderDate': '1997-04-15T00:00:00.000Z',
    'ShippedDate': '1997-05-02T00:00:00.000Z',
    'Freight': 21.19,
    'ShipName': 'Königlich Essen',
    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10507,
    'CustomerID': 'ANTON',
    'OrderDate': '1997-04-15T00:00:00.000Z',
    'ShippedDate': '1997-04-22T00:00:00.000Z',
    'Freight': 47.45,
    'ShipName': 'Antonio Moreno Taquería',
    'ShipAddress': 'Mataderos 2312',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10508,
    'CustomerID': 'OTTIK',
    'OrderDate': '1997-04-16T00:00:00.000Z',
    'ShippedDate': '1997-05-13T00:00:00.000Z',
    'Freight': 4.99,
    'ShipName': 'Ottilies Käseladen',
    'ShipAddress': 'Mehrheimerstr. 369',
    'ShipCity': 'Köln',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10509,

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    'CustomerID': 'BLAUS',
    'OrderDate': '1997-04-17T00:00:00.000Z',
    'ShippedDate': '1997-04-29T00:00:00.000Z',
    'Freight': 0.15,
    'ShipName': 'Blauer See Delikatessen',
    'ShipAddress': 'Forsterstr. 57',
    'ShipCity': 'Mannheim',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10510,
    'CustomerID': 'SAVEA',
    'OrderDate': '1997-04-18T00:00:00.000Z',
    'ShippedDate': '1997-04-28T00:00:00.000Z',
    'Freight': 367.63,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10511,
    'CustomerID': 'BONAP',
    'OrderDate': '1997-04-18T00:00:00.000Z',
    'ShippedDate': '1997-04-21T00:00:00.000Z',
    'Freight': 350.64,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10512,
    'CustomerID': 'FAMIA',
    'OrderDate': '1997-04-21T00:00:00.000Z',
    'ShippedDate': '1997-04-24T00:00:00.000Z',
    'Freight': 3.53,
    'ShipName': 'Familia Arquibaldo',
    'ShipAddress': 'Rua Orós, 92',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10513,
    'CustomerID': 'WANDK',
    'OrderDate': '1997-04-22T00:00:00.000Z',
    'ShippedDate': '1997-04-28T00:00:00.000Z',
    'Freight': 105.65,
    'ShipName': 'Die Wandernde Kuh',
    'ShipAddress': 'Adenauerallee 900',
    'ShipCity': 'Stuttgart',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  }

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},
{
  'OrderID': 10514,
  'CustomerID': 'ERNSH',
  'OrderDate': '1997-04-22T00:00:00.000Z',
  'ShippedDate': '1997-05-16T00:00:00.000Z',
  'Freight': 789.95,
  'ShipName': 'Ernst Handel',
  'ShipAddress': 'Kirchgasse 6',
  'ShipCity': 'Graz',
  'ShipRegion': null,
  'ShipCountry': 'Austria'
},
{
  'OrderID': 10515,
  'CustomerID': 'QUICK',
  'OrderDate': '1997-04-23T00:00:00.000Z',
  'ShippedDate': '1997-05-23T00:00:00.000Z',
  'Freight': 204.47,
  'ShipName': 'QUICK-Stop',
  'ShipAddress': 'Taucherstraße 10',
  'ShipCity': 'Cunewalde',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10516,
  'CustomerID': 'HUNGO',
  'OrderDate': '1997-04-24T00:00:00.000Z',
  'ShippedDate': '1997-05-01T00:00:00.000Z',
  'Freight': 62.78,
  'ShipName': 'Hungry Owl All-Night Grocers',
  'ShipAddress': '8 Johnstown Road',
  'ShipCity': 'Cork',
  'ShipRegion': 'Co. Cork',
  'ShipCountry': 'Ireland'
},
{
  'OrderID': 10517,
  'CustomerID': 'NORTS',
  'OrderDate': '1997-04-24T00:00:00.000Z',
  'ShippedDate': '1997-04-29T00:00:00.000Z',
  'Freight': 32.07,
  'ShipName': 'North/South',
  'ShipAddress': 'South House 300 Queensbridge',
  'ShipCity': 'London',
  'ShipRegion': null,
  'ShipCountry': 'UK'
},
{
  'OrderID': 10518,
  'CustomerID': 'TORTU',
  'OrderDate': '1997-04-25T00:00:00.000Z',
  'ShippedDate': '1997-05-05T00:00:00.000Z',
  'Freight': 218.15,
  'ShipName': 'Tortuga Restaurante',
  'ShipAddress': 'Avda. Azteca 123',
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    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10519,
    'CustomerID': 'CHOPS',
    'OrderDate': '1997-04-28T00:00:00.000Z',
    'ShippedDate': '1997-05-01T00:00:00.000Z',
    'Freight': 91.76,
    'ShipName': 'Chop-suey Chinese',
    'ShipAddress': 'Hauptstr. 31',
    'ShipCity': 'Bern',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
  {
    'OrderID': 10520,
    'CustomerID': 'SANTG',
    'OrderDate': '1997-04-29T00:00:00.000Z',
    'ShippedDate': '1997-05-01T00:00:00.000Z',
    'Freight': 13.37,
    'ShipName': 'Santé Gourmet',
    'ShipAddress': 'Erling Skakkess gate 78',
    'ShipCity': 'Stavern',
    'ShipRegion': null,
    'ShipCountry': 'Norway'
  },
  {
    'OrderID': 10521,
    'CustomerID': 'CACTU',
    'OrderDate': '1997-04-29T00:00:00.000Z',
    'ShippedDate': '1997-05-02T00:00:00.000Z',
    'Freight': 17.22,
    'ShipName': 'Cactus Comidas para llevar',
    'ShipAddress': 'Cerrito 333',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },
  {
    'OrderID': 10522,
    'CustomerID': 'LEHMS',
    'OrderDate': '1997-04-30T00:00:00.000Z',
    'ShippedDate': '1997-05-06T00:00:00.000Z',
    'Freight': 45.33,
    'ShipName': 'Lehmanns Marktstand',
    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10523,
    'CustomerID': 'SEVES',
    'OrderDate': '1997-05-01T00:00:00.000Z',
    'ShippedDate': '1997-05-30T00:00:00.000Z',

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    'Freight': 77.63,
    'ShipName': 'Seven Seas Imports',
    'ShipAddress': '90 Wadhurst Rd.',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10524,
    'CustomerID': 'BERGS',
    'OrderDate': '1997-05-01T00:00:00.000Z',
    'ShippedDate': '1997-05-07T00:00:00.000Z',
    'Freight': 244.79,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10525,
    'CustomerID': 'BONAP',
    'OrderDate': '1997-05-02T00:00:00.000Z',
    'ShippedDate': '1997-05-23T00:00:00.000Z',
    'Freight': 11.06,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10526,
    'CustomerID': 'WARTH',
    'OrderDate': '1997-05-05T00:00:00.000Z',
    'ShippedDate': '1997-05-15T00:00:00.000Z',
    'Freight': 58.59,
    'ShipName': 'Wartian Herkku',
    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 10527,
    'CustomerID': 'QUICK',
    'OrderDate': '1997-05-05T00:00:00.000Z',
    'ShippedDate': '1997-05-07T00:00:00.000Z',
    'Freight': 41.9,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10528,

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    'CustomerID': 'GREAL',
    'OrderDate': '1997-05-06T00:00:00.000Z',
    'ShippedDate': '1997-05-09T00:00:00.000Z',
    'Freight': 3.35,
    'ShipName': 'Great Lakes Food Market',
    'ShipAddress': '2732 Baker Blvd.',
    'ShipCity': 'Eugene',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10529,
    'CustomerID': 'MAISD',
    'OrderDate': '1997-05-07T00:00:00.000Z',
    'ShippedDate': '1997-05-09T00:00:00.000Z',
    'Freight': 66.69,
    'ShipName': 'Maison Dewey',
    'ShipAddress': 'Rue Joseph-Bens 532',
    'ShipCity': 'Bruxelles',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
    'OrderID': 10530,
    'CustomerID': 'PICCO',
    'OrderDate': '1997-05-08T00:00:00.000Z',
    'ShippedDate': '1997-05-12T00:00:00.000Z',
    'Freight': 339.22,
    'ShipName': 'Piccolo und mehr',
    'ShipAddress': 'Geislweg 14',
    'ShipCity': 'Salzburg',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10531,
    'CustomerID': 'OCEAN',
    'OrderDate': '1997-05-08T00:00:00.000Z',
    'ShippedDate': '1997-05-19T00:00:00.000Z',
    'Freight': 8.12,
    'ShipName': 'Océano Atlántico Ltda.',
    'ShipAddress': 'Ing. Gustavo Moncada 8585 Piso 20-A',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },
  {
    'OrderID': 10532,
    'CustomerID': 'EASTC',
    'OrderDate': '1997-05-09T00:00:00.000Z',
    'ShippedDate': '1997-05-12T00:00:00.000Z',
    'Freight': 74.46,
    'ShipName': 'Eastern Connection',
    'ShipAddress': '35 King George',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  }

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},
{
  'OrderID': 10533,
  'CustomerID': 'FOLKO',
  'OrderDate': '1997-05-12T00:00:00.000Z',
  'ShippedDate': '1997-05-22T00:00:00.000Z',
  'Freight': 188.04,
  'ShipName': 'Folk och fä HB',
  'ShipAddress': 'Åkergatan 24',
  'ShipCity': 'Bräcke',
  'ShipRegion': null,
  'ShipCountry': 'Sweden'
},
{
  'OrderID': 10534,
  'CustomerID': 'LEHMS',
  'OrderDate': '1997-05-12T00:00:00.000Z',
  'ShippedDate': '1997-05-14T00:00:00.000Z',
  'Freight': 27.94,
  'ShipName': 'Lehmanns Marktstand',
  'ShipAddress': 'Magazinweg 7',
  'ShipCity': 'Frankfurt a.M.',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10535,
  'CustomerID': 'ANTON',
  'OrderDate': '1997-05-13T00:00:00.000Z',
  'ShippedDate': '1997-05-21T00:00:00.000Z',
  'Freight': 15.64,
  'ShipName': 'Antonio Moreno Taquería',
  'ShipAddress': 'Mataderos 2312',
  'ShipCity': 'México D.F.',
  'ShipRegion': null,
  'ShipCountry': 'Mexico'
},
{
  'OrderID': 10536,
  'CustomerID': 'LEHMS',
  'OrderDate': '1997-05-14T00:00:00.000Z',
  'ShippedDate': '1997-06-06T00:00:00.000Z',
  'Freight': 58.88,
  'ShipName': 'Lehmanns Marktstand',
  'ShipAddress': 'Magazinweg 7',
  'ShipCity': 'Frankfurt a.M.',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10537,
  'CustomerID': 'RICSU',
  'OrderDate': '1997-05-14T00:00:00.000Z',
  'ShippedDate': '1997-05-19T00:00:00.000Z',
  'Freight': 78.85,
  'ShipName': 'Richter Supermarkt',
  'ShipAddress': 'Starenweg 5',
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    'ShipCity': 'Genève',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
  {
    'OrderID': 10538,
    'CustomerID': 'BSBEV',
    'OrderDate': '1997-05-15T00:00:00.000Z',
    'ShippedDate': '1997-05-16T00:00:00.000Z',
    'Freight': 4.87,
    'ShipName': 'B\'s Beverages',
    'ShipAddress': 'Fauntleroy Circus',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10539,
    'CustomerID': 'BSBEV',
    'OrderDate': '1997-05-16T00:00:00.000Z',
    'ShippedDate': '1997-05-23T00:00:00.000Z',
    'Freight': 12.36,
    'ShipName': 'B\'s Beverages',
    'ShipAddress': 'Fauntleroy Circus',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10540,
    'CustomerID': 'QUICK',
    'OrderDate': '1997-05-19T00:00:00.000Z',
    'ShippedDate': '1997-06-13T00:00:00.000Z',
    'Freight': 1007.64,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10541,
    'CustomerID': 'HANAR',
    'OrderDate': '1997-05-19T00:00:00.000Z',
    'ShippedDate': '1997-05-29T00:00:00.000Z',
    'Freight': 68.65,
    'ShipName': 'Hanari Carnes',
    'ShipAddress': 'Rua do Paço, 67',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10542,
    'CustomerID': 'KOENE',
    'OrderDate': '1997-05-20T00:00:00.000Z',
    'ShippedDate': '1997-05-26T00:00:00.000Z',

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    'Freight': 10.95,
    'ShipName': 'Königlich Essen',
    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10543,
    'CustomerID': 'LILAS',
    'OrderDate': '1997-05-21T00:00:00.000Z',
    'ShippedDate': '1997-05-23T00:00:00.000Z',
    'Freight': 48.17,
    'ShipName': 'LILA-Supermercado',
    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10544,
    'CustomerID': 'LONEP',
    'OrderDate': '1997-05-21T00:00:00.000Z',
    'ShippedDate': '1997-05-30T00:00:00.000Z',
    'Freight': 24.91,
    'ShipName': 'Lonesome Pine Restaurant',
    'ShipAddress': '89 Chiaroscuro Rd.',
    'ShipCity': 'Portland',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10545,
    'CustomerID': 'LAZYK',
    'OrderDate': '1997-05-22T00:00:00.000Z',
    'ShippedDate': '1997-06-26T00:00:00.000Z',
    'Freight': 11.92,
    'ShipName': 'Lazy K Kountry Store',
    'ShipAddress': '12 Orchestra Terrace',
    'ShipCity': 'Walla Walla',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10546,
    'CustomerID': 'VICTE',
    'OrderDate': '1997-05-23T00:00:00.000Z',
    'ShippedDate': '1997-05-27T00:00:00.000Z',
    'Freight': 194.72,
    'ShipName': 'Victuailles en stock',
    'ShipAddress': '2, rue du Commerce',
    'ShipCity': 'Lyon',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10547,

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    'CustomerID': 'SEVES',
    'OrderDate': '1997-05-23T00:00:00.000Z',
    'ShippedDate': '1997-06-02T00:00:00.000Z',
    'Freight': 178.43,
    'ShipName': 'Seven Seas Imports',
    'ShipAddress': '90 Wadhurst Rd.',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10548,
    'CustomerID': 'TOMSP',
    'OrderDate': '1997-05-26T00:00:00.000Z',
    'ShippedDate': '1997-06-02T00:00:00.000Z',
    'Freight': 1.43,
    'ShipName': 'Toms Spezialitäten',
    'ShipAddress': 'Luisenstr. 48',
    'ShipCity': 'Münster',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10549,
    'CustomerID': 'QUICK',
    'OrderDate': '1997-05-27T00:00:00.000Z',
    'ShippedDate': '1997-05-30T00:00:00.000Z',
    'Freight': 171.24,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10550,
    'CustomerID': 'GODOS',
    'OrderDate': '1997-05-28T00:00:00.000Z',
    'ShippedDate': '1997-06-06T00:00:00.000Z',
    'Freight': 4.32,
    'ShipName': 'Godos Cocina Típica',
    'ShipAddress': 'C/ Romero, 33',
    'ShipCity': 'Sevilla',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10551,
    'CustomerID': 'FURIB',
    'OrderDate': '1997-05-28T00:00:00.000Z',
    'ShippedDate': '1997-06-06T00:00:00.000Z',
    'Freight': 72.95,
    'ShipName': 'Furia Bacalhau e Frutos do Mar',
    'ShipAddress': 'Jardim das rosas n. 32',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  }

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    },
    {
        'OrderID': 10552,
        'CustomerID': 'HILAA',
        'OrderDate': '1997-05-29T00:00:00.000Z',
        'ShippedDate': '1997-06-05T00:00:00.000Z',
        'Freight': 83.22,
        'ShipName': 'HILARION-Abastos',
        'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
        'ShipCity': 'San Cristóbal',
        'ShipRegion': 'Táchira',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 10553,
        'CustomerID': 'WARTH',
        'OrderDate': '1997-05-30T00:00:00.000Z',
        'ShippedDate': '1997-06-03T00:00:00.000Z',
        'Freight': 149.49,
        'ShipName': 'Wartian Herkku',
        'ShipAddress': 'Torikatu 38',
        'ShipCity': 'Oulu',
        'ShipRegion': null,
        'ShipCountry': 'Finland'
    },
    {
        'OrderID': 10554,
        'CustomerID': 'OTTIK',
        'OrderDate': '1997-05-30T00:00:00.000Z',
        'ShippedDate': '1997-06-05T00:00:00.000Z',
        'Freight': 120.97,
        'ShipName': 'Ottilies Käseladen',
        'ShipAddress': 'Mehrheimerstr. 369',
        'ShipCity': 'Köln',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10555,
        'CustomerID': 'SAVEA',
        'OrderDate': '1997-06-02T00:00:00.000Z',
        'ShippedDate': '1997-06-04T00:00:00.000Z',
        'Freight': 252.49,
        'ShipName': 'Save-a-lot Markets',
        'ShipAddress': '187 Suffolk Ln.',
        'ShipCity': 'Boise',
        'ShipRegion': 'ID',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10556,
        'CustomerID': 'SIMOB',
        'OrderDate': '1997-06-03T00:00:00.000Z',
        'ShippedDate': '1997-06-13T00:00:00.000Z',
        'Freight': 9.8,
        'ShipName': 'Simons bistro',
        'ShipAddress': 'Vinbæltet 34',
    }

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    'ShipCity': 'Kobenhavn',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
    'OrderID': 10557,
    'CustomerID': 'LEHMS',
    'OrderDate': '1997-06-03T00:00:00.000Z',
    'ShippedDate': '1997-06-06T00:00:00.000Z',
    'Freight': 96.72,
    'ShipName': 'Lehmanns Marktstand',
    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10558,
    'CustomerID': 'AROUT',
    'OrderDate': '1997-06-04T00:00:00.000Z',
    'ShippedDate': '1997-06-10T00:00:00.000Z',
    'Freight': 72.97,
    'ShipName': 'Around the Horn',
    'ShipAddress': 'Brook Farm Stratford St. Mary',
    'ShipCity': 'Colchester',
    'ShipRegion': 'Essex',
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10559,
    'CustomerID': 'BLONP',
    'OrderDate': '1997-06-05T00:00:00.000Z',
    'ShippedDate': '1997-06-13T00:00:00.000Z',
    'Freight': 8.05,
    'ShipName': 'Blondel père et fils',
    'ShipAddress': '24, place Kléber',
    'ShipCity': 'Strasbourg',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10560,
    'CustomerID': 'FRANK',
    'OrderDate': '1997-06-06T00:00:00.000Z',
    'ShippedDate': '1997-06-09T00:00:00.000Z',
    'Freight': 36.65,
    'ShipName': 'Frankenversand',
    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10561,
    'CustomerID': 'FOLKO',
    'OrderDate': '1997-06-06T00:00:00.000Z',
    'ShippedDate': '1997-06-09T00:00:00.000Z',

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    'Freight': 242.21,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10562,
    'CustomerID': 'REGGC',
    'OrderDate': '1997-06-09T00:00:00.000Z',
    'ShippedDate': '1997-06-12T00:00:00.000Z',
    'Freight': 22.95,
    'ShipName': 'Reggiani Caseifici',
    'ShipAddress': 'Strada Provinciale 124',
    'ShipCity': 'Reggio Emilia',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 10563,
    'CustomerID': 'RICAR',
    'OrderDate': '1997-06-10T00:00:00.000Z',
    'ShippedDate': '1997-06-24T00:00:00.000Z',
    'Freight': 60.43,
    'ShipName': 'Ricardo Adocicados',
    'ShipAddress': 'Av. Copacabana, 267',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10564,
    'CustomerID': 'RATTC',
    'OrderDate': '1997-06-10T00:00:00.000Z',
    'ShippedDate': '1997-06-16T00:00:00.000Z',
    'Freight': 13.75,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10565,
    'CustomerID': 'MEREP',
    'OrderDate': '1997-06-11T00:00:00.000Z',
    'ShippedDate': '1997-06-18T00:00:00.000Z',
    'Freight': 7.15,
    'ShipName': 'Mère Paillarde',
    'ShipAddress': '43 rue St. Laurent',
    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10566,

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    'CustomerID': 'BLONP',
    'OrderDate': '1997-06-12T00:00:00.000Z',
    'ShippedDate': '1997-06-18T00:00:00.000Z',
    'Freight': 88.4,
    'ShipName': 'Blondel père et fils',
    'ShipAddress': '24, place Kléber',
    'ShipCity': 'Strasbourg',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10567,
    'CustomerID': 'HUNGO',
    'OrderDate': '1997-06-12T00:00:00.000Z',
    'ShippedDate': '1997-06-17T00:00:00.000Z',
    'Freight': 33.97,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10568,
    'CustomerID': 'GALED',
    'OrderDate': '1997-06-13T00:00:00.000Z',
    'ShippedDate': '1997-07-09T00:00:00.000Z',
    'Freight': 6.54,
    'ShipName': 'Galería del gastronómo',
    'ShipAddress': 'Rambla de Cataluña, 23',
    'ShipCity': 'Barcelona',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10569,
    'CustomerID': 'RATTC',
    'OrderDate': '1997-06-16T00:00:00.000Z',
    'ShippedDate': '1997-07-11T00:00:00.000Z',
    'Freight': 58.98,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10570,
    'CustomerID': 'MEREP',
    'OrderDate': '1997-06-17T00:00:00.000Z',
    'ShippedDate': '1997-06-19T00:00:00.000Z',
    'Freight': 188.99,
    'ShipName': 'Mère Paillarde',
    'ShipAddress': '43 rue St. Laurent',
    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
  }

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},
{
  'OrderID': 10571,
  'CustomerID': 'ERNSH',
  'OrderDate': '1997-06-17T00:00:00.000Z',
  'ShippedDate': '1997-07-04T00:00:00.000Z',
  'Freight': 26.06,
  'ShipName': 'Ernst Handel',
  'ShipAddress': 'Kirchgasse 6',
  'ShipCity': 'Graz',
  'ShipRegion': null,
  'ShipCountry': 'Austria'
},
{
  'OrderID': 10572,
  'CustomerID': 'BERGS',
  'OrderDate': '1997-06-18T00:00:00.000Z',
  'ShippedDate': '1997-06-25T00:00:00.000Z',
  'Freight': 116.43,
  'ShipName': 'Berglunds snabbköp',
  'ShipAddress': 'Berguvsvägen 8',
  'ShipCity': 'Luleå',
  'ShipRegion': null,
  'ShipCountry': 'Sweden'
},
{
  'OrderID': 10573,
  'CustomerID': 'ANTON',
  'OrderDate': '1997-06-19T00:00:00.000Z',
  'ShippedDate': '1997-06-20T00:00:00.000Z',
  'Freight': 84.84,
  'ShipName': 'Antonio Moreno Taquería',
  'ShipAddress': 'Mataderos 2312',
  'ShipCity': 'México D.F.',
  'ShipRegion': null,
  'ShipCountry': 'Mexico'
},
{
  'OrderID': 10574,
  'CustomerID': 'TRAIH',
  'OrderDate': '1997-06-19T00:00:00.000Z',
  'ShippedDate': '1997-06-30T00:00:00.000Z',
  'Freight': 37.6,
  'ShipName': 'Trail\'s Head Gourmet Provisioners',
  'ShipAddress': '722 DaVinci Blvd.',
  'ShipCity': 'Kirkland',
  'ShipRegion': 'WA',
  'ShipCountry': 'USA'
},
{
  'OrderID': 10575,
  'CustomerID': 'MORGK',
  'OrderDate': '1997-06-20T00:00:00.000Z',
  'ShippedDate': '1997-06-30T00:00:00.000Z',
  'Freight': 127.34,
  'ShipName': 'Morgenstern Gesundkost',
  'ShipAddress': 'Heerstr. 22',
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    'ShipCity': 'Leipzig',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10576,
    'CustomerID': 'TORTU',
    'OrderDate': '1997-06-23T00:00:00.000Z',
    'ShippedDate': '1997-06-30T00:00:00.000Z',
    'Freight': 18.56,
    'ShipName': 'Tortuga Restaurante',
    'ShipAddress': 'Avda. Azteca 123',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10577,
    'CustomerID': 'TRAIH',
    'OrderDate': '1997-06-23T00:00:00.000Z',
    'ShippedDate': '1997-06-30T00:00:00.000Z',
    'Freight': 25.41,
    'ShipName': 'Trail\'s Head Gourmet Provisioners',
    'ShipAddress': '722 DaVinci Blvd.',
    'ShipCity': 'Kirkland',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10578,
    'CustomerID': 'BSBEV',
    'OrderDate': '1997-06-24T00:00:00.000Z',
    'ShippedDate': '1997-07-25T00:00:00.000Z',
    'Freight': 29.6,
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    'ShipAddress': 'Fauntleroy Circus',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10579,
    'CustomerID': 'LETSS',
    'OrderDate': '1997-06-25T00:00:00.000Z',
    'ShippedDate': '1997-07-04T00:00:00.000Z',
    'Freight': 13.73,
    'ShipName': 'Let\'s Stop N Shop',
    'ShipAddress': '87 Polk St. Suite 5',
    'ShipCity': 'San Francisco',
    'ShipRegion': 'CA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10580,
    'CustomerID': 'OTTIK',
    'OrderDate': '1997-06-26T00:00:00.000Z',
    'ShippedDate': '1997-07-01T00:00:00.000Z',

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    'Freight': 75.89,
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    'ShipAddress': 'Mehrheimerstr. 369',
    'ShipCity': 'Köln',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
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    'CustomerID': 'FAMIA',
    'OrderDate': '1997-06-26T00:00:00.000Z',
    'ShippedDate': '1997-07-02T00:00:00.000Z',
    'Freight': 3.01,
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    'ShipAddress': 'Rua Orós, 92',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
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    'CustomerID': 'BLAUS',
    'OrderDate': '1997-06-27T00:00:00.000Z',
    'ShippedDate': '1997-07-14T00:00:00.000Z',
    'Freight': 27.71,
    'ShipName': 'Blauer See Delikatessen',
    'ShipAddress': 'Forsterstr. 57',
    'ShipCity': 'Mannheim',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10583,
    'CustomerID': 'WARTH',
    'OrderDate': '1997-06-30T00:00:00.000Z',
    'ShippedDate': '1997-07-04T00:00:00.000Z',
    'Freight': 7.28,
    'ShipName': 'Wartian Herkku',
    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
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    'CustomerID': 'BLONP',
    'OrderDate': '1997-06-30T00:00:00.000Z',
    'ShippedDate': '1997-07-04T00:00:00.000Z',
    'Freight': 59.14,
    'ShipName': 'Blondel père et fils',
    'ShipAddress': '24, place Kléber',
    'ShipCity': 'Strasbourg',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10585,

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        'Freight': 13.41,
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        'ShipAddress': 'Rua do Mercado, 12',
        'ShipCity': 'Resende',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
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        'OrderDate': '1997-07-02T00:00:00.000Z',
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        'Freight': 0.48,
        'ShipName': 'Reggiani Caseifici',
        'ShipAddress': 'Strada Provinciale 124',
        'ShipCity': 'Reggio Emilia',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
    {
        'OrderID': 10587,
        'CustomerID': 'QUEDE',
        'OrderDate': '1997-07-02T00:00:00.000Z',
        'ShippedDate': '1997-07-09T00:00:00.000Z',
        'Freight': 62.52,
        'ShipName': 'Que Delícia',
        'ShipAddress': 'Rua da Panificadora, 12',
        'ShipCity': 'Rio de Janeiro',
        'ShipRegion': 'RJ',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10588,
        'CustomerID': 'QUICK',
        'OrderDate': '1997-07-03T00:00:00.000Z',
        'ShippedDate': '1997-07-10T00:00:00.000Z',
        'Freight': 194.67,
        'ShipName': 'QUICK-Stop',
        'ShipAddress': 'Taucherstraße 10',
        'ShipCity': 'Cunewalde',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10589,
        'CustomerID': 'GREAL',
        'OrderDate': '1997-07-04T00:00:00.000Z',
        'ShippedDate': '1997-07-14T00:00:00.000Z',
        'Freight': 4.42,
        'ShipName': 'Great Lakes Food Market',
        'ShipAddress': '2732 Baker Blvd.',
        'ShipCity': 'Eugene',
        'ShipRegion': 'OR',
        'ShipCountry': 'USA'
    }

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    },
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        'ShippedDate': '1997-07-14T00:00:00.000Z',
        'Freight': 44.77,
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        'ShipAddress': '43 rue St. Laurent',
        'ShipCity': 'Montréal',
        'ShipRegion': 'Québec',
        'ShipCountry': 'Canada'
    },
    {
        'OrderID': 10591,
        'CustomerID': 'VAFPE',
        'OrderDate': '1997-07-07T00:00:00.000Z',
        'ShippedDate': '1997-07-16T00:00:00.000Z',
        'Freight': 55.92,
        'ShipName': 'Vaffeljernet',
        'ShipAddress': 'Smagsloget 45',
        'ShipCity': 'Århus',
        'ShipRegion': null,
        'ShipCountry': 'Denmark'
    },
    {
        'OrderID': 10592,
        'CustomerID': 'LEHMS',
        'OrderDate': '1997-07-08T00:00:00.000Z',
        'ShippedDate': '1997-07-16T00:00:00.000Z',
        'Freight': 32.1,
        'ShipName': 'Lehmanns Marktstand',
        'ShipAddress': 'Magazinweg 7',
        'ShipCity': 'Frankfurt a.M.',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10593,
        'CustomerID': 'LEHMS',
        'OrderDate': '1997-07-09T00:00:00.000Z',
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        'Freight': 174.2,
        'ShipName': 'Lehmanns Marktstand',
        'ShipAddress': 'Magazinweg 7',
        'ShipCity': 'Frankfurt a.M.',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10594,
        'CustomerID': 'OLDWO',
        'OrderDate': '1997-07-09T00:00:00.000Z',
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        'Freight': 5.24,
        'ShipName': 'Old World Delicatessen',
        'ShipAddress': '2743 Bering St.',
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        'ShipCity': 'Anchorage',
        'ShipRegion': 'AK',
        'ShipCountry': 'USA'
    },
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        'Freight': 96.78,
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        'ShipAddress': 'Kirchgasse 6',
        'ShipCity': 'Graz',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
        'OrderID': 10596,
        'CustomerID': 'WHITC',
        'OrderDate': '1997-07-11T00:00:00.000Z',
        'ShippedDate': '1997-08-12T00:00:00.000Z',
        'Freight': 16.34,
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        'ShipAddress': '1029 - 12th Ave. S.',
        'ShipCity': 'Seattle',
        'ShipRegion': 'WA',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10597,
        'CustomerID': 'PICCO',
        'OrderDate': '1997-07-11T00:00:00.000Z',
        'ShippedDate': '1997-07-18T00:00:00.000Z',
        'Freight': 35.12,
        'ShipName': 'Piccolo und mehr',
        'ShipAddress': 'Geislweg 14',
        'ShipCity': 'Salzburg',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
        'OrderID': 10598,
        'CustomerID': 'RATTC',
        'OrderDate': '1997-07-14T00:00:00.000Z',
        'ShippedDate': '1997-07-18T00:00:00.000Z',
        'Freight': 44.42,
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        'ShipAddress': '2817 Milton Dr.',
        'ShipCity': 'Albuquerque',
        'ShipRegion': 'NM',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10599,
        'CustomerID': 'BSBEV',
        'OrderDate': '1997-07-15T00:00:00.000Z',
        'ShippedDate': '1997-07-21T00:00:00.000Z',

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    'Freight': 29.98,
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    'ShipAddress': 'Fauntleroy Circus',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
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    'CustomerID': 'HUNGC',
    'OrderDate': '1997-07-16T00:00:00.000Z',
    'ShippedDate': '1997-07-21T00:00:00.000Z',
    'Freight': 45.13,
    'ShipName': 'Hungry Coyote Import Store',
    'ShipAddress': 'City Center Plaza 516 Main St.',
    'ShipCity': 'Elgin',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10601,
    'CustomerID': 'HILAA',
    'OrderDate': '1997-07-16T00:00:00.000Z',
    'ShippedDate': '1997-07-22T00:00:00.000Z',
    'Freight': 58.3,
    'ShipName': 'HILARION-Abastos',
    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10602,
    'CustomerID': 'VAFFE',
    'OrderDate': '1997-07-17T00:00:00.000Z',
    'ShippedDate': '1997-07-22T00:00:00.000Z',
    'Freight': 2.92,
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    'ShipAddress': 'Smagsloget 45',
    'ShipCity': 'Århus',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
    'OrderID': 10603,
    'CustomerID': 'SAVEA',
    'OrderDate': '1997-07-18T00:00:00.000Z',
    'ShippedDate': '1997-08-08T00:00:00.000Z',
    'Freight': 48.77,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10604,

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    'OrderDate': '1997-07-18T00:00:00.000Z',
    'ShippedDate': '1997-07-29T00:00:00.000Z',
    'Freight': 7.46,
    'ShipName': 'Furia Bacalhau e Frutos do Mar',
    'ShipAddress': 'Jardim das rosas n. 32',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {
    'OrderID': 10605,
    'CustomerID': 'MEREP',
    'OrderDate': '1997-07-21T00:00:00.000Z',
    'ShippedDate': '1997-07-29T00:00:00.000Z',
    'Freight': 379.13,
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    'ShipAddress': '43 rue St. Laurent',
    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10606,
    'CustomerID': 'TRADH',
    'OrderDate': '1997-07-22T00:00:00.000Z',
    'ShippedDate': '1997-07-31T00:00:00.000Z',
    'Freight': 79.4,
    'ShipName': 'Tradição Hipermercados',
    'ShipAddress': 'Av. Inês de Castro, 414',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
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    'CustomerID': 'SAVEA',
    'OrderDate': '1997-07-22T00:00:00.000Z',
    'ShippedDate': '1997-07-25T00:00:00.000Z',
    'Freight': 200.24,
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    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'TOMSP',
    'OrderDate': '1997-07-23T00:00:00.000Z',
    'ShippedDate': '1997-08-01T00:00:00.000Z',
    'Freight': 27.79,
    'ShipName': 'Toms Spezialitäten',
    'ShipAddress': 'Luisenstr. 48',
    'ShipCity': 'Münster',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  }

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    },
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        'OrderDate': '1997-07-24T00:00:00.000Z',
        'ShippedDate': '1997-07-30T00:00:00.000Z',
        'Freight': 1.85,
        'ShipName': 'Du monde entier',
        'ShipAddress': '67, rue des Cinquante Otages',
        'ShipCity': 'Nantes',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10610,
        'CustomerID': 'LAMAI',
        'OrderDate': '1997-07-25T00:00:00.000Z',
        'ShippedDate': '1997-08-06T00:00:00.000Z',
        'Freight': 26.78,
        'ShipName': 'La maison d\'Asie',
        'ShipAddress': '1 rue Alsace-Lorraine',
        'ShipCity': 'Toulouse',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10611,
        'CustomerID': 'WOLZA',
        'OrderDate': '1997-07-25T00:00:00.000Z',
        'ShippedDate': '1997-08-01T00:00:00.000Z',
        'Freight': 80.65,
        'ShipName': 'Wolski Zajazd',
        'ShipAddress': 'ul. Filtrowa 68',
        'ShipCity': 'Warszawa',
        'ShipRegion': null,
        'ShipCountry': 'Poland'
    },
    {
        'OrderID': 10612,
        'CustomerID': 'SAVEA',
        'OrderDate': '1997-07-28T00:00:00.000Z',
        'ShippedDate': '1997-08-01T00:00:00.000Z',
        'Freight': 544.08,
        'ShipName': 'Save-a-lot Markets',
        'ShipAddress': '187 Suffolk Ln.',
        'ShipCity': 'Boise',
        'ShipRegion': 'ID',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10613,
        'CustomerID': 'HILAA',
        'OrderDate': '1997-07-29T00:00:00.000Z',
        'ShippedDate': '1997-08-01T00:00:00.000Z',
        'Freight': 8.11,
        'ShipName': 'HILARION-Abastos',
        'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    }

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    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
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    'CustomerID': 'BLAUS',
    'OrderDate': '1997-07-29T00:00:00.000Z',
    'ShippedDate': '1997-08-01T00:00:00.000Z',
    'Freight': 1.93,
    'ShipName': 'Blauer See Delikatessen',
    'ShipAddress': 'Forsterstr. 57',
    'ShipCity': 'Mannheim',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10615,
    'CustomerID': 'WILMK',
    'OrderDate': '1997-07-30T00:00:00.000Z',
    'ShippedDate': '1997-08-06T00:00:00.000Z',
    'Freight': 0.75,
    'ShipName': 'Wilman Kala',
    'ShipAddress': 'Keskuskatu 45',
    'ShipCity': 'Helsinki',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 10616,
    'CustomerID': 'GREAL',
    'OrderDate': '1997-07-31T00:00:00.000Z',
    'ShippedDate': '1997-08-05T00:00:00.000Z',
    'Freight': 116.53,
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    'ShipAddress': '2732 Baker Blvd.',
    'ShipCity': 'Eugene',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10617,
    'CustomerID': 'GREAL',
    'OrderDate': '1997-07-31T00:00:00.000Z',
    'ShippedDate': '1997-08-04T00:00:00.000Z',
    'Freight': 18.53,
    'ShipName': 'Great Lakes Food Market',
    'ShipAddress': '2732 Baker Blvd.',
    'ShipCity': 'Eugene',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10618,
    'CustomerID': 'MEREP',
    'OrderDate': '1997-08-01T00:00:00.000Z',
    'ShippedDate': '1997-08-08T00:00:00.000Z',

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    'Freight': 154.68,
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    'ShipAddress': '43 rue St. Laurent',
    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10619,
    'CustomerID': 'MEREP',
    'OrderDate': '1997-08-04T00:00:00.000Z',
    'ShippedDate': '1997-08-07T00:00:00.000Z',
    'Freight': 91.05,
    'ShipName': 'Mère Paillarde',
    'ShipAddress': '43 rue St. Laurent',
    'ShipCity': 'Montréal',
    'ShipRegion': 'Québec',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10620,
    'CustomerID': 'LAUGB',
    'OrderDate': '1997-08-05T00:00:00.000Z',
    'ShippedDate': '1997-08-14T00:00:00.000Z',
    'Freight': 0.94,
    'ShipName': 'Laughing Bacchus Wine Cellars',
    'ShipAddress': '2319 Elm St.',
    'ShipCity': 'Vancouver',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10621,
    'CustomerID': 'ISLAT',
    'OrderDate': '1997-08-05T00:00:00.000Z',
    'ShippedDate': '1997-08-11T00:00:00.000Z',
    'Freight': 23.73,
    'ShipName': 'Island Trading',
    'ShipAddress': 'Garden House Crowther Way',
    'ShipCity': 'Cowes',
    'ShipRegion': 'Isle of Wight',
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10622,
    'CustomerID': 'RICAR',
    'OrderDate': '1997-08-06T00:00:00.000Z',
    'ShippedDate': '1997-08-11T00:00:00.000Z',
    'Freight': 50.97,
    'ShipName': 'Ricardo Adocicados',
    'ShipAddress': 'Av. Copacabana, 267',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10623,

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    'CustomerID': 'FRANK',
    'OrderDate': '1997-08-07T00:00:00.000Z',
    'ShippedDate': '1997-08-12T00:00:00.000Z',
    'Freight': 97.18,
    'ShipName': 'Frankenversand',
    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10624,
    'CustomerID': 'THECR',
    'OrderDate': '1997-08-07T00:00:00.000Z',
    'ShippedDate': '1997-08-19T00:00:00.000Z',
    'Freight': 94.8,
    'ShipName': 'The Cracker Box',
    'ShipAddress': '55 Grizzly Peak Rd.',
    'ShipCity': 'Butte',
    'ShipRegion': 'MT',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10625,
    'CustomerID': 'ANATR',
    'OrderDate': '1997-08-08T00:00:00.000Z',
    'ShippedDate': '1997-08-14T00:00:00.000Z',
    'Freight': 43.9,
    'ShipName': 'Ana Trujillo Emparedados y helados',
    'ShipAddress': 'Avda. de la Constitución 2222',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10626,
    'CustomerID': 'BERGS',
    'OrderDate': '1997-08-11T00:00:00.000Z',
    'ShippedDate': '1997-08-20T00:00:00.000Z',
    'Freight': 138.69,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10627,
    'CustomerID': 'SAVEA',
    'OrderDate': '1997-08-11T00:00:00.000Z',
    'ShippedDate': '1997-08-21T00:00:00.000Z',
    'Freight': 107.46,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  }

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    },
    {
        'OrderID': 10628,
        'CustomerID': 'BLONP',
        'OrderDate': '1997-08-12T00:00:00.000Z',
        'ShippedDate': '1997-08-20T00:00:00.000Z',
        'Freight': 30.36,
        'ShipName': 'Blondel père et fils',
        'ShipAddress': '24, place Kléber',
        'ShipCity': 'Strasbourg',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10629,
        'CustomerID': 'GODOS',
        'OrderDate': '1997-08-12T00:00:00.000Z',
        'ShippedDate': '1997-08-20T00:00:00.000Z',
        'Freight': 85.46,
        'ShipName': 'Godos Cocina Típica',
        'ShipAddress': 'C/ Romero, 33',
        'ShipCity': 'Sevilla',
        'ShipRegion': null,
        'ShipCountry': 'Spain'
    },
    {
        'OrderID': 10630,
        'CustomerID': 'KOENE',
        'OrderDate': '1997-08-13T00:00:00.000Z',
        'ShippedDate': '1997-08-19T00:00:00.000Z',
        'Freight': 32.35,
        'ShipName': 'Königlich Essen',
        'ShipAddress': 'Maubelstr. 90',
        'ShipCity': 'Brandenburg',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10631,
        'CustomerID': 'LAMAI',
        'OrderDate': '1997-08-14T00:00:00.000Z',
        'ShippedDate': '1997-08-15T00:00:00.000Z',
        'Freight': 0.87,
        'ShipName': 'La maison d\'Asie',
        'ShipAddress': '1 rue Alsace-Lorraine',
        'ShipCity': 'Toulouse',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10632,
        'CustomerID': 'WANDK',
        'OrderDate': '1997-08-14T00:00:00.000Z',
        'ShippedDate': '1997-08-19T00:00:00.000Z',
        'Freight': 41.38,
        'ShipName': 'Die Wandernde Kuh',
        'ShipAddress': 'Adenauerallee 900',
    }

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        'ShipCity': 'Stuttgart',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
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        'OrderID': 10633,
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        'OrderDate': '1997-08-15T00:00:00.000Z',
        'ShippedDate': '1997-08-18T00:00:00.000Z',
        'Freight': 477.9,
        'ShipName': 'Ernst Handel',
        'ShipAddress': 'Kirchgasse 6',
        'ShipCity': 'Graz',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
        'OrderID': 10634,
        'CustomerID': 'FOLIG',
        'OrderDate': '1997-08-15T00:00:00.000Z',
        'ShippedDate': '1997-08-21T00:00:00.000Z',
        'Freight': 487.38,
        'ShipName': 'Folies gourmandes',
        'ShipAddress': '184, chaussée de Tournai',
        'ShipCity': 'Lille',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10635,
        'CustomerID': 'MAGAA',
        'OrderDate': '1997-08-18T00:00:00.000Z',
        'ShippedDate': '1997-08-21T00:00:00.000Z',
        'Freight': 47.46,
        'ShipName': 'Magazzini Alimentari Riuniti',
        'ShipAddress': 'Via Ludovico il Moro 22',
        'ShipCity': 'Bergamo',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
    {
        'OrderID': 10636,
        'CustomerID': 'WARTH',
        'OrderDate': '1997-08-19T00:00:00.000Z',
        'ShippedDate': '1997-08-26T00:00:00.000Z',
        'Freight': 1.15,
        'ShipName': 'Wartian Herkku',
        'ShipAddress': 'Torikatu 38',
        'ShipCity': 'Oulu',
        'ShipRegion': null,
        'ShipCountry': 'Finland'
    },
    {
        'OrderID': 10637,
        'CustomerID': 'QUEEN',
        'OrderDate': '1997-08-19T00:00:00.000Z',
        'ShippedDate': '1997-08-26T00:00:00.000Z',

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    'Freight': 201.29,
    'ShipName': 'Queen Cozinha',
    'ShipAddress': 'Alameda dos Canários, 891',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
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    'CustomerID': 'LINOD',
    'OrderDate': '1997-08-20T00:00:00.000Z',
    'ShippedDate': '1997-09-01T00:00:00.000Z',
    'Freight': 158.44,
    'ShipName': 'LINO-Delicateses',
    'ShipAddress': 'Ave. 5 de Mayo Porlamar',
    'ShipCity': 'I. de Margarita',
    'ShipRegion': 'Nueva Esparta',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10639,
    'CustomerID': 'SANTG',
    'OrderDate': '1997-08-20T00:00:00.000Z',
    'ShippedDate': '1997-08-27T00:00:00.000Z',
    'Freight': 38.64,
    'ShipName': 'Santé Gourmet',
    'ShipAddress': 'Erling Skakkes gate 78',
    'ShipCity': 'Stavern',
    'ShipRegion': null,
    'ShipCountry': 'Norway'
  },
  {
    'OrderID': 10640,
    'CustomerID': 'WANDK',
    'OrderDate': '1997-08-21T00:00:00.000Z',
    'ShippedDate': '1997-08-28T00:00:00.000Z',
    'Freight': 23.55,
    'ShipName': 'Die Wandernde Kuh',
    'ShipAddress': 'Adenauerallee 900',
    'ShipCity': 'Stuttgart',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10641,
    'CustomerID': 'HILAA',
    'OrderDate': '1997-08-22T00:00:00.000Z',
    'ShippedDate': '1997-08-26T00:00:00.000Z',
    'Freight': 179.61,
    'ShipName': 'HILARION-Abastos',
    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10642,

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    'CustomerID': 'SIMOB',
    'OrderDate': '1997-08-22T00:00:00.000Z',
    'ShippedDate': '1997-09-05T00:00:00.000Z',
    'Freight': 41.89,
    'ShipName': 'Simons bistro',
    'ShipAddress': 'Vinbæltet 34',
    'ShipCity': 'Kobenhavn',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
    'OrderID': 10643,
    'CustomerID': 'ALFKI',
    'OrderDate': '1997-08-25T00:00:00.000Z',
    'ShippedDate': '1997-09-02T00:00:00.000Z',
    'Freight': 29.46,
    'ShipName': 'Alfreds Futterkiste',
    'ShipAddress': 'Obere Str. 57',
    'ShipCity': 'Berlin',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10644,
    'CustomerID': 'WELLI',
    'OrderDate': '1997-08-25T00:00:00.000Z',
    'ShippedDate': '1997-09-01T00:00:00.000Z',
    'Freight': 0.14,
    'ShipName': 'Wellington Importadora',
    'ShipAddress': 'Rua do Mercado, 12',
    'ShipCity': 'Resende',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10645,
    'CustomerID': 'HANAR',
    'OrderDate': '1997-08-26T00:00:00.000Z',
    'ShippedDate': '1997-09-02T00:00:00.000Z',
    'Freight': 12.41,
    'ShipName': 'Hanari Carnes',
    'ShipAddress': 'Rua do Paço, 67',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10646,
    'CustomerID': 'HUNGO',
    'OrderDate': '1997-08-27T00:00:00.000Z',
    'ShippedDate': '1997-09-03T00:00:00.000Z',
    'Freight': 142.33,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  }

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},
{
  'OrderID': 10647,
  'CustomerID': 'QUEDE',
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  'ShippedDate': '1997-09-03T00:00:00.000Z',
  'Freight': 45.54,
  'ShipName': 'Que Delícia',
  'ShipAddress': 'Rua da Panificadora, 12',
  'ShipCity': 'Rio de Janeiro',
  'ShipRegion': 'RJ',
  'ShipCountry': 'Brazil'
},
{
  'OrderID': 10648,
  'CustomerID': 'RICAR',
  'OrderDate': '1997-08-28T00:00:00.000Z',
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  'Freight': 14.25,
  'ShipName': 'Ricardo Adocicados',
  'ShipAddress': 'Av. Copacabana, 267',
  'ShipCity': 'Rio de Janeiro',
  'ShipRegion': 'RJ',
  'ShipCountry': 'Brazil'
},
{
  'OrderID': 10649,
  'CustomerID': 'MAISD',
  'OrderDate': '1997-08-28T00:00:00.000Z',
  'ShippedDate': '1997-08-29T00:00:00.000Z',
  'Freight': 6.2,
  'ShipName': 'Maison Dewey',
  'ShipAddress': 'Rue Joseph-Bens 532',
  'ShipCity': 'Bruxelles',
  'ShipRegion': null,
  'ShipCountry': 'Belgium'
},
{
  'OrderID': 10650,
  'CustomerID': 'FAMIA',
  'OrderDate': '1997-08-29T00:00:00.000Z',
  'ShippedDate': '1997-09-03T00:00:00.000Z',
  'Freight': 176.81,
  'ShipName': 'Familia Arquibaldo',
  'ShipAddress': 'Rua Orós, 92',
  'ShipCity': 'Sao Paulo',
  'ShipRegion': 'SP',
  'ShipCountry': 'Brazil'
},
{
  'OrderID': 10651,
  'CustomerID': 'WANDK',
  'OrderDate': '1997-09-01T00:00:00.000Z',
  'ShippedDate': '1997-09-11T00:00:00.000Z',
  'Freight': 20.6,
  'ShipName': 'Die Wandernde Kuh',
  'ShipAddress': 'Adenauerallee 900',
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    'ShipCity': 'Stuttgart',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10652,
    'CustomerID': 'GOURL',
    'OrderDate': '1997-09-01T00:00:00.000Z',
    'ShippedDate': '1997-09-08T00:00:00.000Z',
    'Freight': 7.14,
    'ShipName': 'Gourmet Lanchonetes',
    'ShipAddress': 'Av. Brasil, 442',
    'ShipCity': 'Campinas',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10653,
    'CustomerID': 'FRANK',
    'OrderDate': '1997-09-02T00:00:00.000Z',
    'ShippedDate': '1997-09-19T00:00:00.000Z',
    'Freight': 93.25,
    'ShipName': 'Frankenversand',
    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10654,
    'CustomerID': 'BERGS',
    'OrderDate': '1997-09-02T00:00:00.000Z',
    'ShippedDate': '1997-09-11T00:00:00.000Z',
    'Freight': 55.26,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10655,
    'CustomerID': 'REGGC',
    'OrderDate': '1997-09-03T00:00:00.000Z',
    'ShippedDate': '1997-09-11T00:00:00.000Z',
    'Freight': 4.41,
    'ShipName': 'Reggiani Caseifici',
    'ShipAddress': 'Strada Provinciale 124',
    'ShipCity': 'Reggio Emilia',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 10656,
    'CustomerID': 'GREAL',
    'OrderDate': '1997-09-04T00:00:00.000Z',
    'ShippedDate': '1997-09-10T00:00:00.000Z',

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    'Freight': 57.15,
    'ShipName': 'Great Lakes Food Market',
    'ShipAddress': '2732 Baker Blvd.',
    'ShipCity': 'Eugene',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10657,
    'CustomerID': 'SAVEA',
    'OrderDate': '1997-09-04T00:00:00.000Z',
    'ShippedDate': '1997-09-15T00:00:00.000Z',
    'Freight': 352.69,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10658,
    'CustomerID': 'QUICK',
    'OrderDate': '1997-09-05T00:00:00.000Z',
    'ShippedDate': '1997-09-08T00:00:00.000Z',
    'Freight': 364.15,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10659,
    'CustomerID': 'QUEEN',
    'OrderDate': '1997-09-05T00:00:00.000Z',
    'ShippedDate': '1997-09-10T00:00:00.000Z',
    'Freight': 105.81,
    'ShipName': 'Queen Cozinha',
    'ShipAddress': 'Alameda dos Canários, 891',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10660,
    'CustomerID': 'HUNGC',
    'OrderDate': '1997-09-08T00:00:00.000Z',
    'ShippedDate': '1997-10-15T00:00:00.000Z',
    'Freight': 111.29,
    'ShipName': 'Hungry Coyote Import Store',
    'ShipAddress': 'City Center Plaza 516 Main St.',
    'ShipCity': 'Elgin',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10661,

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    'CustomerID': 'HUNGO',
    'OrderDate': '1997-09-09T00:00:00.000Z',
    'ShippedDate': '1997-09-15T00:00:00.000Z',
    'Freight': 17.55,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10662,
    'CustomerID': 'LONEP',
    'OrderDate': '1997-09-09T00:00:00.000Z',
    'ShippedDate': '1997-09-18T00:00:00.000Z',
    'Freight': 1.28,
    'ShipName': 'Lonesome Pine Restaurant',
    'ShipAddress': '89 Chiaroscuro Rd.',
    'ShipCity': 'Portland',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10663,
    'CustomerID': 'BONAP',
    'OrderDate': '1997-09-10T00:00:00.000Z',
    'ShippedDate': '1997-10-03T00:00:00.000Z',
    'Freight': 113.15,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10664,
    'CustomerID': 'FURIB',
    'OrderDate': '1997-09-10T00:00:00.000Z',
    'ShippedDate': '1997-09-19T00:00:00.000Z',
    'Freight': 1.27,
    'ShipName': 'Furia Bacalhau e Frutos do Mar',
    'ShipAddress': 'Jardim das rosas n. 32',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {
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    'CustomerID': 'LONEP',
    'OrderDate': '1997-09-11T00:00:00.000Z',
    'ShippedDate': '1997-09-17T00:00:00.000Z',
    'Freight': 26.31,
    'ShipName': 'Lonesome Pine Restaurant',
    'ShipAddress': '89 Chiaroscuro Rd.',
    'ShipCity': 'Portland',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  }

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},
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  'CustomerID': 'RICSU',
  'OrderDate': '1997-09-12T00:00:00.000Z',
  'ShippedDate': '1997-09-22T00:00:00.000Z',
  'Freight': 232.42,
  'ShipName': 'Richter Supermarkt',
  'ShipAddress': 'Starenweg 5',
  'ShipCity': 'Genève',
  'ShipRegion': null,
  'ShipCountry': 'Switzerland'
},
{
  'OrderID': 10667,
  'CustomerID': 'ERNSH',
  'OrderDate': '1997-09-12T00:00:00.000Z',
  'ShippedDate': '1997-09-19T00:00:00.000Z',
  'Freight': 78.09,
  'ShipName': 'Ernst Handel',
  'ShipAddress': 'Kirchgasse 6',
  'ShipCity': 'Graz',
  'ShipRegion': null,
  'ShipCountry': 'Austria'
},
{
  'OrderID': 10668,
  'CustomerID': 'WANDK',
  'OrderDate': '1997-09-15T00:00:00.000Z',
  'ShippedDate': '1997-09-23T00:00:00.000Z',
  'Freight': 47.22,
  'ShipName': 'Die Wandernde Kuh',
  'ShipAddress': 'Adenauerallee 900',
  'ShipCity': 'Stuttgart',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10669,
  'CustomerID': 'SIMOB',
  'OrderDate': '1997-09-15T00:00:00.000Z',
  'ShippedDate': '1997-09-22T00:00:00.000Z',
  'Freight': 24.39,
  'ShipName': 'Simons bistro',
  'ShipAddress': 'Vinbæltet 34',
  'ShipCity': 'Kobenhavn',
  'ShipRegion': null,
  'ShipCountry': 'Denmark'
},
{
  'OrderID': 10670,
  'CustomerID': 'FRANK',
  'OrderDate': '1997-09-16T00:00:00.000Z',
  'ShippedDate': '1997-09-18T00:00:00.000Z',
  'Freight': 203.48,
  'ShipName': 'Frankenversand',
  'ShipAddress': 'Berliner Platz 43',
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    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10671,
    'CustomerID': 'FRANR',
    'OrderDate': '1997-09-17T00:00:00.000Z',
    'ShippedDate': '1997-09-24T00:00:00.000Z',
    'Freight': 30.34,
    'ShipName': 'France restauration',
    'ShipAddress': '54, rue Royale',
    'ShipCity': 'Nantes',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10672,
    'CustomerID': 'BERGS',
    'OrderDate': '1997-09-17T00:00:00.000Z',
    'ShippedDate': '1997-09-26T00:00:00.000Z',
    'Freight': 95.75,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10673,
    'CustomerID': 'WILMK',
    'OrderDate': '1997-09-18T00:00:00.000Z',
    'ShippedDate': '1997-09-19T00:00:00.000Z',
    'Freight': 22.76,
    'ShipName': 'Wilman Kala',
    'ShipAddress': 'Keskuskatu 45',
    'ShipCity': 'Helsinki',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 10674,
    'CustomerID': 'ISLAT',
    'OrderDate': '1997-09-18T00:00:00.000Z',
    'ShippedDate': '1997-09-30T00:00:00.000Z',
    'Freight': 0.9,
    'ShipName': 'Island Trading',
    'ShipAddress': 'Garden House Crowther Way',
    'ShipCity': 'Cowes',
    'ShipRegion': 'Isle of Wight',
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10675,
    'CustomerID': 'FRANK',
    'OrderDate': '1997-09-19T00:00:00.000Z',
    'ShippedDate': '1997-09-23T00:00:00.000Z',

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    'Freight': 31.85,
    'ShipName': 'Frankenversand',
    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10676,
    'CustomerID': 'TORTU',
    'OrderDate': '1997-09-22T00:00:00.000Z',
    'ShippedDate': '1997-09-29T00:00:00.000Z',
    'Freight': 2.01,
    'ShipName': 'Tortuga Restaurante',
    'ShipAddress': 'Avda. Azteca 123',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10677,
    'CustomerID': 'ANTON',
    'OrderDate': '1997-09-22T00:00:00.000Z',
    'ShippedDate': '1997-09-26T00:00:00.000Z',
    'Freight': 4.03,
    'ShipName': 'Antonio Moreno Taquería',
    'ShipAddress': 'Mataderos 2312',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10678,
    'CustomerID': 'SAVEA',
    'OrderDate': '1997-09-23T00:00:00.000Z',
    'ShippedDate': '1997-10-16T00:00:00.000Z',
    'Freight': 388.98,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10679,
    'CustomerID': 'BLONP',
    'OrderDate': '1997-09-23T00:00:00.000Z',
    'ShippedDate': '1997-09-30T00:00:00.000Z',
    'Freight': 27.94,
    'ShipName': 'Blondel père et fils',
    'ShipAddress': '24, place Kléber',
    'ShipCity': 'Strasbourg',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10680,

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    'CustomerID': 'OLDWO',
    'OrderDate': '1997-09-24T00:00:00.000Z',
    'ShippedDate': '1997-09-26T00:00:00.000Z',
    'Freight': 26.61,
    'ShipName': 'Old World Delicatessen',
    'ShipAddress': '2743 Bering St.',
    'ShipCity': 'Anchorage',
    'ShipRegion': 'AK',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10681,
    'CustomerID': 'GREAL',
    'OrderDate': '1997-09-25T00:00:00.000Z',
    'ShippedDate': '1997-09-30T00:00:00.000Z',
    'Freight': 76.13,
    'ShipName': 'Great Lakes Food Market',
    'ShipAddress': '2732 Baker Blvd.',
    'ShipCity': 'Eugene',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10682,
    'CustomerID': 'ANTON',
    'OrderDate': '1997-09-25T00:00:00.000Z',
    'ShippedDate': '1997-10-01T00:00:00.000Z',
    'Freight': 36.13,
    'ShipName': 'Antonio Moreno Taquería',
    'ShipAddress': 'Mataderos 2312',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10683,
    'CustomerID': 'DUMON',
    'OrderDate': '1997-09-26T00:00:00.000Z',
    'ShippedDate': '1997-10-01T00:00:00.000Z',
    'Freight': 4.4,
    'ShipName': 'Du monde entier',
    'ShipAddress': '67, rue des Cinquante Otages',
    'ShipCity': 'Nantes',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10684,
    'CustomerID': 'OTTIK',
    'OrderDate': '1997-09-26T00:00:00.000Z',
    'ShippedDate': '1997-09-30T00:00:00.000Z',
    'Freight': 145.63,
    'ShipName': 'Ottilies Käseladen',
    'ShipAddress': 'Mehrheimerstr. 369',
    'ShipCity': 'Köln',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  }

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},
{
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  'CustomerID': 'GOURL',
  'OrderDate': '1997-09-29T00:00:00.000Z',
  'ShippedDate': '1997-10-03T00:00:00.000Z',
  'Freight': 33.75,
  'ShipName': 'Gourmet Lanchonetes',
  'ShipAddress': 'Av. Brasil, 442',
  'ShipCity': 'Campinas',
  'ShipRegion': 'SP',
  'ShipCountry': 'Brazil'
},
{
  'OrderID': 10686,
  'CustomerID': 'PICCO',
  'OrderDate': '1997-09-30T00:00:00.000Z',
  'ShippedDate': '1997-10-08T00:00:00.000Z',
  'Freight': 96.5,
  'ShipName': 'Piccolo und mehr',
  'ShipAddress': 'Geislweg 14',
  'ShipCity': 'Salzburg',
  'ShipRegion': null,
  'ShipCountry': 'Austria'
},
{
  'OrderID': 10687,
  'CustomerID': 'HUNGO',
  'OrderDate': '1997-09-30T00:00:00.000Z',
  'ShippedDate': '1997-10-30T00:00:00.000Z',
  'Freight': 296.43,
  'ShipName': 'Hungry Owl All-Night Grocers',
  'ShipAddress': '8 Johnstown Road',
  'ShipCity': 'Cork',
  'ShipRegion': 'Co. Cork',
  'ShipCountry': 'Ireland'
},
{
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  'CustomerID': 'VAFFE',
  'OrderDate': '1997-10-01T00:00:00.000Z',
  'ShippedDate': '1997-10-07T00:00:00.000Z',
  'Freight': 299.09,
  'ShipName': 'Vaffeljernet',
  'ShipAddress': 'Smagsloget 45',
  'ShipCity': 'Århus',
  'ShipRegion': null,
  'ShipCountry': 'Denmark'
},
{
  'OrderID': 10689,
  'CustomerID': 'BERGS',
  'OrderDate': '1997-10-01T00:00:00.000Z',
  'ShippedDate': '1997-10-07T00:00:00.000Z',
  'Freight': 13.42,
  'ShipName': 'Berglunds snabbköp',
  'ShipAddress': 'Berguvsvägen 8',
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        'ShipCity': 'Luleå',
        'ShipRegion': null,
        'ShipCountry': 'Sweden'
    },
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        'CustomerID': 'HANAR',
        'OrderDate': '1997-10-02T00:00:00.000Z',
        'ShippedDate': '1997-10-03T00:00:00.000Z',
        'Freight': 15.8,
        'ShipName': 'Hanari Carnes',
        'ShipAddress': 'Rua do Paço, 67',
        'ShipCity': 'Rio de Janeiro',
        'ShipRegion': 'RJ',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10691,
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        'OrderDate': '1997-10-03T00:00:00.000Z',
        'ShippedDate': '1997-10-22T00:00:00.000Z',
        'Freight': 810.05,
        'ShipName': 'QUICK-Stop',
        'ShipAddress': 'Taucherstraße 10',
        'ShipCity': 'Cunewalde',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10692,
        'CustomerID': 'ALFKI',
        'OrderDate': '1997-10-03T00:00:00.000Z',
        'ShippedDate': '1997-10-13T00:00:00.000Z',
        'Freight': 61.02,
        'ShipName': 'Alfred's Futterkiste',
        'ShipAddress': 'Obere Str. 57',
        'ShipCity': 'Berlin',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10693,
        'CustomerID': 'WHITC',
        'OrderDate': '1997-10-06T00:00:00.000Z',
        'ShippedDate': '1997-10-10T00:00:00.000Z',
        'Freight': 139.34,
        'ShipName': 'White Clover Markets',
        'ShipAddress': '1029 - 12th Ave. S.',
        'ShipCity': 'Seattle',
        'ShipRegion': 'WA',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10694,
        'CustomerID': 'QUICK',
        'OrderDate': '1997-10-06T00:00:00.000Z',
        'ShippedDate': '1997-10-09T00:00:00.000Z',

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    'Freight': 398.36,
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    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10695,
    'CustomerID': 'WILMK',
    'OrderDate': '1997-10-07T00:00:00.000Z',
    'ShippedDate': '1997-10-14T00:00:00.000Z',
    'Freight': 16.72,
    'ShipName': 'Wilman Kala',
    'ShipAddress': 'Keskuskatu 45',
    'ShipCity': 'Helsinki',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 10696,
    'CustomerID': 'WHITC',
    'OrderDate': '1997-10-08T00:00:00.000Z',
    'ShippedDate': '1997-10-14T00:00:00.000Z',
    'Freight': 102.55,
    'ShipName': 'White Clover Markets',
    'ShipAddress': '1029 - 12th Ave. S.',
    'ShipCity': 'Seattle',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10697,
    'CustomerID': 'LINOD',
    'OrderDate': '1997-10-08T00:00:00.000Z',
    'ShippedDate': '1997-10-14T00:00:00.000Z',
    'Freight': 45.52,
    'ShipName': 'LINO-Delicateses',
    'ShipAddress': 'Ave. 5 de Mayo Porlamar',
    'ShipCity': 'I. de Margarita',
    'ShipRegion': 'Nueva Esparta',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10698,
    'CustomerID': 'ERNSH',
    'OrderDate': '1997-10-09T00:00:00.000Z',
    'ShippedDate': '1997-10-17T00:00:00.000Z',
    'Freight': 272.47,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10699,

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    'CustomerID': 'MORGK',
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    'Freight': 0.58,
    'ShipName': 'Morgenstern Gesundkost',
    'ShipAddress': 'Heerstr. 22',
    'ShipCity': 'Leipzig',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10700,
    'CustomerID': 'SAVEA',
    'OrderDate': '1997-10-10T00:00:00.000Z',
    'ShippedDate': '1997-10-16T00:00:00.000Z',
    'Freight': 65.1,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10701,
    'CustomerID': 'HUNGO',
    'OrderDate': '1997-10-13T00:00:00.000Z',
    'ShippedDate': '1997-10-15T00:00:00.000Z',
    'Freight': 220.31,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10702,
    'CustomerID': 'ALFKI',
    'OrderDate': '1997-10-13T00:00:00.000Z',
    'ShippedDate': '1997-10-21T00:00:00.000Z',
    'Freight': 23.94,
    'ShipName': 'Alfred\'s Futterkiste',
    'ShipAddress': 'Obere Str. 57',
    'ShipCity': 'Berlin',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10703,
    'CustomerID': 'FOLKO',
    'OrderDate': '1997-10-14T00:00:00.000Z',
    'ShippedDate': '1997-10-20T00:00:00.000Z',
    'Freight': 152.3,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  }

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    },
    {
        'OrderID': 10704,
        'CustomerID': 'QUEEN',
        'OrderDate': '1997-10-14T00:00:00.000Z',
        'ShippedDate': '1997-11-07T00:00:00.000Z',
        'Freight': 4.78,
        'ShipName': 'Queen Cozinha',
        'ShipAddress': 'Alameda dos Canários, 891',
        'ShipCity': 'Sao Paulo',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10705,
        'CustomerID': 'HILAA',
        'OrderDate': '1997-10-15T00:00:00.000Z',
        'ShippedDate': '1997-11-18T00:00:00.000Z',
        'Freight': 3.52,
        'ShipName': 'HILARION-Abastos',
        'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
        'ShipCity': 'San Cristóbal',
        'ShipRegion': 'Táchira',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 10706,
        'CustomerID': 'OLDWO',
        'OrderDate': '1997-10-16T00:00:00.000Z',
        'ShippedDate': '1997-10-21T00:00:00.000Z',
        'Freight': 135.63,
        'ShipName': 'Old World Delicatessen',
        'ShipAddress': '2743 Bering St.',
        'ShipCity': 'Anchorage',
        'ShipRegion': 'AK',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10707,
        'CustomerID': 'AROUT',
        'OrderDate': '1997-10-16T00:00:00.000Z',
        'ShippedDate': '1997-10-23T00:00:00.000Z',
        'Freight': 21.74,
        'ShipName': 'Around the Horn',
        'ShipAddress': 'Brook Farm Stratford St. Mary',
        'ShipCity': 'Colchester',
        'ShipRegion': 'Essex',
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10708,
        'CustomerID': 'THEBI',
        'OrderDate': '1997-10-17T00:00:00.000Z',
        'ShippedDate': '1997-11-05T00:00:00.000Z',
        'Freight': 2.96,
        'ShipName': 'The Big Cheese',
        'ShipAddress': '89 Jefferson Way Suite 2',
    }

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        'ShipCity': 'Portland',
        'ShipRegion': 'OR',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10709,
        'CustomerID': 'GOURL',
        'OrderDate': '1997-10-17T00:00:00.000Z',
        'ShippedDate': '1997-11-20T00:00:00.000Z',
        'Freight': 210.8,
        'ShipName': 'Gourmet Lanchonetes',
        'ShipAddress': 'Av. Brasil, 442',
        'ShipCity': 'Campinas',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10710,
        'CustomerID': 'FRANS',
        'OrderDate': '1997-10-20T00:00:00.000Z',
        'ShippedDate': '1997-10-23T00:00:00.000Z',
        'Freight': 4.98,
        'ShipName': 'Franchi S.p.A.',
        'ShipAddress': 'Via Monte Bianco 34',
        'ShipCity': 'Torino',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
    {
        'OrderID': 10711,
        'CustomerID': 'SAVEA',
        'OrderDate': '1997-10-21T00:00:00.000Z',
        'ShippedDate': '1997-10-29T00:00:00.000Z',
        'Freight': 52.41,
        'ShipName': 'Save-a-lot Markets',
        'ShipAddress': '187 Suffolk Ln.',
        'ShipCity': 'Boise',
        'ShipRegion': 'ID',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10712,
        'CustomerID': 'HUNGO',
        'OrderDate': '1997-10-21T00:00:00.000Z',
        'ShippedDate': '1997-10-31T00:00:00.000Z',
        'Freight': 89.93,
        'ShipName': 'Hungry Owl All-Night Grocers',
        'ShipAddress': '8 Johnstown Road',
        'ShipCity': 'Cork',
        'ShipRegion': 'Co. Cork',
        'ShipCountry': 'Ireland'
    },
    {
        'OrderID': 10713,
        'CustomerID': 'SAVEA',
        'OrderDate': '1997-10-22T00:00:00.000Z',
        'ShippedDate': '1997-10-24T00:00:00.000Z',

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    'Freight': 167.05,
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    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10714,
    'CustomerID': 'SAVEA',
    'OrderDate': '1997-10-22T00:00:00.000Z',
    'ShippedDate': '1997-10-27T00:00:00.000Z',
    'Freight': 24.49,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10715,
    'CustomerID': 'BONAP',
    'OrderDate': '1997-10-23T00:00:00.000Z',
    'ShippedDate': '1997-10-29T00:00:00.000Z',
    'Freight': 63.2,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10716,
    'CustomerID': 'RANCH',
    'OrderDate': '1997-10-24T00:00:00.000Z',
    'ShippedDate': '1997-10-27T00:00:00.000Z',
    'Freight': 22.57,
    'ShipName': 'Rancho grande',
    'ShipAddress': 'Av. del Libertador 900',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },
  {
    'OrderID': 10717,
    'CustomerID': 'FRANK',
    'OrderDate': '1997-10-24T00:00:00.000Z',
    'ShippedDate': '1997-10-29T00:00:00.000Z',
    'Freight': 59.25,
    'ShipName': 'Frankenversand',
    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10718,

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    'CustomerID': 'KOENE',
    'OrderDate': '1997-10-27T00:00:00.000Z',
    'ShippedDate': '1997-10-29T00:00:00.000Z',
    'Freight': 170.88,
    'ShipName': 'Königlich Essen',
    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10719,
    'CustomerID': 'LETSS',
    'OrderDate': '1997-10-27T00:00:00.000Z',
    'ShippedDate': '1997-11-05T00:00:00.000Z',
    'Freight': 51.44,
    'ShipName': 'Let\'s Stop N Shop',
    'ShipAddress': '87 Polk St. Suite 5',
    'ShipCity': 'San Francisco',
    'ShipRegion': 'CA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10720,
    'CustomerID': 'QUEDE',
    'OrderDate': '1997-10-28T00:00:00.000Z',
    'ShippedDate': '1997-11-05T00:00:00.000Z',
    'Freight': 9.53,
    'ShipName': 'Que Delícia',
    'ShipAddress': 'Rua da Panificadora, 12',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10721,
    'CustomerID': 'QUICK',
    'OrderDate': '1997-10-29T00:00:00.000Z',
    'ShippedDate': '1997-10-31T00:00:00.000Z',
    'Freight': 48.92,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10722,
    'CustomerID': 'SAVEA',
    'OrderDate': '1997-10-29T00:00:00.000Z',
    'ShippedDate': '1997-11-04T00:00:00.000Z',
    'Freight': 74.58,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  }

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},
{
  'OrderID': 10723,
  'CustomerID': 'WHITC',
  'OrderDate': '1997-10-30T00:00:00.000Z',
  'ShippedDate': '1997-11-25T00:00:00.000Z',
  'Freight': 21.72,
  'ShipName': 'White Clover Markets',
  'ShipAddress': '1029-12th Ave. S.',
  'ShipCity': 'Seattle',
  'ShipRegion': 'WA',
  'ShipCountry': 'USA'
},
{
  'OrderID': 10724,
  'CustomerID': 'MEREP',
  'OrderDate': '1997-10-30T00:00:00.000Z',
  'ShippedDate': '1997-11-05T00:00:00.000Z',
  'Freight': 57.75,
  'ShipName': 'Mère Paillarde',
  'ShipAddress': '43 rue St. Laurent',
  'ShipCity': 'Montréal',
  'ShipRegion': 'Québec',
  'ShipCountry': 'Canada'
},
{
  'OrderID': 10725,
  'CustomerID': 'FAMIA',
  'OrderDate': '1997-10-31T00:00:00.000Z',
  'ShippedDate': '1997-11-05T00:00:00.000Z',
  'Freight': 10.83,
  'ShipName': 'Familia Arquibaldo',
  'ShipAddress': 'Rua Orós, 92',
  'ShipCity': 'Sao Paulo',
  'ShipRegion': 'SP',
  'ShipCountry': 'Brazil'
},
{
  'OrderID': 10726,
  'CustomerID': 'EASTC',
  'OrderDate': '1997-11-03T00:00:00.000Z',
  'ShippedDate': '1997-12-05T00:00:00.000Z',
  'Freight': 16.56,
  'ShipName': 'Eastern Connection',
  'ShipAddress': '35 King George',
  'ShipCity': 'London',
  'ShipRegion': null,
  'ShipCountry': 'UK'
},
{
  'OrderID': 10727,
  'CustomerID': 'REGGC',
  'OrderDate': '1997-11-03T00:00:00.000Z',
  'ShippedDate': '1997-12-05T00:00:00.000Z',
  'Freight': 89.9,
  'ShipName': 'Reggiani Caseifici',
  'ShipAddress': 'Strada Provinciale 124',
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    'ShipCity': 'Reggio Emilia',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 10728,
    'CustomerID': 'QUEEN',
    'OrderDate': '1997-11-04T00:00:00.000Z',
    'ShippedDate': '1997-11-11T00:00:00.000Z',
    'Freight': 58.33,
    'ShipName': 'Queen Cozinha',
    'ShipAddress': 'Alameda dos Canários, 891',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10729,
    'CustomerID': 'LINOD',
    'OrderDate': '1997-11-04T00:00:00.000Z',
    'ShippedDate': '1997-11-14T00:00:00.000Z',
    'Freight': 141.06,
    'ShipName': 'LINO-Delicateses',
    'ShipAddress': 'Ave. 5 de Mayo Porlamar',
    'ShipCity': 'I. de Margarita',
    'ShipRegion': 'Nueva Esparta',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10730,
    'CustomerID': 'BONAP',
    'OrderDate': '1997-11-05T00:00:00.000Z',
    'ShippedDate': '1997-11-14T00:00:00.000Z',
    'Freight': 20.12,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10731,
    'CustomerID': 'CHOPS',
    'OrderDate': '1997-11-06T00:00:00.000Z',
    'ShippedDate': '1997-11-14T00:00:00.000Z',
    'Freight': 96.65,
    'ShipName': 'Chop-suey Chinese',
    'ShipAddress': 'Hauptstr. 31',
    'ShipCity': 'Bern',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
  {
    'OrderID': 10732,
    'CustomerID': 'BONAP',
    'OrderDate': '1997-11-06T00:00:00.000Z',
    'ShippedDate': '1997-11-07T00:00:00.000Z',

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    'Freight': 16.97,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10733,
    'CustomerID': 'BERGS',
    'OrderDate': '1997-11-07T00:00:00.000Z',
    'ShippedDate': '1997-11-10T00:00:00.000Z',
    'Freight': 110.11,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10734,
    'CustomerID': 'GOURL',
    'OrderDate': '1997-11-07T00:00:00.000Z',
    'ShippedDate': '1997-11-12T00:00:00.000Z',
    'Freight': 1.63,
    'ShipName': 'Gourmet Lanchonetes',
    'ShipAddress': 'Av. Brasil, 442',
    'ShipCity': 'Campinas',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10735,
    'CustomerID': 'LETSS',
    'OrderDate': '1997-11-10T00:00:00.000Z',
    'ShippedDate': '1997-11-21T00:00:00.000Z',
    'Freight': 45.97,
    'ShipName': 'Let's Stop N Shop',
    'ShipAddress': '87 Polk St. Suite 5',
    'ShipCity': 'San Francisco',
    'ShipRegion': 'CA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10736,
    'CustomerID': 'HUNGO',
    'OrderDate': '1997-11-11T00:00:00.000Z',
    'ShippedDate': '1997-11-21T00:00:00.000Z',
    'Freight': 44.1,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10737,

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      'CustomerID': 'VINET',
      'OrderDate': '1997-11-11T00:00:00.000Z',
      'ShippedDate': '1997-11-18T00:00:00.000Z',
      'Freight': 7.79,
      'ShipName': 'Vins et alcools Chevalier',
      'ShipAddress': '59 rue de l\'Abbaye',
      'ShipCity': 'Reims',
      'ShipRegion': null,
      'ShipCountry': 'France'
    },
    {
      'OrderID': 10738,
      'CustomerID': 'SPECDE',
      'OrderDate': '1997-11-12T00:00:00.000Z',
      'ShippedDate': '1997-11-18T00:00:00.000Z',
      'Freight': 2.91,
      'ShipName': 'Spécialités du monde',
      'ShipAddress': '25, rue Lauriston',
      'ShipCity': 'Paris',
      'ShipRegion': null,
      'ShipCountry': 'France'
    },
    {
      'OrderID': 10739,
      'CustomerID': 'VINET',
      'OrderDate': '1997-11-12T00:00:00.000Z',
      'ShippedDate': '1997-11-17T00:00:00.000Z',
      'Freight': 11.08,
      'ShipName': 'Vins et alcools Chevalier',
      'ShipAddress': '59 rue de l\'Abbaye',
      'ShipCity': 'Reims',
      'ShipRegion': null,
      'ShipCountry': 'France'
    },
    {
      'OrderID': 10740,
      'CustomerID': 'WHITC',
      'OrderDate': '1997-11-13T00:00:00.000Z',
      'ShippedDate': '1997-11-25T00:00:00.000Z',
      'Freight': 81.88,
      'ShipName': 'White Clover Markets',
      'ShipAddress': '1029 - 12th Ave. S.',
      'ShipCity': 'Seattle',
      'ShipRegion': 'WA',
      'ShipCountry': 'USA'
    },
    {
      'OrderID': 10741,
      'CustomerID': 'AROUT',
      'OrderDate': '1997-11-14T00:00:00.000Z',
      'ShippedDate': '1997-11-18T00:00:00.000Z',
      'Freight': 10.96,
      'ShipName': 'Around the Horn',
      'ShipAddress': 'Brook Farm Stratford St. Mary',
      'ShipCity': 'Colchester',
      'ShipRegion': 'Essex',
      'ShipCountry': 'UK'
    }
  ]

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},
{
  'OrderID': 10742,
  'CustomerID': 'BOTTM',
  'OrderDate': '1997-11-14T00:00:00.000Z',
  'ShippedDate': '1997-11-18T00:00:00.000Z',
  'Freight': 243.73,
  'ShipName': 'Bottom-Dollar Markets',
  'ShipAddress': '23 Tsawassen Blvd.',
  'ShipCity': 'Tsawassen',
  'ShipRegion': 'BC',
  'ShipCountry': 'Canada'
},
{
  'OrderID': 10743,
  'CustomerID': 'AROUT',
  'OrderDate': '1997-11-17T00:00:00.000Z',
  'ShippedDate': '1997-11-21T00:00:00.000Z',
  'Freight': 23.72,
  'ShipName': 'Around the Horn',
  'ShipAddress': 'Brook Farm Stratford St. Mary',
  'ShipCity': 'Colchester',
  'ShipRegion': 'Essex',
  'ShipCountry': 'UK'
},
{
  'OrderID': 10744,
  'CustomerID': 'VAFFE',
  'OrderDate': '1997-11-17T00:00:00.000Z',
  'ShippedDate': '1997-11-24T00:00:00.000Z',
  'Freight': 69.19,
  'ShipName': 'Vaffeljernet',
  'ShipAddress': 'Smagsloget 45',
  'ShipCity': 'Århus',
  'ShipRegion': null,
  'ShipCountry': 'Denmark'
},
{
  'OrderID': 10745,
  'CustomerID': 'QUICK',
  'OrderDate': '1997-11-18T00:00:00.000Z',
  'ShippedDate': '1997-11-27T00:00:00.000Z',
  'Freight': 3.52,
  'ShipName': 'QUICK-Stop',
  'ShipAddress': 'Taucherstraße 10',
  'ShipCity': 'Cunewalde',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10746,
  'CustomerID': 'CHOPS',
  'OrderDate': '1997-11-19T00:00:00.000Z',
  'ShippedDate': '1997-11-21T00:00:00.000Z',
  'Freight': 31.43,
  'ShipName': 'Chop-suey Chinese',
  'ShipAddress': 'Hauptstr. 31',

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        'ShipCity': 'Bern',
        'ShipRegion': null,
        'ShipCountry': 'Switzerland'
    },
    {
        'OrderID': 10747,
        'CustomerID': 'PICCO',
        'OrderDate': '1997-11-19T00:00:00.000Z',
        'ShippedDate': '1997-11-26T00:00:00.000Z',
        'Freight': 117.33,
        'ShipName': 'Piccolo und mehr',
        'ShipAddress': 'Geislweg 14',
        'ShipCity': 'Salzburg',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
        'OrderID': 10748,
        'CustomerID': 'SAVEA',
        'OrderDate': '1997-11-20T00:00:00.000Z',
        'ShippedDate': '1997-11-28T00:00:00.000Z',
        'Freight': 232.55,
        'ShipName': 'Save-a-lot Markets',
        'ShipAddress': '187 Suffolk Ln.',
        'ShipCity': 'Boise',
        'ShipRegion': 'ID',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10749,
        'CustomerID': 'ISLAT',
        'OrderDate': '1997-11-20T00:00:00.000Z',
        'ShippedDate': '1997-12-19T00:00:00.000Z',
        'Freight': 61.53,
        'ShipName': 'Island Trading',
        'ShipAddress': 'Garden House Crowther Way',
        'ShipCity': 'Cowes',
        'ShipRegion': 'Isle of Wight',
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10750,
        'CustomerID': 'WARTH',
        'OrderDate': '1997-11-21T00:00:00.000Z',
        'ShippedDate': '1997-11-24T00:00:00.000Z',
        'Freight': 79.3,
        'ShipName': 'Wartian Herkku',
        'ShipAddress': 'Torikatu 38',
        'ShipCity': 'Oulu',
        'ShipRegion': null,
        'ShipCountry': 'Finland'
    },
    {
        'OrderID': 10751,
        'CustomerID': 'RICSU',
        'OrderDate': '1997-11-24T00:00:00.000Z',
        'ShippedDate': '1997-12-03T00:00:00.000Z',

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    'Freight': 130.79,
    'ShipName': 'Richter Supermarkt',
    'ShipAddress': 'Starenweg 5',
    'ShipCity': 'Genève',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
  {
    'OrderID': 10752,
    'CustomerID': 'NORTS',
    'OrderDate': '1997-11-24T00:00:00.000Z',
    'ShippedDate': '1997-11-28T00:00:00.000Z',
    'Freight': 1.39,
    'ShipName': 'North/South',
    'ShipAddress': 'South House 300 Queensbridge',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10753,
    'CustomerID': 'FRANS',
    'OrderDate': '1997-11-25T00:00:00.000Z',
    'ShippedDate': '1997-11-27T00:00:00.000Z',
    'Freight': 7.7,
    'ShipName': 'Franchi S.p.A.',
    'ShipAddress': 'Via Monte Bianco 34',
    'ShipCity': 'Torino',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 10754,
    'CustomerID': 'MAGAA',
    'OrderDate': '1997-11-25T00:00:00.000Z',
    'ShippedDate': '1997-11-27T00:00:00.000Z',
    'Freight': 2.38,
    'ShipName': 'Magazzini Alimentari Riuniti',
    'ShipAddress': 'Via Ludovico il Moro 22',
    'ShipCity': 'Bergamo',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 10755,
    'CustomerID': 'BONAP',
    'OrderDate': '1997-11-26T00:00:00.000Z',
    'ShippedDate': '1997-11-28T00:00:00.000Z',
    'Freight': 16.71,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10756,

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    'CustomerID': 'SPLIR',
    'OrderDate': '1997-11-27T00:00:00.000Z',
    'ShippedDate': '1997-12-02T00:00:00.000Z',
    'Freight': 73.21,
    'ShipName': 'Split Rail Beer & Ale',
    'ShipAddress': 'P.O. Box 555',
    'ShipCity': 'Lander',
    'ShipRegion': 'WY',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10757,
    'CustomerID': 'SAVEA',
    'OrderDate': '1997-11-27T00:00:00.000Z',
    'ShippedDate': '1997-12-15T00:00:00.000Z',
    'Freight': 8.19,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10758,
    'CustomerID': 'RICSU',
    'OrderDate': '1997-11-28T00:00:00.000Z',
    'ShippedDate': '1997-12-04T00:00:00.000Z',
    'Freight': 138.17,
    'ShipName': 'Richter Supermarkt',
    'ShipAddress': 'Starenweg 5',
    'ShipCity': 'Genève',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
  {
    'OrderID': 10759,
    'CustomerID': 'ANATR',
    'OrderDate': '1997-11-28T00:00:00.000Z',
    'ShippedDate': '1997-12-12T00:00:00.000Z',
    'Freight': 11.99,
    'ShipName': 'Ana Trujillo Emparedados y helados',
    'ShipAddress': 'Avda. de la Constitución 2222',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10760,
    'CustomerID': 'MAISD',
    'OrderDate': '1997-12-01T00:00:00.000Z',
    'ShippedDate': '1997-12-10T00:00:00.000Z',
    'Freight': 155.64,
    'ShipName': 'Maison Dewey',
    'ShipAddress': 'Rue Joseph-Bens 532',
    'ShipCity': 'Bruxelles',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  }

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},
{
  'OrderID': 10761,
  'CustomerID': 'RATTC',
  'OrderDate': '1997-12-02T00:00:00.000Z',
  'ShippedDate': '1997-12-08T00:00:00.000Z',
  'Freight': 18.66,
  'ShipName': 'Rattlesnake Canyon Grocery',
  'ShipAddress': '2817 Milton Dr.',
  'ShipCity': 'Albuquerque',
  'ShipRegion': 'NM',
  'ShipCountry': 'USA'
},
{
  'OrderID': 10762,
  'CustomerID': 'FOLKO',
  'OrderDate': '1997-12-02T00:00:00.000Z',
  'ShippedDate': '1997-12-09T00:00:00.000Z',
  'Freight': 328.74,
  'ShipName': 'Folk och fä HB',
  'ShipAddress': 'Åkergatan 24',
  'ShipCity': 'Bräcke',
  'ShipRegion': null,
  'ShipCountry': 'Sweden'
},
{
  'OrderID': 10763,
  'CustomerID': 'FOLIG',
  'OrderDate': '1997-12-03T00:00:00.000Z',
  'ShippedDate': '1997-12-08T00:00:00.000Z',
  'Freight': 37.35,
  'ShipName': 'Folies gourmandes',
  'ShipAddress': '184, chaussée de Tournai',
  'ShipCity': 'Lille',
  'ShipRegion': null,
  'ShipCountry': 'France'
},
{
  'OrderID': 10764,
  'CustomerID': 'ERNSH',
  'OrderDate': '1997-12-03T00:00:00.000Z',
  'ShippedDate': '1997-12-08T00:00:00.000Z',
  'Freight': 145.45,
  'ShipName': 'Ernst Handel',
  'ShipAddress': 'Kirchgasse 6',
  'ShipCity': 'Graz',
  'ShipRegion': null,
  'ShipCountry': 'Austria'
},
{
  'OrderID': 10765,
  'CustomerID': 'QUICK',
  'OrderDate': '1997-12-04T00:00:00.000Z',
  'ShippedDate': '1997-12-09T00:00:00.000Z',
  'Freight': 42.74,
  'ShipName': 'QUICK-Stop',
  'ShipAddress': 'Taucherstraße 10',
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        'ShipCity': 'Cunewalde',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10766,
        'CustomerID': 'OTTIK',
        'OrderDate': '1997-12-05T00:00:00.000Z',
        'ShippedDate': '1997-12-09T00:00:00.000Z',
        'Freight': 157.55,
        'ShipName': 'Ottilies Käseladen',
        'ShipAddress': 'Mehrheimerstr. 369',
        'ShipCity': 'Köln',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10767,
        'CustomerID': 'SUPRD',
        'OrderDate': '1997-12-05T00:00:00.000Z',
        'ShippedDate': '1997-12-15T00:00:00.000Z',
        'Freight': 1.59,
        'ShipName': 'Suprêmes délices',
        'ShipAddress': 'Boulevard Tirou, 255',
        'ShipCity': 'Charleroi',
        'ShipRegion': null,
        'ShipCountry': 'Belgium'
    },
    {
        'OrderID': 10768,
        'CustomerID': 'AROUT',
        'OrderDate': '1997-12-08T00:00:00.000Z',
        'ShippedDate': '1997-12-15T00:00:00.000Z',
        'Freight': 146.32,
        'ShipName': 'Around the Horn',
        'ShipAddress': 'Brook Farm Stratford St. Mary',
        'ShipCity': 'Colchester',
        'ShipRegion': 'Essex',
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10769,
        'CustomerID': 'VAFFE',
        'OrderDate': '1997-12-08T00:00:00.000Z',
        'ShippedDate': '1997-12-12T00:00:00.000Z',
        'Freight': 65.06,
        'ShipName': 'Vaffeljernet',
        'ShipAddress': 'Smagsloget 45',
        'ShipCity': 'Århus',
        'ShipRegion': null,
        'ShipCountry': 'Denmark'
    },
    {
        'OrderID': 10770,
        'CustomerID': 'HANAR',
        'OrderDate': '1997-12-09T00:00:00.000Z',
        'ShippedDate': '1997-12-17T00:00:00.000Z',

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    'Freight': 5.32,
    'ShipName': 'Hanari Carnes',
    'ShipAddress': 'Rua do Paço, 67',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10771,
    'CustomerID': 'ERNSH',
    'OrderDate': '1997-12-10T00:00:00.000Z',
    'ShippedDate': '1998-01-02T00:00:00.000Z',
    'Freight': 11.19,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10772,
    'CustomerID': 'LEHMS',
    'OrderDate': '1997-12-10T00:00:00.000Z',
    'ShippedDate': '1997-12-19T00:00:00.000Z',
    'Freight': 91.28,
    'ShipName': 'Lehmanns Marktstand',
    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10773,
    'CustomerID': 'ERNSH',
    'OrderDate': '1997-12-11T00:00:00.000Z',
    'ShippedDate': '1997-12-16T00:00:00.000Z',
    'Freight': 96.43,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10774,
    'CustomerID': 'FOLKO',
    'OrderDate': '1997-12-11T00:00:00.000Z',
    'ShippedDate': '1997-12-12T00:00:00.000Z',
    'Freight': 48.2,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10775,

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    'CustomerID': 'THECR',
    'OrderDate': '1997-12-12T00:00:00.000Z',
    'ShippedDate': '1997-12-26T00:00:00.000Z',
    'Freight': 20.25,
    'ShipName': 'The Cracker Box',
    'ShipAddress': '55 Grizzly Peak Rd.',
    'ShipCity': 'Butte',
    'ShipRegion': 'MT',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10776,
    'CustomerID': 'ERNSH',
    'OrderDate': '1997-12-15T00:00:00.000Z',
    'ShippedDate': '1997-12-18T00:00:00.000Z',
    'Freight': 351.53,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10777,
    'CustomerID': 'GOURL',
    'OrderDate': '1997-12-15T00:00:00.000Z',
    'ShippedDate': '1998-01-21T00:00:00.000Z',
    'Freight': 3.01,
    'ShipName': 'Gourmet Lanchonetes',
    'ShipAddress': 'Av. Brasil, 442',
    'ShipCity': 'Campinas',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10778,
    'CustomerID': 'BERGS',
    'OrderDate': '1997-12-16T00:00:00.000Z',
    'ShippedDate': '1997-12-24T00:00:00.000Z',
    'Freight': 6.79,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10779,
    'CustomerID': 'MORGK',
    'OrderDate': '1997-12-16T00:00:00.000Z',
    'ShippedDate': '1998-01-14T00:00:00.000Z',
    'Freight': 58.13,
    'ShipName': 'Morgenstern Gesundkost',
    'ShipAddress': 'Heerstr. 22',
    'ShipCity': 'Leipzig',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  }

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    },
    {
        'OrderID': 10780,
        'CustomerID': 'LILAS',
        'OrderDate': '1997-12-16T00:00:00.000Z',
        'ShippedDate': '1997-12-25T00:00:00.000Z',
        'Freight': 42.13,
        'ShipName': 'LILA-Supermercado',
        'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
        'ShipCity': 'Barquisimeto',
        'ShipRegion': 'Lara',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 10781,
        'CustomerID': 'WARTH',
        'OrderDate': '1997-12-17T00:00:00.000Z',
        'ShippedDate': '1997-12-19T00:00:00.000Z',
        'Freight': 73.16,
        'ShipName': 'Wartian Herkku',
        'ShipAddress': 'Torikatu 38',
        'ShipCity': 'Oulu',
        'ShipRegion': null,
        'ShipCountry': 'Finland'
    },
    {
        'OrderID': 10782,
        'CustomerID': 'CACTU',
        'OrderDate': '1997-12-17T00:00:00.000Z',
        'ShippedDate': '1997-12-22T00:00:00.000Z',
        'Freight': 1.1,
        'ShipName': 'Cactus Comidas para llevar',
        'ShipAddress': 'Cerrito 333',
        'ShipCity': 'Buenos Aires',
        'ShipRegion': null,
        'ShipCountry': 'Argentina'
    },
    {
        'OrderID': 10783,
        'CustomerID': 'HANAR',
        'OrderDate': '1997-12-18T00:00:00.000Z',
        'ShippedDate': '1997-12-19T00:00:00.000Z',
        'Freight': 124.98,
        'ShipName': 'Hanari Carnes',
        'ShipAddress': 'Rua do Paço, 67',
        'ShipCity': 'Rio de Janeiro',
        'ShipRegion': 'RJ',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10784,
        'CustomerID': 'MAGAA',
        'OrderDate': '1997-12-18T00:00:00.000Z',
        'ShippedDate': '1997-12-22T00:00:00.000Z',
        'Freight': 70.09,
        'ShipName': 'Magazzini Alimentari Riuniti',
        'ShipAddress': 'Via Ludovico il Moro 22',
    }

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    'ShipCity': 'Bergamo',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 10785,
    'CustomerID': 'GROSR',
    'OrderDate': '1997-12-18T00:00:00.000Z',
    'ShippedDate': '1997-12-24T00:00:00.000Z',
    'Freight': 1.51,
    'ShipName': 'GROSELLA-Restaurante',
    'ShipAddress': '5ª Ave. Los Palos Grandes',
    'ShipCity': 'Caracas',
    'ShipRegion': 'DF',
    'ShipCountry': 'Venezuela'
  },
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    'OrderID': 10786,
    'CustomerID': 'QUEEN',
    'OrderDate': '1997-12-19T00:00:00.000Z',
    'ShippedDate': '1997-12-23T00:00:00.000Z',
    'Freight': 110.87,
    'ShipName': 'Queen Cozinha',
    'ShipAddress': 'Alameda dos Canários, 891',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10787,
    'CustomerID': 'LAMAI',
    'OrderDate': '1997-12-19T00:00:00.000Z',
    'ShippedDate': '1997-12-26T00:00:00.000Z',
    'Freight': 249.93,
    'ShipName': 'La maison d\'Asie',
    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10788,
    'CustomerID': 'QUICK',
    'OrderDate': '1997-12-22T00:00:00.000Z',
    'ShippedDate': '1998-01-19T00:00:00.000Z',
    'Freight': 42.7,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10789,
    'CustomerID': 'FOLIG',
    'OrderDate': '1997-12-22T00:00:00.000Z',
    'ShippedDate': '1997-12-31T00:00:00.000Z',

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    'Freight': 100.6,
    'ShipName': 'Folies gourmandes',
    'ShipAddress': '184, chaussée de Tournai',
    'ShipCity': 'Lille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10790,
    'CustomerID': 'GOURL',
    'OrderDate': '1997-12-22T00:00:00.000Z',
    'ShippedDate': '1997-12-26T00:00:00.000Z',
    'Freight': 28.23,
    'ShipName': 'Gourmet Lanchonetes',
    'ShipAddress': 'Av. Brasil, 442',
    'ShipCity': 'Campinas',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10791,
    'CustomerID': 'FRANK',
    'OrderDate': '1997-12-23T00:00:00.000Z',
    'ShippedDate': '1998-01-01T00:00:00.000Z',
    'Freight': 16.85,
    'ShipName': 'Frankenversand',
    'ShipAddress': 'Berliner Platz 43',
    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10792,
    'CustomerID': 'WOLZA',
    'OrderDate': '1997-12-23T00:00:00.000Z',
    'ShippedDate': '1997-12-31T00:00:00.000Z',
    'Freight': 23.79,
    'ShipName': 'Wolski Zajazd',
    'ShipAddress': 'ul. Filtrowa 68',
    'ShipCity': 'Warszawa',
    'ShipRegion': null,
    'ShipCountry': 'Poland'
  },
  {
    'OrderID': 10793,
    'CustomerID': 'AROUT',
    'OrderDate': '1997-12-24T00:00:00.000Z',
    'ShippedDate': '1998-01-08T00:00:00.000Z',
    'Freight': 4.52,
    'ShipName': 'Around the Horn',
    'ShipAddress': 'Brook Farm Stratford St. Mary',
    'ShipCity': 'Colchester',
    'ShipRegion': 'Essex',
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10794,

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    'CustomerID': 'QUEDE',
    'OrderDate': '1997-12-24T00:00:00.000Z',
    'ShippedDate': '1998-01-02T00:00:00.000Z',
    'Freight': 21.49,
    'ShipName': 'Que Delícia',
    'ShipAddress': 'Rua da Panificadora, 12',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10795,
    'CustomerID': 'ERNSH',
    'OrderDate': '1997-12-24T00:00:00.000Z',
    'ShippedDate': '1998-01-20T00:00:00.000Z',
    'Freight': 126.66,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10796,
    'CustomerID': 'HILAA',
    'OrderDate': '1997-12-25T00:00:00.000Z',
    'ShippedDate': '1998-01-14T00:00:00.000Z',
    'Freight': 26.52,
    'ShipName': 'HILARION-Abastos',
    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10797,
    'CustomerID': 'DRACD',
    'OrderDate': '1997-12-25T00:00:00.000Z',
    'ShippedDate': '1998-01-05T00:00:00.000Z',
    'Freight': 33.35,
    'ShipName': 'Drachenblut Delikatessen',
    'ShipAddress': 'Walserweg 21',
    'ShipCity': 'Aachen',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10798,
    'CustomerID': 'ISLAT',
    'OrderDate': '1997-12-26T00:00:00.000Z',
    'ShippedDate': '1998-01-05T00:00:00.000Z',
    'Freight': 2.33,
    'ShipName': 'Island Trading',
    'ShipAddress': 'Garden House Crowther Way',
    'ShipCity': 'Cowes',
    'ShipRegion': 'Isle of Wight',
    'ShipCountry': 'UK'
  }

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    },
    {
        'OrderID': 10799,
        'CustomerID': 'KOENE',
        'OrderDate': '1997-12-26T00:00:00.000Z',
        'ShippedDate': '1998-01-05T00:00:00.000Z',
        'Freight': 30.76,
        'ShipName': 'Königlich Essen',
        'ShipAddress': 'Maubelstr. 90',
        'ShipCity': 'Brandenburg',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10800,
        'CustomerID': 'SEVES',
        'OrderDate': '1997-12-26T00:00:00.000Z',
        'ShippedDate': '1998-01-05T00:00:00.000Z',
        'Freight': 137.44,
        'ShipName': 'Seven Seas Imports',
        'ShipAddress': '90 Wadhurst Rd.',
        'ShipCity': 'London',
        'ShipRegion': null,
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10801,
        'CustomerID': 'BOLID',
        'OrderDate': '1997-12-29T00:00:00.000Z',
        'ShippedDate': '1997-12-31T00:00:00.000Z',
        'Freight': 97.09,
        'ShipName': 'Bólido Comidas preparadas',
        'ShipAddress': 'C/ Araquil, 67',
        'ShipCity': 'Madrid',
        'ShipRegion': null,
        'ShipCountry': 'Spain'
    },
    {
        'OrderID': 10802,
        'CustomerID': 'SIMOB',
        'OrderDate': '1997-12-29T00:00:00.000Z',
        'ShippedDate': '1998-01-02T00:00:00.000Z',
        'Freight': 257.26,
        'ShipName': 'Simons bistro',
        'ShipAddress': 'Vinbæltet 34',
        'ShipCity': 'Kobenhavn',
        'ShipRegion': null,
        'ShipCountry': 'Denmark'
    },
    {
        'OrderID': 10803,
        'CustomerID': 'WELLI',
        'OrderDate': '1997-12-30T00:00:00.000Z',
        'ShippedDate': '1998-01-06T00:00:00.000Z',
        'Freight': 55.23,
        'ShipName': 'Wellington Importadora',
        'ShipAddress': 'Rua do Mercado, 12',

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        'ShipCity': 'Resende',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10804,
        'CustomerID': 'SEVES',
        'OrderDate': '1997-12-30T00:00:00.000Z',
        'ShippedDate': '1998-01-07T00:00:00.000Z',
        'Freight': 27.33,
        'ShipName': 'Seven Seas Imports',
        'ShipAddress': '90 Wadhurst Rd.',
        'ShipCity': 'London',
        'ShipRegion': null,
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10805,
        'CustomerID': 'THEBI',
        'OrderDate': '1997-12-30T00:00:00.000Z',
        'ShippedDate': '1998-01-09T00:00:00.000Z',
        'Freight': 237.34,
        'ShipName': 'The Big Cheese',
        'ShipAddress': '89 Jefferson Way Suite 2',
        'ShipCity': 'Portland',
        'ShipRegion': 'OR',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10806,
        'CustomerID': 'VICTE',
        'OrderDate': '1997-12-31T00:00:00.000Z',
        'ShippedDate': '1998-01-05T00:00:00.000Z',
        'Freight': 22.11,
        'ShipName': 'Victuailles en stock',
        'ShipAddress': '2, rue du Commerce',
        'ShipCity': 'Lyon',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10807,
        'CustomerID': 'FRANS',
        'OrderDate': '1997-12-31T00:00:00.000Z',
        'ShippedDate': '1998-01-30T00:00:00.000Z',
        'Freight': 1.36,
        'ShipName': 'Franchi S.p.A.',
        'ShipAddress': 'Via Monte Bianco 34',
        'ShipCity': 'Torino',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
    {
        'OrderID': 10808,
        'CustomerID': 'OLDWO',
        'OrderDate': '1998-01-01T00:00:00.000Z',
        'ShippedDate': '1998-01-09T00:00:00.000Z',

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    'Freight': 45.53,
    'ShipName': 'Old World Delicatessen',
    'ShipAddress': '2743 Bering St.',
    'ShipCity': 'Anchorage',
    'ShipRegion': 'AK',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10809,
    'CustomerID': 'WELLI',
    'OrderDate': '1998-01-01T00:00:00.000Z',
    'ShippedDate': '1998-01-07T00:00:00.000Z',
    'Freight': 4.87,
    'ShipName': 'Wellington Importadora',
    'ShipAddress': 'Rua do Mercado, 12',
    'ShipCity': 'Resende',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10810,
    'CustomerID': 'LAUGB',
    'OrderDate': '1998-01-01T00:00:00.000Z',
    'ShippedDate': '1998-01-07T00:00:00.000Z',
    'Freight': 4.33,
    'ShipName': 'Laughing Bacchus Wine Cellars',
    'ShipAddress': '2319 Elm St.',
    'ShipCity': 'Vancouver',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10811,
    'CustomerID': 'LINOD',
    'OrderDate': '1998-01-02T00:00:00.000Z',
    'ShippedDate': '1998-01-08T00:00:00.000Z',
    'Freight': 31.22,
    'ShipName': 'LINO-Delicateses',
    'ShipAddress': 'Ave. 5 de Mayo Porlamar',
    'ShipCity': 'I. de Margarita',
    'ShipRegion': 'Nueva Esparta',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10812,
    'CustomerID': 'REGGC',
    'OrderDate': '1998-01-02T00:00:00.000Z',
    'ShippedDate': '1998-01-12T00:00:00.000Z',
    'Freight': 59.78,
    'ShipName': 'Reggiani Caseifici',
    'ShipAddress': 'Strada Provinciale 124',
    'ShipCity': 'Reggio Emilia',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 10813,

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    'CustomerID': 'RICAR',
    'OrderDate': '1998-01-05T00:00:00.000Z',
    'ShippedDate': '1998-01-09T00:00:00.000Z',
    'Freight': 47.38,
    'ShipName': 'Ricardo Adocicados',
    'ShipAddress': 'Av. Copacabana, 267',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10814,
    'CustomerID': 'VICTE',
    'OrderDate': '1998-01-05T00:00:00.000Z',
    'ShippedDate': '1998-01-14T00:00:00.000Z',
    'Freight': 130.94,
    'ShipName': 'Victuailles en stock',
    'ShipAddress': '2, rue du Commerce',
    'ShipCity': 'Lyon',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10815,
    'CustomerID': 'SAVEA',
    'OrderDate': '1998-01-05T00:00:00.000Z',
    'ShippedDate': '1998-01-14T00:00:00.000Z',
    'Freight': 14.62,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10816,
    'CustomerID': 'GREAL',
    'OrderDate': '1998-01-06T00:00:00.000Z',
    'ShippedDate': '1998-02-04T00:00:00.000Z',
    'Freight': 719.78,
    'ShipName': 'Great Lakes Food Market',
    'ShipAddress': '2732 Baker Blvd.',
    'ShipCity': 'Eugene',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10817,
    'CustomerID': 'KOENE',
    'OrderDate': '1998-01-06T00:00:00.000Z',
    'ShippedDate': '1998-01-13T00:00:00.000Z',
    'Freight': 306.07,
    'ShipName': 'Königlich Essen',
    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  }

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    },
    {
        'OrderID': 10818,
        'CustomerID': 'MAGAA',
        'OrderDate': '1998-01-07T00:00:00.000Z',
        'ShippedDate': '1998-01-12T00:00:00.000Z',
        'Freight': 65.48,
        'ShipName': 'Magazzini Alimentari Riuniti',
        'ShipAddress': 'Via Ludovico il Moro 22',
        'ShipCity': 'Bergamo',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
    {
        'OrderID': 10819,
        'CustomerID': 'CACTU',
        'OrderDate': '1998-01-07T00:00:00.000Z',
        'ShippedDate': '1998-01-16T00:00:00.000Z',
        'Freight': 19.76,
        'ShipName': 'Cactus Comidas para llevar',
        'ShipAddress': 'Cerrito 333',
        'ShipCity': 'Buenos Aires',
        'ShipRegion': null,
        'ShipCountry': 'Argentina'
    },
    {
        'OrderID': 10820,
        'CustomerID': 'RATTC',
        'OrderDate': '1998-01-07T00:00:00.000Z',
        'ShippedDate': '1998-01-13T00:00:00.000Z',
        'Freight': 37.52,
        'ShipName': 'Rattlesnake Canyon Grocery',
        'ShipAddress': '2817 Milton Dr.',
        'ShipCity': 'Albuquerque',
        'ShipRegion': 'NM',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10821,
        'CustomerID': 'SPLIR',
        'OrderDate': '1998-01-08T00:00:00.000Z',
        'ShippedDate': '1998-01-15T00:00:00.000Z',
        'Freight': 36.68,
        'ShipName': 'Split Rail Beer & Ale',
        'ShipAddress': 'P.O. Box 555',
        'ShipCity': 'Lander',
        'ShipRegion': 'WY',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10822,
        'CustomerID': 'TRAIH',
        'OrderDate': '1998-01-08T00:00:00.000Z',
        'ShippedDate': '1998-01-16T00:00:00.000Z',
        'Freight': 7,
        'ShipName': 'Trail\'s Head Gourmet Provisioners',
        'ShipAddress': '722 DaVinci Blvd.',
    }

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    'ShipCity': 'Kirkland',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10823,
    'CustomerID': 'LILAS',
    'OrderDate': '1998-01-09T00:00:00.000Z',
    'ShippedDate': '1998-01-13T00:00:00.000Z',
    'Freight': 163.97,
    'ShipName': 'LILA-Supermercado',
    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 10824,
    'CustomerID': 'FOLKO',
    'OrderDate': '1998-01-09T00:00:00.000Z',
    'ShippedDate': '1998-01-30T00:00:00.000Z',
    'Freight': 1.23,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10825,
    'CustomerID': 'DRACD',
    'OrderDate': '1998-01-09T00:00:00.000Z',
    'ShippedDate': '1998-01-14T00:00:00.000Z',
    'Freight': 79.25,
    'ShipName': 'Drachenblut Delikatessen',
    'ShipAddress': 'Walserweg 21',
    'ShipCity': 'Aachen',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10826,
    'CustomerID': 'BLONP',
    'OrderDate': '1998-01-12T00:00:00.000Z',
    'ShippedDate': '1998-02-06T00:00:00.000Z',
    'Freight': 7.09,
    'ShipName': 'Blondel père et fils',
    'ShipAddress': '24, place Kléber',
    'ShipCity': 'Strasbourg',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10827,
    'CustomerID': 'BONAP',
    'OrderDate': '1998-01-12T00:00:00.000Z',
    'ShippedDate': '1998-02-06T00:00:00.000Z',

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    'Freight': 63.54,
    'ShipName': 'Bon app',
    'ShipAddress': '12, rue des Bouchers',
    'ShipCity': 'Marseille',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10828,
    'CustomerID': 'RANCH',
    'OrderDate': '1998-01-13T00:00:00.000Z',
    'ShippedDate': '1998-02-04T00:00:00.000Z',
    'Freight': 90.85,
    'ShipName': 'Rancho grande',
    'ShipAddress': 'Av. del Libertador 900',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },
  {
    'OrderID': 10829,
    'CustomerID': 'ISLAT',
    'OrderDate': '1998-01-13T00:00:00.000Z',
    'ShippedDate': '1998-01-23T00:00:00.000Z',
    'Freight': 154.72,
    'ShipName': 'Island Trading',
    'ShipAddress': 'Garden House Crowther Way',
    'ShipCity': 'Cowes',
    'ShipRegion': 'Isle of Wight',
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10830,
    'CustomerID': 'TRADH',
    'OrderDate': '1998-01-13T00:00:00.000Z',
    'ShippedDate': '1998-01-21T00:00:00.000Z',
    'Freight': 81.83,
    'ShipName': 'Tradição Hipermercados',
    'ShipAddress': 'Av. Inês de Castro, 414',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10831,
    'CustomerID': 'SANTG',
    'OrderDate': '1998-01-14T00:00:00.000Z',
    'ShippedDate': '1998-01-23T00:00:00.000Z',
    'Freight': 72.19,
    'ShipName': 'Santé Gourmet',
    'ShipAddress': 'Erling Skakkess gate 78',
    'ShipCity': 'Stavern',
    'ShipRegion': null,
    'ShipCountry': 'Norway'
  },
  {
    'OrderID': 10832,

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    'CustomerID': 'LAMAI',
    'OrderDate': '1998-01-14T00:00:00.000Z',
    'ShippedDate': '1998-01-19T00:00:00.000Z',
    'Freight': 43.26,
    'ShipName': 'La maison d\'Asie',
    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10833,
    'CustomerID': 'OTTIK',
    'OrderDate': '1998-01-15T00:00:00.000Z',
    'ShippedDate': '1998-01-23T00:00:00.000Z',
    'Freight': 71.49,
    'ShipName': 'Ottilies Käseladen',
    'ShipAddress': 'Mehrheimerstr. 369',
    'ShipCity': 'Köln',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10834,
    'CustomerID': 'TRADH',
    'OrderDate': '1998-01-15T00:00:00.000Z',
    'ShippedDate': '1998-01-19T00:00:00.000Z',
    'Freight': 29.78,
    'ShipName': 'Tradiçao Hipermercados',
    'ShipAddress': 'Av. Inês de Castro, 414',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10835,
    'CustomerID': 'ALFKI',
    'OrderDate': '1998-01-15T00:00:00.000Z',
    'ShippedDate': '1998-01-21T00:00:00.000Z',
    'Freight': 69.53,
    'ShipName': 'Alfred\'s Futterkiste',
    'ShipAddress': 'Obere Str. 57',
    'ShipCity': 'Berlin',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10836,
    'CustomerID': 'ERNSH',
    'OrderDate': '1998-01-16T00:00:00.000Z',
    'ShippedDate': '1998-01-21T00:00:00.000Z',
    'Freight': 411.88,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  }

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},
{
  'OrderID': 10837,
  'CustomerID': 'BERGS',
  'OrderDate': '1998-01-16T00:00:00.000Z',
  'ShippedDate': '1998-01-23T00:00:00.000Z',
  'Freight': 13.32,
  'ShipName': 'Berglunds snabbköp',
  'ShipAddress': 'Berguvsvägen 8',
  'ShipCity': 'Luleå',
  'ShipRegion': null,
  'ShipCountry': 'Sweden'
},
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  'OrderID': 10838,
  'CustomerID': 'LINOD',
  'OrderDate': '1998-01-19T00:00:00.000Z',
  'ShippedDate': '1998-01-23T00:00:00.000Z',
  'Freight': 59.28,
  'ShipName': 'LINO-Delicateses',
  'ShipAddress': 'Ave. 5 de Mayo Porlamar',
  'ShipCity': 'I. de Margarita',
  'ShipRegion': 'Nueva Esparta',
  'ShipCountry': 'Venezuela'
},
{
  'OrderID': 10839,
  'CustomerID': 'TRADH',
  'OrderDate': '1998-01-19T00:00:00.000Z',
  'ShippedDate': '1998-01-22T00:00:00.000Z',
  'Freight': 35.43,
  'ShipName': 'Tradiçao Hipermercados',
  'ShipAddress': 'Av. Inês de Castro, 414',
  'ShipCity': 'Sao Paulo',
  'ShipRegion': 'SP',
  'ShipCountry': 'Brazil'
},
{
  'OrderID': 10840,
  'CustomerID': 'LINOD',
  'OrderDate': '1998-01-19T00:00:00.000Z',
  'ShippedDate': '1998-02-16T00:00:00.000Z',
  'Freight': 2.71,
  'ShipName': 'LINO-Delicateses',
  'ShipAddress': 'Ave. 5 de Mayo Porlamar',
  'ShipCity': 'I. de Margarita',
  'ShipRegion': 'Nueva Esparta',
  'ShipCountry': 'Venezuela'
},
{
  'OrderID': 10841,
  'CustomerID': 'SUPRD',
  'OrderDate': '1998-01-20T00:00:00.000Z',
  'ShippedDate': '1998-01-29T00:00:00.000Z',
  'Freight': 424.3,
  'ShipName': 'Suprêmes délices',
  'ShipAddress': 'Boulevard Tirou, 255',
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    'ShipCity': 'Charleroi',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
    'OrderID': 10842,
    'CustomerID': 'TORTU',
    'OrderDate': '1998-01-20T00:00:00.000Z',
    'ShippedDate': '1998-01-29T00:00:00.000Z',
    'Freight': 54.42,
    'ShipName': 'Tortuga Restaurante',
    'ShipAddress': 'Avda. Azteca 123',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10843,
    'CustomerID': 'VICTE',
    'OrderDate': '1998-01-21T00:00:00.000Z',
    'ShippedDate': '1998-01-26T00:00:00.000Z',
    'Freight': 9.26,
    'ShipName': 'Victuailles en stock',
    'ShipAddress': '2, rue du Commerce',
    'ShipCity': 'Lyon',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10844,
    'CustomerID': 'PICCO',
    'OrderDate': '1998-01-21T00:00:00.000Z',
    'ShippedDate': '1998-01-26T00:00:00.000Z',
    'Freight': 25.22,
    'ShipName': 'Piccolo und mehr',
    'ShipAddress': 'Geislweg 14',
    'ShipCity': 'Salzburg',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10845,
    'CustomerID': 'QUICK',
    'OrderDate': '1998-01-21T00:00:00.000Z',
    'ShippedDate': '1998-01-30T00:00:00.000Z',
    'Freight': 212.98,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10846,
    'CustomerID': 'SUPRD',
    'OrderDate': '1998-01-22T00:00:00.000Z',
    'ShippedDate': '1998-01-23T00:00:00.000Z',

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    'Freight': 56.46,
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    'ShipAddress': 'Boulevard Tirou, 255',
    'ShipCity': 'Charleroi',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
    'OrderID': 10847,
    'CustomerID': 'SAVEA',
    'OrderDate': '1998-01-22T00:00:00.000Z',
    'ShippedDate': '1998-02-10T00:00:00.000Z',
    'Freight': 487.57,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10848,
    'CustomerID': 'CONSH',
    'OrderDate': '1998-01-23T00:00:00.000Z',
    'ShippedDate': '1998-01-29T00:00:00.000Z',
    'Freight': 38.24,
    'ShipName': 'Consolidated Holdings',
    'ShipAddress': 'Berkeley Gardens 12 Brewery',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10849,
    'CustomerID': 'KOENE',
    'OrderDate': '1998-01-23T00:00:00.000Z',
    'ShippedDate': '1998-01-30T00:00:00.000Z',
    'Freight': 0.56,
    'ShipName': 'Königlich Essen',
    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10850,
    'CustomerID': 'VICTE',
    'OrderDate': '1998-01-23T00:00:00.000Z',
    'ShippedDate': '1998-01-30T00:00:00.000Z',
    'Freight': 49.19,
    'ShipName': 'Victuailles en stock',
    'ShipAddress': '2, rue du Commerce',
    'ShipCity': 'Lyon',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10851,

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    'CustomerID': 'RICAR',
    'OrderDate': '1998-01-26T00:00:00.000Z',
    'ShippedDate': '1998-02-02T00:00:00.000Z',
    'Freight': 160.55,
    'ShipName': 'Ricardo Adocicados',
    'ShipAddress': 'Av. Copacabana, 267',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10852,
    'CustomerID': 'RATTC',
    'OrderDate': '1998-01-26T00:00:00.000Z',
    'ShippedDate': '1998-01-30T00:00:00.000Z',
    'Freight': 174.05,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10853,
    'CustomerID': 'BLAUS',
    'OrderDate': '1998-01-27T00:00:00.000Z',
    'ShippedDate': '1998-02-03T00:00:00.000Z',
    'Freight': 53.83,
    'ShipName': 'Blauer See Delikatessen',
    'ShipAddress': 'Forsterstr. 57',
    'ShipCity': 'Mannheim',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10854,
    'CustomerID': 'ERNSH',
    'OrderDate': '1998-01-27T00:00:00.000Z',
    'ShippedDate': '1998-02-05T00:00:00.000Z',
    'Freight': 100.22,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10855,
    'CustomerID': 'OLDWO',
    'OrderDate': '1998-01-27T00:00:00.000Z',
    'ShippedDate': '1998-02-04T00:00:00.000Z',
    'Freight': 170.97,
    'ShipName': 'Old World Delicatessen',
    'ShipAddress': '2743 Bering St.',
    'ShipCity': 'Anchorage',
    'ShipRegion': 'AK',
    'ShipCountry': 'USA'
  }

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    },
    {
        'OrderID': 10856,
        'CustomerID': 'ANTON',
        'OrderDate': '1998-01-28T00:00:00.000Z',
        'ShippedDate': '1998-02-10T00:00:00.000Z',
        'Freight': 58.43,
        'ShipName': 'Antonio Moreno Taquería',
        'ShipAddress': 'Mataderos 2312',
        'ShipCity': 'México D.F.',
        'ShipRegion': null,
        'ShipCountry': 'Mexico'
    },
    {
        'OrderID': 10857,
        'CustomerID': 'BERGS',
        'OrderDate': '1998-01-28T00:00:00.000Z',
        'ShippedDate': '1998-02-06T00:00:00.000Z',
        'Freight': 188.85,
        'ShipName': 'Berglunds snabbköp',
        'ShipAddress': 'Berguvsvägen 8',
        'ShipCity': 'Luleå',
        'ShipRegion': null,
        'ShipCountry': 'Sweden'
    },
    {
        'OrderID': 10858,
        'CustomerID': 'LACOR',
        'OrderDate': '1998-01-29T00:00:00.000Z',
        'ShippedDate': '1998-02-03T00:00:00.000Z',
        'Freight': 52.51,
        'ShipName': 'La corne d\'abondance',
        'ShipAddress': '67, avenue de l\'Europe',
        'ShipCity': 'Versailles',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10859,
        'CustomerID': 'FRANK',
        'OrderDate': '1998-01-29T00:00:00.000Z',
        'ShippedDate': '1998-02-02T00:00:00.000Z',
        'Freight': 76.1,
        'ShipName': 'Frankenversand',
        'ShipAddress': 'Berliner Platz 43',
        'ShipCity': 'München',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10860,
        'CustomerID': 'FRANR',
        'OrderDate': '1998-01-29T00:00:00.000Z',
        'ShippedDate': '1998-02-04T00:00:00.000Z',
        'Freight': 19.26,
        'ShipName': 'France restauration',
        'ShipAddress': '54, rue Royale',
    }

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        'ShipCity': 'Nantes',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10861,
        'CustomerID': 'WHITC',
        'OrderDate': '1998-01-30T00:00:00.000Z',
        'ShippedDate': '1998-02-17T00:00:00.000Z',
        'Freight': 14.93,
        'ShipName': 'White Clover Markets',
        'ShipAddress': '1029 - 12th Ave. S.',
        'ShipCity': 'Seattle',
        'ShipRegion': 'WA',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10862,
        'CustomerID': 'LEHMS',
        'OrderDate': '1998-01-30T00:00:00.000Z',
        'ShippedDate': '1998-02-02T00:00:00.000Z',
        'Freight': 53.23,
        'ShipName': 'Lehmanns Marktstand',
        'ShipAddress': 'Magazinweg 7',
        'ShipCity': 'Frankfurt a.M.',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10863,
        'CustomerID': 'HILAA',
        'OrderDate': '1998-02-02T00:00:00.000Z',
        'ShippedDate': '1998-02-17T00:00:00.000Z',
        'Freight': 30.26,
        'ShipName': 'HILARION-Abastos',
        'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
        'ShipCity': 'San Cristóbal',
        'ShipRegion': 'Táchira',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 10864,
        'CustomerID': 'AROUT',
        'OrderDate': '1998-02-02T00:00:00.000Z',
        'ShippedDate': '1998-02-09T00:00:00.000Z',
        'Freight': 3.04,
        'ShipName': 'Around the Horn',
        'ShipAddress': 'Brook Farm Stratford St. Mary',
        'ShipCity': 'Colchester',
        'ShipRegion': 'Essex',
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10865,
        'CustomerID': 'QUICK',
        'OrderDate': '1998-02-02T00:00:00.000Z',
        'ShippedDate': '1998-02-12T00:00:00.000Z',

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    'Freight': 348.14,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10866,
    'CustomerID': 'BERGS',
    'OrderDate': '1998-02-03T00:00:00.000Z',
    'ShippedDate': '1998-02-12T00:00:00.000Z',
    'Freight': 109.11,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10867,
    'CustomerID': 'LONEP',
    'OrderDate': '1998-02-03T00:00:00.000Z',
    'ShippedDate': '1998-02-11T00:00:00.000Z',
    'Freight': 1.93,
    'ShipName': 'Lonesome Pine Restaurant',
    'ShipAddress': '89 Chiaroscuro Rd.',
    'ShipCity': 'Portland',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10868,
    'CustomerID': 'QUEEN',
    'OrderDate': '1998-02-04T00:00:00.000Z',
    'ShippedDate': '1998-02-23T00:00:00.000Z',
    'Freight': 191.27,
    'ShipName': 'Queen Cozinha',
    'ShipAddress': 'Alameda dos Canários, 891',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10869,
    'CustomerID': 'SEVES',
    'OrderDate': '1998-02-04T00:00:00.000Z',
    'ShippedDate': '1998-02-09T00:00:00.000Z',
    'Freight': 143.28,
    'ShipName': 'Seven Seas Imports',
    'ShipAddress': '90 Wadhurst Rd.',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10870,

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      'CustomerID': 'WOLZA',
      'OrderDate': '1998-02-04T00:00:00.000Z',
      'ShippedDate': '1998-02-13T00:00:00.000Z',
      'Freight': 12.04,
      'ShipName': 'Wolski Zajazd',
      'ShipAddress': 'ul. Filtrowa 68',
      'ShipCity': 'Warszawa',
      'ShipRegion': null,
      'ShipCountry': 'Poland'
    },
    {
      'OrderID': 10871,
      'CustomerID': 'BONAP',
      'OrderDate': '1998-02-05T00:00:00.000Z',
      'ShippedDate': '1998-02-10T00:00:00.000Z',
      'Freight': 112.27,
      'ShipName': 'Bon app',
      'ShipAddress': '12, rue des Bouchers',
      'ShipCity': 'Marseille',
      'ShipRegion': null,
      'ShipCountry': 'France'
    },
    {
      'OrderID': 10872,
      'CustomerID': 'GODOS',
      'OrderDate': '1998-02-05T00:00:00.000Z',
      'ShippedDate': '1998-02-09T00:00:00.000Z',
      'Freight': 175.32,
      'ShipName': 'Godos Cocina Típica',
      'ShipAddress': 'C/ Romero, 33',
      'ShipCity': 'Sevilla',
      'ShipRegion': null,
      'ShipCountry': 'Spain'
    },
    {
      'OrderID': 10873,
      'CustomerID': 'WILMK',
      'OrderDate': '1998-02-06T00:00:00.000Z',
      'ShippedDate': '1998-02-09T00:00:00.000Z',
      'Freight': 0.82,
      'ShipName': 'Wilman Kala',
      'ShipAddress': 'Keskuskatu 45',
      'ShipCity': 'Helsinki',
      'ShipRegion': null,
      'ShipCountry': 'Finland'
    },
    {
      'OrderID': 10874,
      'CustomerID': 'GODOS',
      'OrderDate': '1998-02-06T00:00:00.000Z',
      'ShippedDate': '1998-02-11T00:00:00.000Z',
      'Freight': 19.58,
      'ShipName': 'Godos Cocina Típica',
      'ShipAddress': 'C/ Romero, 33',
      'ShipCity': 'Sevilla',
      'ShipRegion': null,
      'ShipCountry': 'Spain'
    }
  ]

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},
{
  'OrderID': 10875,
  'CustomerID': 'BERGS',
  'OrderDate': '1998-02-06T00:00:00.000Z',
  'ShippedDate': '1998-03-03T00:00:00.000Z',
  'Freight': 32.37,
  'ShipName': 'Berglunds snabbköp',
  'ShipAddress': 'Berguvsvägen 8',
  'ShipCity': 'Luleå',
  'ShipRegion': null,
  'ShipCountry': 'Sweden'
},
{
  'OrderID': 10876,
  'CustomerID': 'BONAP',
  'OrderDate': '1998-02-09T00:00:00.000Z',
  'ShippedDate': '1998-02-12T00:00:00.000Z',
  'Freight': 60.42,
  'ShipName': 'Bon app',
  'ShipAddress': '12, rue des Bouchers',
  'ShipCity': 'Marseille',
  'ShipRegion': null,
  'ShipCountry': 'France'
},
{
  'OrderID': 10877,
  'CustomerID': 'RICAR',
  'OrderDate': '1998-02-09T00:00:00.000Z',
  'ShippedDate': '1998-02-19T00:00:00.000Z',
  'Freight': 38.06,
  'ShipName': 'Ricardo Adocicados',
  'ShipAddress': 'Av. Copacabana, 267',
  'ShipCity': 'Rio de Janeiro',
  'ShipRegion': 'RJ',
  'ShipCountry': 'Brazil'
},
{
  'OrderID': 10878,
  'CustomerID': 'QUICK',
  'OrderDate': '1998-02-10T00:00:00.000Z',
  'ShippedDate': '1998-02-12T00:00:00.000Z',
  'Freight': 46.69,
  'ShipName': 'QUICK-Stop',
  'ShipAddress': 'Taucherstraße 10',
  'ShipCity': 'Cunewalde',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10879,
  'CustomerID': 'WILMK',
  'OrderDate': '1998-02-10T00:00:00.000Z',
  'ShippedDate': '1998-02-12T00:00:00.000Z',
  'Freight': 8.5,
  'ShipName': 'Wilman Kala',
  'ShipAddress': 'Keskuskatu 45',
```

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'ShipCity': 'Helsinki',
'ShipRegion': null,
'ShipCountry': 'Finland'
},
{
  'OrderID': 10880,
  'CustomerID': 'FOLKO',
  'OrderDate': '1998-02-10T00:00:00.000Z',
  'ShippedDate': '1998-02-18T00:00:00.000Z',
  'Freight': 88.01,
  'ShipName': 'Folk och få HB',
  'ShipAddress': 'Åkergatan 24',
  'ShipCity': 'Bräcke',
  'ShipRegion': null,
  'ShipCountry': 'Sweden'
},
{
  'OrderID': 10881,
  'CustomerID': 'CACTU',
  'OrderDate': '1998-02-11T00:00:00.000Z',
  'ShippedDate': '1998-02-18T00:00:00.000Z',
  'Freight': 2.84,
  'ShipName': 'Cactus Comidas para llevar',
  'ShipAddress': 'Cerrito 333',
  'ShipCity': 'Buenos Aires',
  'ShipRegion': null,
  'ShipCountry': 'Argentina'
},
{
  'OrderID': 10882,
  'CustomerID': 'SAVEA',
  'OrderDate': '1998-02-11T00:00:00.000Z',
  'ShippedDate': '1998-02-20T00:00:00.000Z',
  'Freight': 23.1,
  'ShipName': 'Save-a-lot Markets',
  'ShipAddress': '187 Suffolk Ln.',
  'ShipCity': 'Boise',
  'ShipRegion': 'ID',
  'ShipCountry': 'USA'
},
{
  'OrderID': 10883,
  'CustomerID': 'LONEP',
  'OrderDate': '1998-02-12T00:00:00.000Z',
  'ShippedDate': '1998-02-20T00:00:00.000Z',
  'Freight': 0.53,
  'ShipName': 'Lonesome Pine Restaurant',
  'ShipAddress': '89 Chiaroscuro Rd.',
  'ShipCity': 'Portland',
  'ShipRegion': 'OR',
  'ShipCountry': 'USA'
},
{
  'OrderID': 10884,
  'CustomerID': 'LETSS',
  'OrderDate': '1998-02-12T00:00:00.000Z',
  'ShippedDate': '1998-02-13T00:00:00.000Z',
```

```

    'Freight': 90.97,
    'ShipName': 'Let\'s Stop N Shop',
    'ShipAddress': '87 Polk St. Suite 5',
    'ShipCity': 'San Francisco',
    'ShipRegion': 'CA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10885,
    'CustomerID': 'SUPRD',
    'OrderDate': '1998-02-12T00:00:00.000Z',
    'ShippedDate': '1998-02-18T00:00:00.000Z',
    'Freight': 5.64,
    'ShipName': 'Suprêmes délices',
    'ShipAddress': 'Boulevard Tirou, 255',
    'ShipCity': 'Charleroi',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
    'OrderID': 10886,
    'CustomerID': 'HANAR',
    'OrderDate': '1998-02-13T00:00:00.000Z',
    'ShippedDate': '1998-03-02T00:00:00.000Z',
    'Freight': 4.99,
    'ShipName': 'Hanari Carnes',
    'ShipAddress': 'Rua do Paço, 67',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10887,
    'CustomerID': 'GALED',
    'OrderDate': '1998-02-13T00:00:00.000Z',
    'ShippedDate': '1998-02-16T00:00:00.000Z',
    'Freight': 1.25,
    'ShipName': 'Galería del gastronómo',
    'ShipAddress': 'Rambla de Cataluña, 23',
    'ShipCity': 'Barcelona',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10888,
    'CustomerID': 'GODOS',
    'OrderDate': '1998-02-16T00:00:00.000Z',
    'ShippedDate': '1998-02-23T00:00:00.000Z',
    'Freight': 51.87,
    'ShipName': 'Godos Cocina Típica',
    'ShipAddress': 'C/ Romero, 33',
    'ShipCity': 'Sevilla',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10889,

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    'CustomerID': 'RATTC',
    'OrderDate': '1998-02-16T00:00:00.000Z',
    'ShippedDate': '1998-02-23T00:00:00.000Z',
    'Freight': 280.61,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
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    'ShipAddress': '67, rue des Cinquante Otages',
    'ShipCity': 'Nantes',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
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    'OrderDate': '1998-02-17T00:00:00.000Z',
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    'Freight': 20.37,
    'ShipName': 'Lehmanns Marktstand',
    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10892,
    'CustomerID': 'MAISD',
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    'Freight': 120.27,
    'ShipName': 'Maison Dewey',
    'ShipAddress': 'Rue Joseph-Bens 532',
    'ShipCity': 'Bruxelles',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
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    'CustomerID': 'KOENE',
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    'ShippedDate': '1998-02-20T00:00:00.000Z',
    'Freight': 77.78,
    'ShipName': 'Königlich Essen',
    'ShipAddress': 'Maubelstr. 90',
    'ShipCity': 'Brandenburg',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  }

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    },
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        'ShipAddress': '187 Suffolk Ln.',
        'ShipCity': 'Boise',
        'ShipRegion': 'ID',
        'ShipCountry': 'USA'
    },
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        'CustomerID': 'ERNSH',
        'OrderDate': '1998-02-18T00:00:00.000Z',
        'ShippedDate': '1998-02-23T00:00:00.000Z',
        'Freight': 162.75,
        'ShipName': 'Ernst Handel',
        'ShipAddress': 'Kirchgasse 6',
        'ShipCity': 'Graz',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
        'OrderID': 10896,
        'CustomerID': 'MAISD',
        'OrderDate': '1998-02-19T00:00:00.000Z',
        'ShippedDate': '1998-02-27T00:00:00.000Z',
        'Freight': 32.45,
        'ShipName': 'Maison Dewey',
        'ShipAddress': 'Rue Joseph-Bens 532',
        'ShipCity': 'Bruxelles',
        'ShipRegion': null,
        'ShipCountry': 'Belgium'
    },
    {
        'OrderID': 10897,
        'CustomerID': 'HUNGO',
        'OrderDate': '1998-02-19T00:00:00.000Z',
        'ShippedDate': '1998-02-25T00:00:00.000Z',
        'Freight': 603.54,
        'ShipName': 'Hungry Owl All-Night Grocers',
        'ShipAddress': '8 Johnstown Road',
        'ShipCity': 'Cork',
        'ShipRegion': 'Co. Cork',
        'ShipCountry': 'Ireland'
    },
    {
        'OrderID': 10898,
        'CustomerID': 'OCEAN',
        'OrderDate': '1998-02-20T00:00:00.000Z',
        'ShippedDate': '1998-03-06T00:00:00.000Z',
        'Freight': 1.27,
        'ShipName': 'Océano Atlántico Ltda.',
        'ShipAddress': 'Ing. Gustavo Moncada 8585 Piso 20-A',
    }

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    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
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    'ShippedDate': '1998-02-26T00:00:00.000Z',
    'Freight': 1.21,
    'ShipName': 'LILA-Supermercado',
    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },
  {
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    'CustomerID': 'WELLI',
    'OrderDate': '1998-02-20T00:00:00.000Z',
    'ShippedDate': '1998-03-04T00:00:00.000Z',
    'Freight': 1.66,
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    'ShipAddress': 'Rua do Mercado, 12',
    'ShipCity': 'Resende',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10901,
    'CustomerID': 'HILAA',
    'OrderDate': '1998-02-23T00:00:00.000Z',
    'ShippedDate': '1998-02-26T00:00:00.000Z',
    'Freight': 62.09,
    'ShipName': 'HILARION-Abastos',
    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
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    'CustomerID': 'FOLKO',
    'OrderDate': '1998-02-23T00:00:00.000Z',
    'ShippedDate': '1998-03-03T00:00:00.000Z',
    'Freight': 44.15,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10903,
    'CustomerID': 'HANAR',
    'OrderDate': '1998-02-24T00:00:00.000Z',
    'ShippedDate': '1998-03-04T00:00:00.000Z',

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    'Freight': 36.71,
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    'ShipAddress': 'Rua do Paço, 67',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10904,
    'CustomerID': 'WHITC',
    'OrderDate': '1998-02-24T00:00:00.000Z',
    'ShippedDate': '1998-02-27T00:00:00.000Z',
    'Freight': 162.95,
    'ShipName': 'White Clover Markets',
    'ShipAddress': '1029 - 12th Ave. S.',
    'ShipCity': 'Seattle',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10905,
    'CustomerID': 'WELLI',
    'OrderDate': '1998-02-24T00:00:00.000Z',
    'ShippedDate': '1998-03-06T00:00:00.000Z',
    'Freight': 13.72,
    'ShipName': 'Wellington Importadora',
    'ShipAddress': 'Rua do Mercado, 12',
    'ShipCity': 'Resende',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10906,
    'CustomerID': 'WOLZA',
    'OrderDate': '1998-02-25T00:00:00.000Z',
    'ShippedDate': '1998-03-03T00:00:00.000Z',
    'Freight': 26.29,
    'ShipName': 'Wolski Zajazd',
    'ShipAddress': 'ul. Filtrowa 68',
    'ShipCity': 'Warszawa',
    'ShipRegion': null,
    'ShipCountry': 'Poland'
  },
  {
    'OrderID': 10907,
    'CustomerID': 'SPECB',
    'OrderDate': '1998-02-25T00:00:00.000Z',
    'ShippedDate': '1998-02-27T00:00:00.000Z',
    'Freight': 9.19,
    'ShipName': 'Spécialités du monde',
    'ShipAddress': '25, rue Lauriston',
    'ShipCity': 'Paris',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10908,

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    'CustomerID': 'REGGC',
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    'ShippedDate': '1998-03-06T00:00:00.000Z',
    'Freight': 32.96,
    'ShipName': 'Reggiani Caseifici',
    'ShipAddress': 'Strada Provinciale 124',
    'ShipCity': 'Reggio Emilia',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 10909,
    'CustomerID': 'SANTG',
    'OrderDate': '1998-02-26T00:00:00.000Z',
    'ShippedDate': '1998-03-10T00:00:00.000Z',
    'Freight': 53.05,
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    'ShipAddress': 'Erling Skakkes gate 78',
    'ShipCity': 'Stavern',
    'ShipRegion': null,
    'ShipCountry': 'Norway'
  },
  {
    'OrderID': 10910,
    'CustomerID': 'WILMK',
    'OrderDate': '1998-02-26T00:00:00.000Z',
    'ShippedDate': '1998-03-04T00:00:00.000Z',
    'Freight': 38.11,
    'ShipName': 'Wilman Kala',
    'ShipAddress': 'Keskuskatu 45',
    'ShipCity': 'Helsinki',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 10911,
    'CustomerID': 'GODOS',
    'OrderDate': '1998-02-26T00:00:00.000Z',
    'ShippedDate': '1998-03-05T00:00:00.000Z',
    'Freight': 38.19,
    'ShipName': 'Godos Cocina Típica',
    'ShipAddress': 'C/ Romero, 33',
    'ShipCity': 'Sevilla',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10912,
    'CustomerID': 'HUNGO',
    'OrderDate': '1998-02-26T00:00:00.000Z',
    'ShippedDate': '1998-03-18T00:00:00.000Z',
    'Freight': 580.91,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  }

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},
{
  'OrderID': 10913,
  'CustomerID': 'QUEEN',
  'OrderDate': '1998-02-26T00:00:00.000Z',
  'ShippedDate': '1998-03-04T00:00:00.000Z',
  'Freight': 33.05,
  'ShipName': 'Queen Cozinha',
  'ShipAddress': 'Alameda dos Canários, 891',
  'ShipCity': 'Sao Paulo',
  'ShipRegion': 'SP',
  'ShipCountry': 'Brazil'
},
{
  'OrderID': 10914,
  'CustomerID': 'QUEEN',
  'OrderDate': '1998-02-27T00:00:00.000Z',
  'ShippedDate': '1998-03-02T00:00:00.000Z',
  'Freight': 21.19,
  'ShipName': 'Queen Cozinha',
  'ShipAddress': 'Alameda dos Canários, 891',
  'ShipCity': 'Sao Paulo',
  'ShipRegion': 'SP',
  'ShipCountry': 'Brazil'
},
{
  'OrderID': 10915,
  'CustomerID': 'TORTU',
  'OrderDate': '1998-02-27T00:00:00.000Z',
  'ShippedDate': '1998-03-02T00:00:00.000Z',
  'Freight': 3.51,
  'ShipName': 'Tortuga Restaurante',
  'ShipAddress': 'Avda. Azteca 123',
  'ShipCity': 'México D.F.',
  'ShipRegion': null,
  'ShipCountry': 'Mexico'
},
{
  'OrderID': 10916,
  'CustomerID': 'RANCH',
  'OrderDate': '1998-02-27T00:00:00.000Z',
  'ShippedDate': '1998-03-09T00:00:00.000Z',
  'Freight': 63.77,
  'ShipName': 'Rancho grande',
  'ShipAddress': 'Av. del Libertador 900',
  'ShipCity': 'Buenos Aires',
  'ShipRegion': null,
  'ShipCountry': 'Argentina'
},
{
  'OrderID': 10917,
  'CustomerID': 'ROMEY',
  'OrderDate': '1998-03-02T00:00:00.000Z',
  'ShippedDate': '1998-03-11T00:00:00.000Z',
  'Freight': 8.29,
  'ShipName': 'Romero y tomillo',
  'ShipAddress': 'Gran Vía, 1',
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        'ShipCity': 'Madrid',
        'ShipRegion': null,
        'ShipCountry': 'Spain'
    },
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        'CustomerID': 'BOTTM',
        'OrderDate': '1998-03-02T00:00:00.000Z',
        'ShippedDate': '1998-03-11T00:00:00.000Z',
        'Freight': 48.83,
        'ShipName': 'Bottom-Dollar Markets',
        'ShipAddress': '23 Tsawassen Blvd.',
        'ShipCity': 'Tsawassen',
        'ShipRegion': 'BC',
        'ShipCountry': 'Canada'
    },
    {
        'OrderID': 10919,
        'CustomerID': 'LINOD',
        'OrderDate': '1998-03-02T00:00:00.000Z',
        'ShippedDate': '1998-03-04T00:00:00.000Z',
        'Freight': 19.8,
        'ShipName': 'LINO-Delicatesses',
        'ShipAddress': 'Ave. 5 de Mayo Porlamar',
        'ShipCity': 'I. de Margarita',
        'ShipRegion': 'Nueva Esparta',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 10920,
        'CustomerID': 'AROUT',
        'OrderDate': '1998-03-03T00:00:00.000Z',
        'ShippedDate': '1998-03-09T00:00:00.000Z',
        'Freight': 29.61,
        'ShipName': 'Around the Horn',
        'ShipAddress': 'Brook Farm Stratford St. Mary',
        'ShipCity': 'Colchester',
        'ShipRegion': 'Essex',
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10921,
        'CustomerID': 'VAFFE',
        'OrderDate': '1998-03-03T00:00:00.000Z',
        'ShippedDate': '1998-03-09T00:00:00.000Z',
        'Freight': 176.48,
        'ShipName': 'Vaffeljernet',
        'ShipAddress': 'Smagsloget 45',
        'ShipCity': 'Århus',
        'ShipRegion': null,
        'ShipCountry': 'Denmark'
    },
    {
        'OrderID': 10922,
        'CustomerID': 'HANAR',
        'OrderDate': '1998-03-03T00:00:00.000Z',
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    'Freight': 62.74,
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    'ShipAddress': 'Rua do Paço, 67',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10923,
    'CustomerID': 'LAMAI',
    'OrderDate': '1998-03-03T00:00:00.000Z',
    'ShippedDate': '1998-03-13T00:00:00.000Z',
    'Freight': 68.26,
    'ShipName': 'La maison d\'Asie',
    'ShipAddress': '1 rue Alsace-Lorraine',
    'ShipCity': 'Toulouse',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10924,
    'CustomerID': 'BERGS',
    'OrderDate': '1998-03-04T00:00:00.000Z',
    'ShippedDate': '1998-04-08T00:00:00.000Z',
    'Freight': 151.52,
    'ShipName': 'Berglunds snabbköp',
    'ShipAddress': 'Berguvsvägen 8',
    'ShipCity': 'Luleå',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10925,
    'CustomerID': 'HANAR',
    'OrderDate': '1998-03-04T00:00:00.000Z',
    'ShippedDate': '1998-03-13T00:00:00.000Z',
    'Freight': 2.27,
    'ShipName': 'Hanari Carnes',
    'ShipAddress': 'Rua do Paço, 67',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10926,
    'CustomerID': 'ANATR',
    'OrderDate': '1998-03-04T00:00:00.000Z',
    'ShippedDate': '1998-03-11T00:00:00.000Z',
    'Freight': 39.92,
    'ShipName': 'Ana Trujillo Emparedados y helados',
    'ShipAddress': 'Avda. de la Constitución 2222',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 10927,

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        'OrderDate': '1998-03-05T00:00:00.000Z',
        'ShippedDate': '1998-04-08T00:00:00.000Z',
        'Freight': 19.79,
        'ShipName': 'La corne d\'abondance',
        'ShipAddress': '67, avenue de l\'Europe',
        'ShipCity': 'Versailles',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10928,
        'CustomerID': 'GALED',
        'OrderDate': '1998-03-05T00:00:00.000Z',
        'ShippedDate': '1998-03-18T00:00:00.000Z',
        'Freight': 1.36,
        'ShipName': 'Galería del gastronómo',
        'ShipAddress': 'Rambla de Cataluña, 23',
        'ShipCity': 'Barcelona',
        'ShipRegion': null,
        'ShipCountry': 'Spain'
    },
    {
        'OrderID': 10929,
        'CustomerID': 'FRANK',
        'OrderDate': '1998-03-05T00:00:00.000Z',
        'ShippedDate': '1998-03-12T00:00:00.000Z',
        'Freight': 33.93,
        'ShipName': 'Frankenversand',
        'ShipAddress': 'Berliner Platz 43',
        'ShipCity': 'München',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10930,
        'CustomerID': 'SUPRD',
        'OrderDate': '1998-03-06T00:00:00.000Z',
        'ShippedDate': '1998-03-18T00:00:00.000Z',
        'Freight': 15.55,
        'ShipName': 'Suprêmes délices',
        'ShipAddress': 'Boulevard Tirou, 255',
        'ShipCity': 'Charleroi',
        'ShipRegion': null,
        'ShipCountry': 'Belgium'
    },
    {
        'OrderID': 10931,
        'CustomerID': 'RICSU',
        'OrderDate': '1998-03-06T00:00:00.000Z',
        'ShippedDate': '1998-03-19T00:00:00.000Z',
        'Freight': 13.6,
        'ShipName': 'Richter Supermarkt',
        'ShipAddress': 'Starenweg 5',
        'ShipCity': 'Genève',
        'ShipRegion': null,
        'ShipCountry': 'Switzerland'
    }

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    {
        'OrderID': 10932,
        'CustomerID': 'BONAP',
        'OrderDate': '1998-03-06T00:00:00.000Z',
        'ShippedDate': '1998-03-24T00:00:00.000Z',
        'Freight': 134.64,
        'ShipName': 'Bon app',
        'ShipAddress': '12, rue des Bouchers',
        'ShipCity': 'Marseille',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10933,
        'CustomerID': 'ISLAT',
        'OrderDate': '1998-03-06T00:00:00.000Z',
        'ShippedDate': '1998-03-16T00:00:00.000Z',
        'Freight': 54.15,
        'ShipName': 'Island Trading',
        'ShipAddress': 'Garden House Crowther Way',
        'ShipCity': 'Cowes',
        'ShipRegion': 'Isle of Wight',
        'ShipCountry': 'UK'
    },
    {
        'OrderID': 10934,
        'CustomerID': 'LEHMS',
        'OrderDate': '1998-03-09T00:00:00.000Z',
        'ShippedDate': '1998-03-12T00:00:00.000Z',
        'Freight': 32.01,
        'ShipName': 'Lehmanns Marktstand',
        'ShipAddress': 'Magazinweg 7',
        'ShipCity': 'Frankfurt a.M.',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10935,
        'CustomerID': 'WELLI',
        'OrderDate': '1998-03-09T00:00:00.000Z',
        'ShippedDate': '1998-03-18T00:00:00.000Z',
        'Freight': 47.59,
        'ShipName': 'Wellington Importadora',
        'ShipAddress': 'Rua do Mercado, 12',
        'ShipCity': 'Resende',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10936,
        'CustomerID': 'GREAL',
        'OrderDate': '1998-03-09T00:00:00.000Z',
        'ShippedDate': '1998-03-18T00:00:00.000Z',
        'Freight': 33.68,
        'ShipName': 'Great Lakes Food Market',
        'ShipAddress': '2732 Baker Blvd.',
    }

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        'ShipCity': 'Eugene',
        'ShipRegion': 'OR',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10937,
        'CustomerID': 'CACTU',
        'OrderDate': '1998-03-10T00:00:00.000Z',
        'ShippedDate': '1998-03-13T00:00:00.000Z',
        'Freight': 31.51,
        'ShipName': 'Cactus Comidas para llevar',
        'ShipAddress': 'Cerrito 333',
        'ShipCity': 'Buenos Aires',
        'ShipRegion': null,
        'ShipCountry': 'Argentina'
    },
    {
        'OrderID': 10938,
        'CustomerID': 'QUICK',
        'OrderDate': '1998-03-10T00:00:00.000Z',
        'ShippedDate': '1998-03-16T00:00:00.000Z',
        'Freight': 31.89,
        'ShipName': 'QUICK-Stop',
        'ShipAddress': 'Taucherstraße 10',
        'ShipCity': 'Cunewalde',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10939,
        'CustomerID': 'MAGAA',
        'OrderDate': '1998-03-10T00:00:00.000Z',
        'ShippedDate': '1998-03-13T00:00:00.000Z',
        'Freight': 76.33,
        'ShipName': 'Magazzini Alimentari Riuniti',
        'ShipAddress': 'Via Ludovico il Moro 22',
        'ShipCity': 'Bergamo',
        'ShipRegion': null,
        'ShipCountry': 'Italy'
    },
    {
        'OrderID': 10940,
        'CustomerID': 'BONAP',
        'OrderDate': '1998-03-11T00:00:00.000Z',
        'ShippedDate': '1998-03-23T00:00:00.000Z',
        'Freight': 19.77,
        'ShipName': 'Bon app',
        'ShipAddress': '12, rue des Bouchers',
        'ShipCity': 'Marseille',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10941,
        'CustomerID': 'SAVEA',
        'OrderDate': '1998-03-11T00:00:00.000Z',
        'ShippedDate': '1998-03-20T00:00:00.000Z',

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    'Freight': 400.81,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
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    'CustomerID': 'REGGC',
    'OrderDate': '1998-03-11T00:00:00.000Z',
    'ShippedDate': '1998-03-18T00:00:00.000Z',
    'Freight': 17.95,
    'ShipName': 'Reggiani Caseifici',
    'ShipAddress': 'Strada Provinciale 124',
    'ShipCity': 'Reggio Emilia',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 10943,
    'CustomerID': 'BSBEV',
    'OrderDate': '1998-03-11T00:00:00.000Z',
    'ShippedDate': '1998-03-19T00:00:00.000Z',
    'Freight': 2.17,
    'ShipName': 'B\'s Beverages',
    'ShipAddress': 'Fauntleroy Circus',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10944,
    'CustomerID': 'BOTTM',
    'OrderDate': '1998-03-12T00:00:00.000Z',
    'ShippedDate': '1998-03-13T00:00:00.000Z',
    'Freight': 52.92,
    'ShipName': 'Bottom-Dollar Markets',
    'ShipAddress': '23 Tsawassen Blvd.',
    'ShipCity': 'Tsawassen',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10945,
    'CustomerID': 'MORGK',
    'OrderDate': '1998-03-12T00:00:00.000Z',
    'ShippedDate': '1998-03-18T00:00:00.000Z',
    'Freight': 10.22,
    'ShipName': 'Morgenstern Gesundkost',
    'ShipAddress': 'Heerstr. 22',
    'ShipCity': 'Leipzig',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10946,

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    'CustomerID': 'VAFPE',
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    'ShippedDate': '1998-03-19T00:00:00.000Z',
    'Freight': 27.2,
    'ShipName': 'Vaffeljernet',
    'ShipAddress': 'Smagsloget 45',
    'ShipCity': 'Århus',
    'ShipRegion': null,
    'ShipCountry': 'Denmark'
  },
  {
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    'CustomerID': 'BSBEV',
    'OrderDate': '1998-03-13T00:00:00.000Z',
    'ShippedDate': '1998-03-16T00:00:00.000Z',
    'Freight': 3.26,
    'ShipName': 'B\'s Beverages',
    'ShipAddress': 'Fauntleroy Circus',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10948,
    'CustomerID': 'GODOS',
    'OrderDate': '1998-03-13T00:00:00.000Z',
    'ShippedDate': '1998-03-19T00:00:00.000Z',
    'Freight': 23.39,
    'ShipName': 'Godos Cocina Típica',
    'ShipAddress': 'C/ Romero, 33',
    'ShipCity': 'Sevilla',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 10949,
    'CustomerID': 'BOTTM',
    'OrderDate': '1998-03-13T00:00:00.000Z',
    'ShippedDate': '1998-03-17T00:00:00.000Z',
    'Freight': 74.44,
    'ShipName': 'Bottom-Dollar Markets',
    'ShipAddress': '23 Tsawassen Blvd.',
    'ShipCity': 'Tsawassen',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10950,
    'CustomerID': 'MAGAA',
    'OrderDate': '1998-03-16T00:00:00.000Z',
    'ShippedDate': '1998-03-23T00:00:00.000Z',
    'Freight': 2.5,
    'ShipName': 'Magazzini Alimentari Riuniti',
    'ShipAddress': 'Via Ludovico il Moro 22',
    'ShipCity': 'Bergamo',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  }

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},
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  'OrderID': 10951,
  'CustomerID': 'RICSU',
  'OrderDate': '1998-03-16T00:00:00.000Z',
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  'Freight': 30.85,
  'ShipName': 'Richter Supermarkt',
  'ShipAddress': 'Starenweg 5',
  'ShipCity': 'Genève',
  'ShipRegion': null,
  'ShipCountry': 'Switzerland'
},
{
  'OrderID': 10952,
  'CustomerID': 'ALFKI',
  'OrderDate': '1998-03-16T00:00:00.000Z',
  'ShippedDate': '1998-03-24T00:00:00.000Z',
  'Freight': 40.42,
  'ShipName': 'Alfred\'s Futterkiste',
  'ShipAddress': 'Obere Str. 57',
  'ShipCity': 'Berlin',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 10953,
  'CustomerID': 'AROUT',
  'OrderDate': '1998-03-16T00:00:00.000Z',
  'ShippedDate': '1998-03-25T00:00:00.000Z',
  'Freight': 23.72,
  'ShipName': 'Around the Horn',
  'ShipAddress': 'Brook Farm Stratford St. Mary',
  'ShipCity': 'Colchester',
  'ShipRegion': 'Essex',
  'ShipCountry': 'UK'
},
{
  'OrderID': 10954,
  'CustomerID': 'LINOD',
  'OrderDate': '1998-03-17T00:00:00.000Z',
  'ShippedDate': '1998-03-20T00:00:00.000Z',
  'Freight': 27.91,
  'ShipName': 'LINO-Delicatesses',
  'ShipAddress': 'Ave. 5 de Mayo Porlamar',
  'ShipCity': 'I. de Margarita',
  'ShipRegion': 'Nueva Esparta',
  'ShipCountry': 'Venezuela'
},
{
  'OrderID': 10955,
  'CustomerID': 'FOLKO',
  'OrderDate': '1998-03-17T00:00:00.000Z',
  'ShippedDate': '1998-03-20T00:00:00.000Z',
  'Freight': 3.26,
  'ShipName': 'Folk och fä HB',
  'ShipAddress': 'Åkergatan 24',
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        'ShipCity': 'Bräcke',
        'ShipRegion': null,
        'ShipCountry': 'Sweden'
    },
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        'CustomerID': 'BLAUS',
        'OrderDate': '1998-03-17T00:00:00.000Z',
        'ShippedDate': '1998-03-20T00:00:00.000Z',
        'Freight': 44.65,
        'ShipName': 'Blauer See Delikatessen',
        'ShipAddress': 'Forsterstr. 57',
        'ShipCity': 'Mannheim',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10957,
        'CustomerID': 'HILAA',
        'OrderDate': '1998-03-18T00:00:00.000Z',
        'ShippedDate': '1998-03-27T00:00:00.000Z',
        'Freight': 105.36,
        'ShipName': 'HILARION-Abastos',
        'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
        'ShipCity': 'San Cristóbal',
        'ShipRegion': 'Táchira',
        'ShipCountry': 'Venezuela'
    },
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        'OrderID': 10958,
        'CustomerID': 'OCEAN',
        'OrderDate': '1998-03-18T00:00:00.000Z',
        'ShippedDate': '1998-03-27T00:00:00.000Z',
        'Freight': 49.56,
        'ShipName': 'Océano Atlántico Ltda.',
        'ShipAddress': 'Ing. Gustavo Moncada 8585 Piso 20-A',
        'ShipCity': 'Buenos Aires',
        'ShipRegion': null,
        'ShipCountry': 'Argentina'
    },
    {
        'OrderID': 10959,
        'CustomerID': 'GOURL',
        'OrderDate': '1998-03-18T00:00:00.000Z',
        'ShippedDate': '1998-03-23T00:00:00.000Z',
        'Freight': 4.98,
        'ShipName': 'Gourmet Lanchonetes',
        'ShipAddress': 'Av. Brasil, 442',
        'ShipCity': 'Campinas',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10960,
        'CustomerID': 'HILAA',
        'OrderDate': '1998-03-19T00:00:00.000Z',
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    'Freight': 2.08,
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    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
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    'CustomerID': 'QUEEN',
    'OrderDate': '1998-03-19T00:00:00.000Z',
    'ShippedDate': '1998-03-30T00:00:00.000Z',
    'Freight': 104.47,
    'ShipName': 'Queen Cozinha',
    'ShipAddress': 'Alameda dos Canários, 891',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10962,
    'CustomerID': 'QUICK',
    'OrderDate': '1998-03-19T00:00:00.000Z',
    'ShippedDate': '1998-03-23T00:00:00.000Z',
    'Freight': 275.79,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 10963,
    'CustomerID': 'FURIB',
    'OrderDate': '1998-03-19T00:00:00.000Z',
    'ShippedDate': '1998-03-26T00:00:00.000Z',
    'Freight': 2.7,
    'ShipName': 'Furia Bacalhau e Frutos do Mar',
    'ShipAddress': 'Jardim das rosas n. 32',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  },
  {
    'OrderID': 10964,
    'CustomerID': 'SPECB',
    'OrderDate': '1998-03-20T00:00:00.000Z',
    'ShippedDate': '1998-03-24T00:00:00.000Z',
    'Freight': 87.38,
    'ShipName': 'Spécialités du monde',
    'ShipAddress': '25, rue Lauriston',
    'ShipCity': 'Paris',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 10965,

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      'CustomerID': 'OLDWO',
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      'ShippedDate': '1998-03-30T00:00:00.000Z',
      'Freight': 144.38,
      'ShipName': 'Old World Delicatessen',
      'ShipAddress': '2743 Bering St.',
      'ShipCity': 'Anchorage',
      'ShipRegion': 'AK',
      'ShipCountry': 'USA'
    },
    {
      'OrderID': 10966,
      'CustomerID': 'CHOPS',
      'OrderDate': '1998-03-20T00:00:00.000Z',
      'ShippedDate': '1998-04-08T00:00:00.000Z',
      'Freight': 27.19,
      'ShipName': 'Chop-suey Chinese',
      'ShipAddress': 'Hauptstr. 31',
      'ShipCity': 'Bern',
      'ShipRegion': null,
      'ShipCountry': 'Switzerland'
    },
    {
      'OrderID': 10967,
      'CustomerID': 'TOMSP',
      'OrderDate': '1998-03-23T00:00:00.000Z',
      'ShippedDate': '1998-04-02T00:00:00.000Z',
      'Freight': 62.22,
      'ShipName': 'Toms Spezialitäten',
      'ShipAddress': 'Luisenstr. 48',
      'ShipCity': 'Münster',
      'ShipRegion': null,
      'ShipCountry': 'Germany'
    },
    {
      'OrderID': 10968,
      'CustomerID': 'ERNSH',
      'OrderDate': '1998-03-23T00:00:00.000Z',
      'ShippedDate': '1998-04-01T00:00:00.000Z',
      'Freight': 74.6,
      'ShipName': 'Ernst Handel',
      'ShipAddress': 'Kirchgasse 6',
      'ShipCity': 'Graz',
      'ShipRegion': null,
      'ShipCountry': 'Austria'
    },
    {
      'OrderID': 10969,
      'CustomerID': 'COMMI',
      'OrderDate': '1998-03-23T00:00:00.000Z',
      'ShippedDate': '1998-03-30T00:00:00.000Z',
      'Freight': 0.21,
      'ShipName': 'Comércio Mineiro',
      'ShipAddress': 'Av. dos Lusíadas, 23',
      'ShipCity': 'Sao Paulo',
      'ShipRegion': 'SP',
      'ShipCountry': 'Brazil'
    }
  ]

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    },
    {
        'OrderID': 10970,
        'CustomerID': 'BOLID',
        'OrderDate': '1998-03-24T00:00:00.000Z',
        'ShippedDate': '1998-04-24T00:00:00.000Z',
        'Freight': 16.16,
        'ShipName': 'Bólido Comidas preparadas',
        'ShipAddress': 'C/ Araquil, 67',
        'ShipCity': 'Madrid',
        'ShipRegion': null,
        'ShipCountry': 'Spain'
    },
    {
        'OrderID': 10971,
        'CustomerID': 'FRANR',
        'OrderDate': '1998-03-24T00:00:00.000Z',
        'ShippedDate': '1998-04-02T00:00:00.000Z',
        'Freight': 121.82,
        'ShipName': 'France restauration',
        'ShipAddress': '54, rue Royale',
        'ShipCity': 'Nantes',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10972,
        'CustomerID': 'LACOR',
        'OrderDate': '1998-03-24T00:00:00.000Z',
        'ShippedDate': '1998-03-26T00:00:00.000Z',
        'Freight': 0.02,
        'ShipName': 'La corne d\'abondance',
        'ShipAddress': '67, avenue de l\'Europe',
        'ShipCity': 'Versailles',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10973,
        'CustomerID': 'LACOR',
        'OrderDate': '1998-03-24T00:00:00.000Z',
        'ShippedDate': '1998-03-27T00:00:00.000Z',
        'Freight': 15.17,
        'ShipName': 'La corne d\'abondance',
        'ShipAddress': '67, avenue de l\'Europe',
        'ShipCity': 'Versailles',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 10974,
        'CustomerID': 'SPLIR',
        'OrderDate': '1998-03-25T00:00:00.000Z',
        'ShippedDate': '1998-04-03T00:00:00.000Z',
        'Freight': 12.96,
        'ShipName': 'Split Rail Beer & Ale',
        'ShipAddress': 'P.O. Box 555',
    }

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        'ShipCity': 'Lander',
        'ShipRegion': 'WY',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10975,
        'CustomerID': 'BOTTM',
        'OrderDate': '1998-03-25T00:00:00.000Z',
        'ShippedDate': '1998-03-27T00:00:00.000Z',
        'Freight': 32.27,
        'ShipName': 'Bottom-Dollar Markets',
        'ShipAddress': '23 Tsawassen Blvd.',
        'ShipCity': 'Tsawassen',
        'ShipRegion': 'BC',
        'ShipCountry': 'Canada'
    },
    {
        'OrderID': 10976,
        'CustomerID': 'HILAA',
        'OrderDate': '1998-03-25T00:00:00.000Z',
        'ShippedDate': '1998-04-03T00:00:00.000Z',
        'Freight': 37.97,
        'ShipName': 'HILARION-Abastos',
        'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
        'ShipCity': 'San Cristóbal',
        'ShipRegion': 'Táchira',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 10977,
        'CustomerID': 'FOLKO',
        'OrderDate': '1998-03-26T00:00:00.000Z',
        'ShippedDate': '1998-04-10T00:00:00.000Z',
        'Freight': 208.5,
        'ShipName': 'Folk och fä HB',
        'ShipAddress': 'Åkergatan 24',
        'ShipCity': 'Bräcke',
        'ShipRegion': null,
        'ShipCountry': 'Sweden'
    },
    {
        'OrderID': 10978,
        'CustomerID': 'MAISD',
        'OrderDate': '1998-03-26T00:00:00.000Z',
        'ShippedDate': '1998-04-23T00:00:00.000Z',
        'Freight': 32.82,
        'ShipName': 'Maison Dewey',
        'ShipAddress': 'Rue Joseph-Bens 532',
        'ShipCity': 'Bruxelles',
        'ShipRegion': null,
        'ShipCountry': 'Belgium'
    },
    {
        'OrderID': 10979,
        'CustomerID': 'ERNSH',
        'OrderDate': '1998-03-26T00:00:00.000Z',
        'ShippedDate': '1998-03-31T00:00:00.000Z',

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    'Freight': 353.07,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 10980,
    'CustomerID': 'FOLKO',
    'OrderDate': '1998-03-27T00:00:00.000Z',
    'ShippedDate': '1998-04-17T00:00:00.000Z',
    'Freight': 1.26,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 10981,
    'CustomerID': 'HANAR',
    'OrderDate': '1998-03-27T00:00:00.000Z',
    'ShippedDate': '1998-04-02T00:00:00.000Z',
    'Freight': 193.37,
    'ShipName': 'Hanari Carnes',
    'ShipAddress': 'Rua do Paço, 67',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 10982,
    'CustomerID': 'BOTTM',
    'OrderDate': '1998-03-27T00:00:00.000Z',
    'ShippedDate': '1998-04-08T00:00:00.000Z',
    'Freight': 14.01,
    'ShipName': 'Bottom-Dollar Markets',
    'ShipAddress': '23 Tsawassen Blvd.',
    'ShipCity': 'Tsawassen',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  },
  {
    'OrderID': 10983,
    'CustomerID': 'SAVEA',
    'OrderDate': '1998-03-27T00:00:00.000Z',
    'ShippedDate': '1998-04-06T00:00:00.000Z',
    'Freight': 657.54,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10984,

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    'CustomerID': 'SAVEA',
    'OrderDate': '1998-03-30T00:00:00.000Z',
    'ShippedDate': '1998-04-03T00:00:00.000Z',
    'Freight': 211.22,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 10985,
    'CustomerID': 'HUNGO',
    'OrderDate': '1998-03-30T00:00:00.000Z',
    'ShippedDate': '1998-04-02T00:00:00.000Z',
    'Freight': 91.51,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 10986,
    'CustomerID': 'OCEAN',
    'OrderDate': '1998-03-30T00:00:00.000Z',
    'ShippedDate': '1998-04-21T00:00:00.000Z',
    'Freight': 217.86,
    'ShipName': 'Océano Atlántico Ltda.',
    'ShipAddress': 'Ing. Gustavo Moncada 8585 Piso 20-A',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },
  {
    'OrderID': 10987,
    'CustomerID': 'EASTC',
    'OrderDate': '1998-03-31T00:00:00.000Z',
    'ShippedDate': '1998-04-06T00:00:00.000Z',
    'Freight': 185.48,
    'ShipName': 'Eastern Connection',
    'ShipAddress': '35 King George',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 10988,
    'CustomerID': 'RATTC',
    'OrderDate': '1998-03-31T00:00:00.000Z',
    'ShippedDate': '1998-04-10T00:00:00.000Z',
    'Freight': 61.14,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  }

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    },
    {
        'OrderID': 10989,
        'CustomerID': 'QUEDE',
        'OrderDate': '1998-03-31T00:00:00.000Z',
        'ShippedDate': '1998-04-02T00:00:00.000Z',
        'Freight': 34.76,
        'ShipName': 'Que Delícia',
        'ShipAddress': 'Rua da Panificadora, 12',
        'ShipCity': 'Rio de Janeiro',
        'ShipRegion': 'RJ',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 10990,
        'CustomerID': 'ERNSH',
        'OrderDate': '1998-04-01T00:00:00.000Z',
        'ShippedDate': '1998-04-07T00:00:00.000Z',
        'Freight': 117.61,
        'ShipName': 'Ernst Handel',
        'ShipAddress': 'Kirchgasse 6',
        'ShipCity': 'Graz',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
        'OrderID': 10991,
        'CustomerID': 'QUICK',
        'OrderDate': '1998-04-01T00:00:00.000Z',
        'ShippedDate': '1998-04-07T00:00:00.000Z',
        'Freight': 38.51,
        'ShipName': 'QUICK-Stop',
        'ShipAddress': 'Taucherstraße 10',
        'ShipCity': 'Cunewalde',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10992,
        'CustomerID': 'THEBI',
        'OrderDate': '1998-04-01T00:00:00.000Z',
        'ShippedDate': '1998-04-03T00:00:00.000Z',
        'Freight': 4.27,
        'ShipName': 'The Big Cheese',
        'ShipAddress': '89 Jefferson Way Suite 2',
        'ShipCity': 'Portland',
        'ShipRegion': 'OR',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 10993,
        'CustomerID': 'FOLKO',
        'OrderDate': '1998-04-01T00:00:00.000Z',
        'ShippedDate': '1998-04-10T00:00:00.000Z',
        'Freight': 8.81,
        'ShipName': 'Folk och fä HB',
        'ShipAddress': 'Åkergatan 24',
    }

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        'ShipCity': 'Bräcke',
        'ShipRegion': null,
        'ShipCountry': 'Sweden'
    },
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        'ShippedDate': '1998-04-09T00:00:00.000Z',
        'Freight': 65.53,
        'ShipName': 'Vaffeljernet',
        'ShipAddress': 'Smagsloget 45',
        'ShipCity': 'Århus',
        'ShipRegion': null,
        'ShipCountry': 'Denmark'
    },
    {
        'OrderID': 10995,
        'CustomerID': 'PERIC',
        'OrderDate': '1998-04-02T00:00:00.000Z',
        'ShippedDate': '1998-04-06T00:00:00.000Z',
        'Freight': 46,
        'ShipName': 'Pericles Comidas clásicas',
        'ShipAddress': 'Calle Dr. Jorge Cash 321',
        'ShipCity': 'México D.F.',
        'ShipRegion': null,
        'ShipCountry': 'Mexico'
    },
    {
        'OrderID': 10996,
        'CustomerID': 'QUICK',
        'OrderDate': '1998-04-02T00:00:00.000Z',
        'ShippedDate': '1998-04-10T00:00:00.000Z',
        'Freight': 1.12,
        'ShipName': 'QUICK-Stop',
        'ShipAddress': 'Taucherstraße 10',
        'ShipCity': 'Cunewalde',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 10997,
        'CustomerID': 'LILAS',
        'OrderDate': '1998-04-03T00:00:00.000Z',
        'ShippedDate': '1998-04-13T00:00:00.000Z',
        'Freight': 73.91,
        'ShipName': 'LILA-Supermercado',
        'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
        'ShipCity': 'Barquisimeto',
        'ShipRegion': 'Lara',
        'ShipCountry': 'Venezuela'
    },
    {
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        'CustomerID': 'WOLZA',
        'OrderDate': '1998-04-03T00:00:00.000Z',
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    'Freight': 20.31,
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    'ShipAddress': 'ul. Filtrowa 68',
    'ShipCity': 'Warszawa',
    'ShipRegion': null,
    'ShipCountry': 'Poland'
  },
  {
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    'CustomerID': 'OTTIK',
    'OrderDate': '1998-04-03T00:00:00.000Z',
    'ShippedDate': '1998-04-10T00:00:00.000Z',
    'Freight': 96.35,
    'ShipName': 'Ottilies Käseladen',
    'ShipAddress': 'Mehrheimerstr. 369',
    'ShipCity': 'Köln',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
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    'CustomerID': 'RATTC',
    'OrderDate': '1998-04-06T00:00:00.000Z',
    'ShippedDate': '1998-04-14T00:00:00.000Z',
    'Freight': 55.12,
    'ShipName': 'Rattlesnake Canyon Grocery',
    'ShipAddress': '2817 Milton Dr.',
    'ShipCity': 'Albuquerque',
    'ShipRegion': 'NM',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 11001,
    'CustomerID': 'FOLKO',
    'OrderDate': '1998-04-06T00:00:00.000Z',
    'ShippedDate': '1998-04-14T00:00:00.000Z',
    'Freight': 197.3,
    'ShipName': 'Folk och fä HB',
    'ShipAddress': 'Åkergatan 24',
    'ShipCity': 'Bräcke',
    'ShipRegion': null,
    'ShipCountry': 'Sweden'
  },
  {
    'OrderID': 11002,
    'CustomerID': 'SAVEA',
    'OrderDate': '1998-04-06T00:00:00.000Z',
    'ShippedDate': '1998-04-16T00:00:00.000Z',
    'Freight': 141.16,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 11003,

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    'CustomerID': 'THECR',
    'OrderDate': '1998-04-06T00:00:00.000Z',
    'ShippedDate': '1998-04-08T00:00:00.000Z',
    'Freight': 14.91,
    'ShipName': 'The Cracker Box',
    'ShipAddress': '55 Grizzly Peak Rd.',
    'ShipCity': 'Butte',
    'ShipRegion': 'MT',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 11004,
    'CustomerID': 'MAISD',
    'OrderDate': '1998-04-07T00:00:00.000Z',
    'ShippedDate': '1998-04-20T00:00:00.000Z',
    'Freight': 44.84,
    'ShipName': 'Maison Dewey',
    'ShipAddress': 'Rue Joseph-Bens 532',
    'ShipCity': 'Bruxelles',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
    'OrderID': 11005,
    'CustomerID': 'WILMK',
    'OrderDate': '1998-04-07T00:00:00.000Z',
    'ShippedDate': '1998-04-10T00:00:00.000Z',
    'Freight': 0.75,
    'ShipName': 'Wilman Kala',
    'ShipAddress': 'Keskuskatu 45',
    'ShipCity': 'Helsinki',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 11006,
    'CustomerID': 'GREAL',
    'OrderDate': '1998-04-07T00:00:00.000Z',
    'ShippedDate': '1998-04-15T00:00:00.000Z',
    'Freight': 25.19,
    'ShipName': 'Great Lakes Food Market',
    'ShipAddress': '2732 Baker Blvd.',
    'ShipCity': 'Eugene',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 11007,
    'CustomerID': 'PRINI',
    'OrderDate': '1998-04-08T00:00:00.000Z',
    'ShippedDate': '1998-04-13T00:00:00.000Z',
    'Freight': 202.24,
    'ShipName': 'Princesa Isabel Vinhos',
    'ShipAddress': 'Estrada da saúde n. 58',
    'ShipCity': 'Lisboa',
    'ShipRegion': null,
    'ShipCountry': 'Portugal'
  }

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},
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  'CustomerID': 'ERNSH',
  'OrderDate': '1998-04-08T00:00:00.000Z',
  'ShippedDate': null,
  'Freight': 79.46,
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  'ShipAddress': 'Kirchgasse 6',
  'ShipCity': 'Graz',
  'ShipRegion': null,
  'ShipCountry': 'Austria'
},
{
  'OrderID': 11009,
  'CustomerID': 'GODOS',
  'OrderDate': '1998-04-08T00:00:00.000Z',
  'ShippedDate': '1998-04-10T00:00:00.000Z',
  'Freight': 59.11,
  'ShipName': 'Godos Cocina Típica',
  'ShipAddress': 'C/ Romero, 33',
  'ShipCity': 'Sevilla',
  'ShipRegion': null,
  'ShipCountry': 'Spain'
},
{
  'OrderID': 11010,
  'CustomerID': 'REGGC',
  'OrderDate': '1998-04-09T00:00:00.000Z',
  'ShippedDate': '1998-04-21T00:00:00.000Z',
  'Freight': 28.71,
  'ShipName': 'Reggiani Caseifici',
  'ShipAddress': 'Strada Provinciale 124',
  'ShipCity': 'Reggio Emilia',
  'ShipRegion': null,
  'ShipCountry': 'Italy'
},
{
  'OrderID': 11011,
  'CustomerID': 'ALFKI',
  'OrderDate': '1998-04-09T00:00:00.000Z',
  'ShippedDate': '1998-04-13T00:00:00.000Z',
  'Freight': 1.21,
  'ShipName': 'Alfred's Futterkiste',
  'ShipAddress': 'Obere Str. 57',
  'ShipCity': 'Berlin',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 11012,
  'CustomerID': 'FRANK',
  'OrderDate': '1998-04-09T00:00:00.000Z',
  'ShippedDate': '1998-04-17T00:00:00.000Z',
  'Freight': 242.95,
  'ShipName': 'Frankenversand',
  'ShipAddress': 'Berliner Platz 43',
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    'ShipCity': 'München',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
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    'CustomerID': 'ROMEY',
    'OrderDate': '1998-04-09T00:00:00.000Z',
    'ShippedDate': '1998-04-10T00:00:00.000Z',
    'Freight': 32.99,
    'ShipName': 'Romero y tomillo',
    'ShipAddress': 'Gran Vía, 1',
    'ShipCity': 'Madrid',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 11014,
    'CustomerID': 'LINOD',
    'OrderDate': '1998-04-10T00:00:00.000Z',
    'ShippedDate': '1998-04-15T00:00:00.000Z',
    'Freight': 23.6,
    'ShipName': 'LINO-Delicateses',
    'ShipAddress': 'Ave. 5 de Mayo Porlamar',
    'ShipCity': 'I. de Margarita',
    'ShipRegion': 'Nueva Esparta',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 11015,
    'CustomerID': 'SANTG',
    'OrderDate': '1998-04-10T00:00:00.000Z',
    'ShippedDate': '1998-04-20T00:00:00.000Z',
    'Freight': 4.62,
    'ShipName': 'Santé Gourmet',
    'ShipAddress': 'Erling Skakkess gate 78',
    'ShipCity': 'Stavern',
    'ShipRegion': null,
    'ShipCountry': 'Norway'
  },
  {
    'OrderID': 11016,
    'CustomerID': 'AROUT',
    'OrderDate': '1998-04-10T00:00:00.000Z',
    'ShippedDate': '1998-04-13T00:00:00.000Z',
    'Freight': 33.8,
    'ShipName': 'Around the Horn',
    'ShipAddress': 'Brook Farm Stratford St. Mary',
    'ShipCity': 'Colchester',
    'ShipRegion': 'Essex',
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 11017,
    'CustomerID': 'ERNSH',
    'OrderDate': '1998-04-13T00:00:00.000Z',
    'ShippedDate': '1998-04-20T00:00:00.000Z',

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    'Freight': 754.26,
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    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 11018,
    'CustomerID': 'LONEP',
    'OrderDate': '1998-04-13T00:00:00.000Z',
    'ShippedDate': '1998-04-16T00:00:00.000Z',
    'Freight': 11.65,
    'ShipName': 'Lonesome Pine Restaurant',
    'ShipAddress': '89 Chiaroscuro Rd.',
    'ShipCity': 'Portland',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 11019,
    'CustomerID': 'RANCH',
    'OrderDate': '1998-04-13T00:00:00.000Z',
    'ShippedDate': null,
    'Freight': 3.17,
    'ShipName': 'Rancho grande',
    'ShipAddress': 'Av. del Libertador 900',
    'ShipCity': 'Buenos Aires',
    'ShipRegion': null,
    'ShipCountry': 'Argentina'
  },
  {
    'OrderID': 11020,
    'CustomerID': 'OTTIK',
    'OrderDate': '1998-04-14T00:00:00.000Z',
    'ShippedDate': '1998-04-16T00:00:00.000Z',
    'Freight': 43.3,
    'ShipName': 'Ottilies Käseladen',
    'ShipAddress': 'Mehrheimerstr. 369',
    'ShipCity': 'Köln',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 11021,
    'CustomerID': 'QUICK',
    'OrderDate': '1998-04-14T00:00:00.000Z',
    'ShippedDate': '1998-04-21T00:00:00.000Z',
    'Freight': 297.18,
    'ShipName': 'QUICK-Stop',
    'ShipAddress': 'Taucherstraße 10',
    'ShipCity': 'Cunewalde',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 11022,

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    'CustomerID': 'HANAR',
    'OrderDate': '1998-04-14T00:00:00.000Z',
    'ShippedDate': '1998-05-04T00:00:00.000Z',
    'Freight': 6.27,
    'ShipName': 'Hanari Carnes',
    'ShipAddress': 'Rua do Paço, 67',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 11023,
    'CustomerID': 'BSBEV',
    'OrderDate': '1998-04-14T00:00:00.000Z',
    'ShippedDate': '1998-04-24T00:00:00.000Z',
    'Freight': 123.83,
    'ShipName': 'B\'s Beverages',
    'ShipAddress': 'Fauntleroy Circus',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 11024,
    'CustomerID': 'EASTC',
    'OrderDate': '1998-04-15T00:00:00.000Z',
    'ShippedDate': '1998-04-20T00:00:00.000Z',
    'Freight': 74.36,
    'ShipName': 'Eastern Connection',
    'ShipAddress': '35 King George',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 11025,
    'CustomerID': 'WARTH',
    'OrderDate': '1998-04-15T00:00:00.000Z',
    'ShippedDate': '1998-04-24T00:00:00.000Z',
    'Freight': 29.17,
    'ShipName': 'Wartian Herkku',
    'ShipAddress': 'Torikatu 38',
    'ShipCity': 'Oulu',
    'ShipRegion': null,
    'ShipCountry': 'Finland'
  },
  {
    'OrderID': 11026,
    'CustomerID': 'FRANS',
    'OrderDate': '1998-04-15T00:00:00.000Z',
    'ShippedDate': '1998-04-28T00:00:00.000Z',
    'Freight': 47.09,
    'ShipName': 'Franchi S.p.A.',
    'ShipAddress': 'Via Monte Bianco 34',
    'ShipCity': 'Torino',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  }

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    },
    {
        'OrderID': 11027,
        'CustomerID': 'BOTTM',
        'OrderDate': '1998-04-16T00:00:00.000Z',
        'ShippedDate': '1998-04-20T00:00:00.000Z',
        'Freight': 52.52,
        'ShipName': 'Bottom-Dollar Markets',
        'ShipAddress': '23 Tsawassen Blvd.',
        'ShipCity': 'Tsawassen',
        'ShipRegion': 'BC',
        'ShipCountry': 'Canada'
    },
    {
        'OrderID': 11028,
        'CustomerID': 'KOENE',
        'OrderDate': '1998-04-16T00:00:00.000Z',
        'ShippedDate': '1998-04-22T00:00:00.000Z',
        'Freight': 29.59,
        'ShipName': 'Königlich Essen',
        'ShipAddress': 'Maubelstr. 90',
        'ShipCity': 'Brandenburg',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 11029,
        'CustomerID': 'CHOPS',
        'OrderDate': '1998-04-16T00:00:00.000Z',
        'ShippedDate': '1998-04-27T00:00:00.000Z',
        'Freight': 47.84,
        'ShipName': 'Chop-suey Chinese',
        'ShipAddress': 'Hauptstr. 31',
        'ShipCity': 'Bern',
        'ShipRegion': null,
        'ShipCountry': 'Switzerland'
    },
    {
        'OrderID': 11030,
        'CustomerID': 'SAVEA',
        'OrderDate': '1998-04-17T00:00:00.000Z',
        'ShippedDate': '1998-04-27T00:00:00.000Z',
        'Freight': 830.75,
        'ShipName': 'Save-a-lot Markets',
        'ShipAddress': '187 Suffolk Ln.',
        'ShipCity': 'Boise',
        'ShipRegion': 'ID',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 11031,
        'CustomerID': 'SAVEA',
        'OrderDate': '1998-04-17T00:00:00.000Z',
        'ShippedDate': '1998-04-24T00:00:00.000Z',
        'Freight': 227.22,
        'ShipName': 'Save-a-lot Markets',
        'ShipAddress': '187 Suffolk Ln.',
    }

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    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 11032,
    'CustomerID': 'WHITC',
    'OrderDate': '1998-04-17T00:00:00.000Z',
    'ShippedDate': '1998-04-23T00:00:00.000Z',
    'Freight': 606.19,
    'ShipName': 'White Clover Markets',
    'ShipAddress': '1029 - 12th Ave. S.',
    'ShipCity': 'Seattle',
    'ShipRegion': 'WA',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 11033,
    'CustomerID': 'RICSU',
    'OrderDate': '1998-04-17T00:00:00.000Z',
    'ShippedDate': '1998-04-23T00:00:00.000Z',
    'Freight': 84.74,
    'ShipName': 'Richter Supermarkt',
    'ShipAddress': 'Starenweg 5',
    'ShipCity': 'Genève',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
  {
    'OrderID': 11034,
    'CustomerID': 'OLDWO',
    'OrderDate': '1998-04-20T00:00:00.000Z',
    'ShippedDate': '1998-04-27T00:00:00.000Z',
    'Freight': 40.32,
    'ShipName': 'Old World Delicatessen',
    'ShipAddress': '2743 Bering St.',
    'ShipCity': 'Anchorage',
    'ShipRegion': 'AK',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 11035,
    'CustomerID': 'SUPRD',
    'OrderDate': '1998-04-20T00:00:00.000Z',
    'ShippedDate': '1998-04-24T00:00:00.000Z',
    'Freight': 0.17,
    'ShipName': 'Suprêmes délices',
    'ShipAddress': 'Boulevard Tirou, 255',
    'ShipCity': 'Charleroi',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
    'OrderID': 11036,
    'CustomerID': 'DRACD',
    'OrderDate': '1998-04-20T00:00:00.000Z',
    'ShippedDate': '1998-04-22T00:00:00.000Z',

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    'Freight': 149.47,
    'ShipName': 'Drachenblut Delikatessen',
    'ShipAddress': 'Walserweg 21',
    'ShipCity': 'Aachen',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 11037,
    'CustomerID': 'GODOS',
    'OrderDate': '1998-04-21T00:00:00.000Z',
    'ShippedDate': '1998-04-27T00:00:00.000Z',
    'Freight': 3.2,
    'ShipName': 'Godos Cocina Típica',
    'ShipAddress': 'C/ Romero, 33',
    'ShipCity': 'Sevilla',
    'ShipRegion': null,
    'ShipCountry': 'Spain'
  },
  {
    'OrderID': 11038,
    'CustomerID': 'SUPRD',
    'OrderDate': '1998-04-21T00:00:00.000Z',
    'ShippedDate': '1998-04-30T00:00:00.000Z',
    'Freight': 29.59,
    'ShipName': 'Suprêmes délices',
    'ShipAddress': 'Boulevard Tirou, 255',
    'ShipCity': 'Charleroi',
    'ShipRegion': null,
    'ShipCountry': 'Belgium'
  },
  {
    'OrderID': 11039,
    'CustomerID': 'LINOD',
    'OrderDate': '1998-04-21T00:00:00.000Z',
    'ShippedDate': null,
    'Freight': 65,
    'ShipName': 'LINO-Delicateses',
    'ShipAddress': 'Ave. 5 de Mayo Porlamar',
    'ShipCity': 'I. de Margarita',
    'ShipRegion': 'Nueva Esparta',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 11040,
    'CustomerID': 'GREAL',
    'OrderDate': '1998-04-22T00:00:00.000Z',
    'ShippedDate': null,
    'Freight': 18.84,
    'ShipName': 'Great Lakes Food Market',
    'ShipAddress': '2732 Baker Blvd.',
    'ShipCity': 'Eugene',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 11041,

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    'CustomerID': 'CHOPS',
    'OrderDate': '1998-04-22T00:00:00.000Z',
    'ShippedDate': '1998-04-28T00:00:00.000Z',
    'Freight': 48.22,
    'ShipName': 'Chop-suey Chinese',
    'ShipAddress': 'Hauptstr. 31',
    'ShipCity': 'Bern',
    'ShipRegion': null,
    'ShipCountry': 'Switzerland'
  },
  {
    'OrderID': 11042,
    'CustomerID': 'COMMI',
    'OrderDate': '1998-04-22T00:00:00.000Z',
    'ShippedDate': '1998-05-01T00:00:00.000Z',
    'Freight': 29.99,
    'ShipName': 'Comércio Mineiro',
    'ShipAddress': 'Av. dos Lusíadas, 23',
    'ShipCity': 'Sao Paulo',
    'ShipRegion': 'SP',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 11043,
    'CustomerID': 'SPECB',
    'OrderDate': '1998-04-22T00:00:00.000Z',
    'ShippedDate': '1998-04-29T00:00:00.000Z',
    'Freight': 8.8,
    'ShipName': 'Spécialités du monde',
    'ShipAddress': '25, rue Lauriston',
    'ShipCity': 'Paris',
    'ShipRegion': null,
    'ShipCountry': 'France'
  },
  {
    'OrderID': 11044,
    'CustomerID': 'WOLZA',
    'OrderDate': '1998-04-23T00:00:00.000Z',
    'ShippedDate': '1998-05-01T00:00:00.000Z',
    'Freight': 8.72,
    'ShipName': 'Wolski Zajazd',
    'ShipAddress': 'ul. Filtrowa 68',
    'ShipCity': 'Warszawa',
    'ShipRegion': null,
    'ShipCountry': 'Poland'
  },
  {
    'OrderID': 11045,
    'CustomerID': 'BOTTM',
    'OrderDate': '1998-04-23T00:00:00.000Z',
    'ShippedDate': null,
    'Freight': 70.58,
    'ShipName': 'Bottom-Dollar Markets',
    'ShipAddress': '23 Tsawassen Blvd.',
    'ShipCity': 'Tsawassen',
    'ShipRegion': 'BC',
    'ShipCountry': 'Canada'
  }

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},
{
  'OrderID': 11046,
  'CustomerID': 'WANDK',
  'OrderDate': '1998-04-23T00:00:00.000Z',
  'ShippedDate': '1998-04-24T00:00:00.000Z',
  'Freight': 71.64,
  'ShipName': 'Die Wandernde Kuh',
  'ShipAddress': 'Adenauerallee 900',
  'ShipCity': 'Stuttgart',
  'ShipRegion': null,
  'ShipCountry': 'Germany'
},
{
  'OrderID': 11047,
  'CustomerID': 'EASTC',
  'OrderDate': '1998-04-24T00:00:00.000Z',
  'ShippedDate': '1998-05-01T00:00:00.000Z',
  'Freight': 46.62,
  'ShipName': 'Eastern Connection',
  'ShipAddress': '35 King George',
  'ShipCity': 'London',
  'ShipRegion': null,
  'ShipCountry': 'UK'
},
{
  'OrderID': 11048,
  'CustomerID': 'BOTTM',
  'OrderDate': '1998-04-24T00:00:00.000Z',
  'ShippedDate': '1998-04-30T00:00:00.000Z',
  'Freight': 24.12,
  'ShipName': 'Bottom-Dollar Markets',
  'ShipAddress': '23 Tsawassen Blvd.',
  'ShipCity': 'Tsawassen',
  'ShipRegion': 'BC',
  'ShipCountry': 'Canada'
},
{
  'OrderID': 11049,
  'CustomerID': 'GOURL',
  'OrderDate': '1998-04-24T00:00:00.000Z',
  'ShippedDate': '1998-05-04T00:00:00.000Z',
  'Freight': 8.34,
  'ShipName': 'Gourmet Lanchonetes',
  'ShipAddress': 'Av. Brasil, 442',
  'ShipCity': 'Campinas',
  'ShipRegion': 'SP',
  'ShipCountry': 'Brazil'
},
{
  'OrderID': 11050,
  'CustomerID': 'FOLKO',
  'OrderDate': '1998-04-27T00:00:00.000Z',
  'ShippedDate': '1998-05-05T00:00:00.000Z',
  'Freight': 59.41,
  'ShipName': 'Folk och fä HB',
  'ShipAddress': 'Åkergatan 24',
```

```

        'ShipCity': 'Bräcke',
        'ShipRegion': null,
        'ShipCountry': 'Sweden'
    },
    {
        'OrderID': 11051,
        'CustomerID': 'LAMAI',
        'OrderDate': '1998-04-27T00:00:00.000Z',
        'ShippedDate': null,
        'Freight': 2.79,
        'ShipName': 'La maison d\'Asie',
        'ShipAddress': '1 rue Alsace-Lorraine',
        'ShipCity': 'Toulouse',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 11052,
        'CustomerID': 'HANAR',
        'OrderDate': '1998-04-27T00:00:00.000Z',
        'ShippedDate': '1998-05-01T00:00:00.000Z',
        'Freight': 67.26,
        'ShipName': 'Hanari Carnes',
        'ShipAddress': 'Rua do Paço, 67',
        'ShipCity': 'Rio de Janeiro',
        'ShipRegion': 'RJ',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 11053,
        'CustomerID': 'PICCO',
        'OrderDate': '1998-04-27T00:00:00.000Z',
        'ShippedDate': '1998-04-29T00:00:00.000Z',
        'Freight': 53.05,
        'ShipName': 'Piccolo und mehr',
        'ShipAddress': 'Geislweg 14',
        'ShipCity': 'Salzburg',
        'ShipRegion': null,
        'ShipCountry': 'Austria'
    },
    {
        'OrderID': 11054,
        'CustomerID': 'CACTU',
        'OrderDate': '1998-04-28T00:00:00.000Z',
        'ShippedDate': '1998-04-29T00:00:00.000Z',
        'Freight': 0.33,
        'ShipName': 'Cactus Comidas para llevar',
        'ShipAddress': 'Cerrito 333',
        'ShipCity': 'Buenos Aires',
        'ShipRegion': null,
        'ShipCountry': 'Argentina'
    },
    {
        'OrderID': 11055,
        'CustomerID': 'HILAA',
        'OrderDate': '1998-04-28T00:00:00.000Z',
        'ShippedDate': '1998-05-05T00:00:00.000Z',

```

```

    'Freight': 120.92,
    'ShipName': 'HILARION-Abastos',
    'ShipAddress': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'ShipCity': 'San Cristóbal',
    'ShipRegion': 'Táchira',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 11056,
    'CustomerID': 'EASTC',
    'OrderDate': '1998-04-28T00:00:00.000Z',
    'ShippedDate': '1998-05-01T00:00:00.000Z',
    'Freight': 278.96,
    'ShipName': 'Eastern Connection',
    'ShipAddress': '35 King George',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 11057,
    'CustomerID': 'NORTS',
    'OrderDate': '1998-04-29T00:00:00.000Z',
    'ShippedDate': '1998-05-01T00:00:00.000Z',
    'Freight': 4.13,
    'ShipName': 'North/South',
    'ShipAddress': 'South House 300 Queensbridge',
    'ShipCity': 'London',
    'ShipRegion': null,
    'ShipCountry': 'UK'
  },
  {
    'OrderID': 11058,
    'CustomerID': 'BLAUS',
    'OrderDate': '1998-04-29T00:00:00.000Z',
    'ShippedDate': null,
    'Freight': 31.14,
    'ShipName': 'Blauer See Delikatessen',
    'ShipAddress': 'Forsterstr. 57',
    'ShipCity': 'Mannheim',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 11059,
    'CustomerID': 'RICAR',
    'OrderDate': '1998-04-29T00:00:00.000Z',
    'ShippedDate': null,
    'Freight': 85.8,
    'ShipName': 'Ricardo Adocicados',
    'ShipAddress': 'Av. Copacabana, 267',
    'ShipCity': 'Rio de Janeiro',
    'ShipRegion': 'RJ',
    'ShipCountry': 'Brazil'
  },
  {
    'OrderID': 11060,

```



```

    'CustomerID': 'FRANS',
    'OrderDate': '1998-04-30T00:00:00.000Z',
    'ShippedDate': '1998-05-04T00:00:00.000Z',
    'Freight': 10.98,
    'ShipName': 'Franchi S.p.A.',
    'ShipAddress': 'Via Monte Bianco 34',
    'ShipCity': 'Torino',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 11061,
    'CustomerID': 'GREAL',
    'OrderDate': '1998-04-30T00:00:00.000Z',
    'ShippedDate': null,
    'Freight': 14.01,
    'ShipName': 'Great Lakes Food Market',
    'ShipAddress': '2732 Baker Blvd.',
    'ShipCity': 'Eugene',
    'ShipRegion': 'OR',
    'ShipCountry': 'USA'
  },
  {
    'OrderID': 11062,
    'CustomerID': 'REGGC',
    'OrderDate': '1998-04-30T00:00:00.000Z',
    'ShippedDate': null,
    'Freight': 29.93,
    'ShipName': 'Reggiani Caseifici',
    'ShipAddress': 'Strada Provinciale 124',
    'ShipCity': 'Reggio Emilia',
    'ShipRegion': null,
    'ShipCountry': 'Italy'
  },
  {
    'OrderID': 11063,
    'CustomerID': 'HUNGO',
    'OrderDate': '1998-04-30T00:00:00.000Z',
    'ShippedDate': '1998-05-06T00:00:00.000Z',
    'Freight': 81.73,
    'ShipName': 'Hungry Owl All-Night Grocers',
    'ShipAddress': '8 Johnstown Road',
    'ShipCity': 'Cork',
    'ShipRegion': 'Co. Cork',
    'ShipCountry': 'Ireland'
  },
  {
    'OrderID': 11064,
    'CustomerID': 'SAVEA',
    'OrderDate': '1998-05-01T00:00:00.000Z',
    'ShippedDate': '1998-05-04T00:00:00.000Z',
    'Freight': 30.09,
    'ShipName': 'Save-a-lot Markets',
    'ShipAddress': '187 Suffolk Ln.',
    'ShipCity': 'Boise',
    'ShipRegion': 'ID',
    'ShipCountry': 'USA'
  }

```

```

    },
    {
        'OrderID': 11065,
        'CustomerID': 'LILAS',
        'OrderDate': '1998-05-01T00:00:00.000Z',
        'ShippedDate': null,
        'Freight': 12.91,
        'ShipName': 'LILA-Supermercado',
        'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
        'ShipCity': 'Barquisimeto',
        'ShipRegion': 'Lara',
        'ShipCountry': 'Venezuela'
    },
    {
        'OrderID': 11066,
        'CustomerID': 'WHITC',
        'OrderDate': '1998-05-01T00:00:00.000Z',
        'ShippedDate': '1998-05-04T00:00:00.000Z',
        'Freight': 44.72,
        'ShipName': 'White Clover Markets',
        'ShipAddress': '1029 - 12th Ave. S.',
        'ShipCity': 'Seattle',
        'ShipRegion': 'WA',
        'ShipCountry': 'USA'
    },
    {
        'OrderID': 11067,
        'CustomerID': 'DRACD',
        'OrderDate': '1998-05-04T00:00:00.000Z',
        'ShippedDate': '1998-05-06T00:00:00.000Z',
        'Freight': 7.98,
        'ShipName': 'Drachenblut Delikatessen',
        'ShipAddress': 'Walserweg 21',
        'ShipCity': 'Aachen',
        'ShipRegion': null,
        'ShipCountry': 'Germany'
    },
    {
        'OrderID': 11068,
        'CustomerID': 'QUEEN',
        'OrderDate': '1998-05-04T00:00:00.000Z',
        'ShippedDate': null,
        'Freight': 81.75,
        'ShipName': 'Queen Cozinha',
        'ShipAddress': 'Alameda dos Canários, 891',
        'ShipCity': 'Sao Paulo',
        'ShipRegion': 'SP',
        'ShipCountry': 'Brazil'
    },
    {
        'OrderID': 11069,
        'CustomerID': 'TORTU',
        'OrderDate': '1998-05-04T00:00:00.000Z',
        'ShippedDate': '1998-05-06T00:00:00.000Z',
        'Freight': 15.67,
        'ShipName': 'Tortuga Restaurante',
        'ShipAddress': 'Avda. Azteca 123',
    }

```

```

    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 11070,
    'CustomerID': 'LEHMS',
    'OrderDate': '1998-05-05T00:00:00.000Z',
    'ShippedDate': null,
    'Freight': 136,
    'ShipName': 'Lehmanns Marktstand',
    'ShipAddress': 'Magazinweg 7',
    'ShipCity': 'Frankfurt a.M.',
    'ShipRegion': null,
    'ShipCountry': 'Germany'
  },
  {
    'OrderID': 11071,
    'CustomerID': 'LILAS',
    'OrderDate': '1998-05-05T00:00:00.000Z',
    'ShippedDate': null,
    'Freight': 0.93,
    'ShipName': 'LILA-Supermercado',
    'ShipAddress': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'ShipCity': 'Barquisimeto',
    'ShipRegion': 'Lara',
    'ShipCountry': 'Venezuela'
  },
  {
    'OrderID': 11072,
    'CustomerID': 'ERNSH',
    'OrderDate': '1998-05-05T00:00:00.000Z',
    'ShippedDate': null,
    'Freight': 258.64,
    'ShipName': 'Ernst Handel',
    'ShipAddress': 'Kirchgasse 6',
    'ShipCity': 'Graz',
    'ShipRegion': null,
    'ShipCountry': 'Austria'
  },
  {
    'OrderID': 11073,
    'CustomerID': 'PERIC',
    'OrderDate': '1998-05-05T00:00:00.000Z',
    'ShippedDate': null,
    'Freight': 24.95,
    'ShipName': 'Pericles Comidas clásicas',
    'ShipAddress': 'Calle Dr. Jorge Cash 321',
    'ShipCity': 'México D.F.',
    'ShipRegion': null,
    'ShipCountry': 'Mexico'
  },
  {
    'OrderID': 11074,
    'CustomerID': 'SIMOB',
    'OrderDate': '1998-05-06T00:00:00.000Z',
    'ShippedDate': null,

```

```

        'Freight': 18.44,
        'ShipName': 'Simons bistro',
        'ShipAddress': 'Vinbæltet 34',
        'ShipCity': 'Kobenhavn',
        'ShipRegion': null,
        'ShipCountry': 'Denmark'
    },
    {
        'OrderID': 11075,
        'CustomerID': 'RICSU',
        'OrderDate': '1998-05-06T00:00:00.000Z',
        'ShippedDate': null,
        'Freight': 6.19,
        'ShipName': 'Richter Supermarkt',
        'ShipAddress': 'Starenweg 5',
        'ShipCity': 'Genève',
        'ShipRegion': null,
        'ShipCountry': 'Switzerland'
    },
    {
        'OrderID': 11076,
        'CustomerID': 'BONAP',
        'OrderDate': '1998-05-06T00:00:00.000Z',
        'ShippedDate': null,
        'Freight': 38.28,
        'ShipName': 'Bon app',
        'ShipAddress': '12, rue des Bouchers',
        'ShipCity': 'Marseille',
        'ShipRegion': null,
        'ShipCountry': 'France'
    },
    {
        'OrderID': 11077,
        'CustomerID': 'RATTC',
        'OrderDate': '1998-05-06T00:00:00.000Z',
        'ShippedDate': null,
        'Freight': 8.53,
        'ShipName': 'Rattlesnake Canyon Grocery',
        'ShipAddress': '2817 Milton Dr.',
        'ShipCity': 'Albuquerque',
        'ShipRegion': 'NM',
        'ShipCountry': 'USA'
    }
]);
export let orderData: any = JSON.parse(stringData, function (field, value) {
    var dupValue = value;
    if (typeof value === 'string' && /^(\\d{4}\\-\\d\\d\\-\\d\\d([tT][\\d:\\.]*){1})([zZ]|([+\\-])(\\d\\d):(?(\\d\\d))?$/).test(value)) {
        var arr = dupValue.split(/^[^0-9]/);
        var arg = parseInt(arr[4], 10);
        var arg1 = parseInt(arr[5], 10);
        value = new Date(parseInt(arr[0], 10), parseInt(arr[1], 10) - 1,
            parseInt(arr[2], 10), parseInt(arr[3], 10), arg, arg1);
    }
    return value;
});
export let data = orderData.map(function (item:any) {

```

```
var name = customerData.filter(function (cItem:any) {  
    return cItem.CustomerID === item.CustomerID;  
})[0];  
item.CustomerName = (name || {}).ContactName;  
return item;  
});
```

To prevent unnecessary re-rendering, you can utilize the `useMemo` and `useCallback` hook.

Testing the React application using Jest

React [Jest](#) testing is a popular approach to test React applications using the Jest testing framework. This approach involves the creation and execution of unit tests specifically designed for React components. By conducting unit testing, which focuses on testing isolated units of code like functions, methods, and components to ensure that they behave as expected. This approach validates the individual units of your React components, catch potential bugs early in the development process, and maintains the reliability and stability of your React application. To create a Jest test case for the Grid component, follow the below steps:

Step 1: Set up the Jest testing environment

I. Check and install the node version:

You need to verify if the installed version of Node is 14 or higher. If it is below version 14, you must install a version of Node above 14. You can refer the following link to install the [node version](#). You can select the any node version is 14 or above and installed.

II. Create an React application and install the Syncfusion Grid package:

To create an React application and install the Syncfusion Grid package, you can refer to the [Getting started](#) documentation.

III. Install the Jest:

When react application is installed, the dependency for Jest should be automatically installed. To verify if the Jest dependency is installed, you can check the **package.json** file. If the Jest dependency is not installed, you can run the following command to install the Jest dependency using npm.

`

```
npm install --save-dev jest
```

`

IV. Install the testing library package:

Run the following command to install the testing library package using npm.

`

```
npm install --save-dev @testing-library/jest-dom
```

`

Step 2: Adding a Grid component

Refer to the [documentation](#) to add the styling for the Grid component. The following code is used in this demonstration to create a Grid component. For further information on creating the Grid component, refer to the detailed [documentation](#).

App.tsx:

```
`typescript
import * as React from 'react';
import { ColumnDirective, ColumnsDirective, GridComponent } from '@syncfusion/ej2-react-grids';
// import the your datasource instead of this
import { customerData } from './dataSource';
import './App.css';
function App() {
  return (<div>
    <GridComponent dataSource={customerData.slice(0,5)} height={315}>
    <ColumnsDirective>
    <ColumnDirective field='CustomerID' headerText='Customer ID' width='100' />
    <ColumnDirective field='ContactName' headerText='CustomerName' width='100' textAlign="Right" />
    <ColumnDirective field='Address' headerText='Address' width='80' textAlign="Right" />
    <ColumnDirective field='Country' headerText='Country' width='100' />
    </ColumnsDirective>
    </GridComponent>
  </div>)
};
export default App;
`
```

Step 3: To implement the Jest test case.

You can write the Jest test case in the test.tsx extension file. You need to import the below required files in your component. You need to import the `render` function from the `@testing-library/react` package. This function is used to render the component for react testing. To test a specific component, you need to import it into your testing environment. In this demo, we have written the grid component in the **App** file. So, you need to import the **App** file in the Jest test case.

```
`typescript
import { render } from '@testing-library/react';
import App from './App';
`
```

I. Define test suite:

The `describe` function is utilized to define the test suite. Within the `describe` function, you can use the `beforeEach` function. This function to execute the before each test case. Inside the `beforeEach` function, The Jest mock function is assign to the `windows.crypto`. By using `jest.fn`, we are creating a

mock implementation for the `crypto` object. The another Jest mock function is assign to the `window.crypto.getRandomValues`. This is done to replace the original implementation of the `getRandomValues` method with a mock implementation for testing.

```
`typescript
window.crypto = jest.fn() as any;
window.crypto.getRandomValues = jest.fn();
`
```

II. Types of testing:

You need to add the different types of test cases in a `it` block.

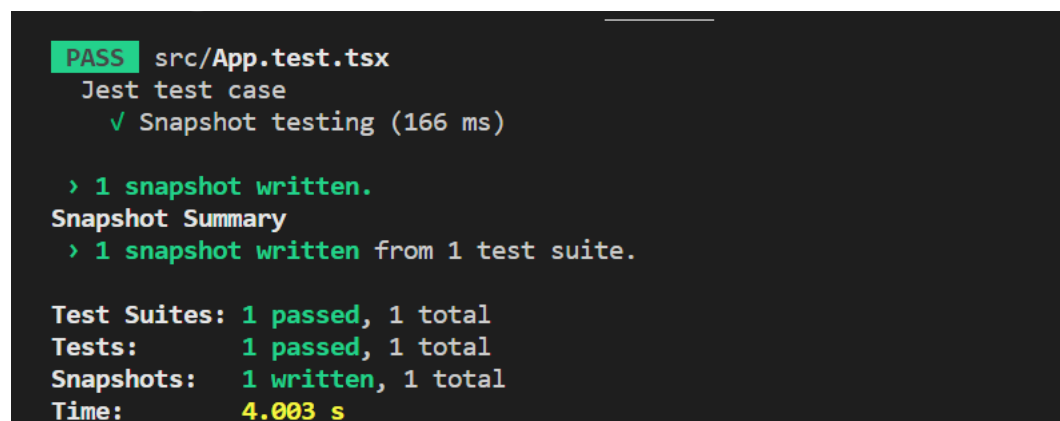
1. Snapshot Testing:

The Snapshot testing involves capturing a snapshot of the rendered output of a component and comparing it against a previously stored snapshot. If the current output matches the stored snapshot, the test case will be passed successfully.

Example:

In the below example, the `it` block is utilized to define a test case for **Snapshot testing**. Within the test case, the `<App/>` component is rendered within the container object. After, the `expect` statement verifies that the container matches the stored snapshot, utilizing the `toMatchSnapshot` matcher provided by Jest.

```
`typescript
it('Snapshot testing', () => {
  const { container } = render(<App />);
  expect(container).toMatchSnapshot();
});
`
```



```
PASS src/App.test.tsx
  Jest test case
    ✓ Snapshot testing (166 ms)

    > 1 snapshot written.
  Snapshot Summary
    > 1 snapshot written from 1 test suite.

Test Suites: 1 passed, 1 total
Tests:       1 passed, 1 total
Snapshots:   1 written, 1 total
Time:        4.003 s
```

2. DOM testing:

The **DOM** testing involves testing the behavior and interact of React component. This goal is to ensure that the component function correctly and produce the expected output when interacting with the

DOM. You can utilize libraries like **react-testing-library**, **Enzyme**, or **React's TestUtils** to manipulate the rendered component in the DOM testing.

Example:

In the below example, the `it` block is used to define a test case for the "Length of the record". Within the test case, render the `<App/>` component in the container object. After, you need to create the instance of grid component. We check that the data grid in the data source has the appropriate number of data records. The `dataSource` property is employed to retrieve the record of the data. By utilizing this property, we can verify the accurate population of data length in the grid component.

```
`typescript
it('Length of the record', () => {
  const { container } = render(<App />);
  // eslint-disable-next-line testing-library/no-container, testing-library/no-node-access
  const gridElement = container.getElementsByClassName('e-grid');
  const gridInstance = (gridElement as any)[0].ej2_instances[0];
  expect(gridInstance.dataSource).toHaveLength(5);
});
`
```

The following example illustrates how to create the grid sample and how to write the Jest test case.

APP.TSX

```
import * as React from 'react';
import { ColumnDirective, ColumnsDirective, GridComponent } from
 '@syncfusion/ej2-react-grids';
import { customerData } from './dataSource';
function App() {
  return (
    <div>
      <GridComponent dataSource={customerData.slice(0, 5)} height={315}>
        <ColumnsDirective>
          <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
          <ColumnDirective field='ContactName' headerText='ContactName'
width='100' textAlign="Right" />
          <ColumnDirective field='Address' headerText='Address'
width='80' textAlign="Right"/>
          <ColumnDirective field='Country' headerText='Country'
width='100' />
        </ColumnsDirective>
      </GridComponent>
    </div>
  );
};
export default App;
```

APP.TEST.TSX

```
import React from 'react';
import { render } from '@testing-library/react';
```



```
import App from './App';
const { getComputedStyle } = global.window;
describe('Jest test case', () =>{
  beforeEach(() =>{
    window.crypto = jest.fn() as any;
    window.crypto.getRandomValues = jest.fn();
    window.getComputedStyle = (elem, select) => getComputedStyle(elem,
select);
  });
  it('Length of the record', () => {
    const { container } = render(<App />);
    // eslint-disable-next-line testing-library/no-container, testing-
library/no-node-access
    const gridElement = container.getElementsByClassName('e-grid');
    const gridInstance = (gridElement as any)[0].ej2_instances[0];
    expect(gridInstance.dataSource).toHaveLength(5);
  });
});
```

SNAP.TEST.TSX

```
import React from 'react';
import { render } from '@testing-library/react';
import App from './App';
const { getComputedStyle } = global.window;
describe('Jest test case', () =>{
  beforeEach(() =>{
    window.crypto = jest.fn() as any;
    window.crypto.getRandomValues = jest.fn();
    window.getComputedStyle = (elem, select) => getComputedStyle(elem,
select);
  });
  it('Snapshot testing', () => {
    const { container } = render(<App />);
    expect(container).toMatchSnapshot();
  });
});
```

APP.JSX

```
import React from 'react';
import { GridComponent, ColumnsDirective, ColumnDirective } from
'@syncfusion/ej2-react-grids';
import { customerData } from './datasource';
function App() {
  return (<div>
    <GridComponent dataSource={customerData.slice(0,5)} height={315}>
      <ColumnsDirective>
        <ColumnDirective field='CustomerID' headerText='Customer ID'
width='100' />
        <ColumnDirective field='ContactName' headerText='ContactName'
width='100' textAlign="Right" />
        <ColumnDirective field='Address' headerText='Address'
width='80' textAlign="Right"/>
        <ColumnDirective field='Country' headerText='Country'
width='100' />
      </ColumnsDirective>
    </GridComponent>
  </div>);
```

```

        </ColumnsDirective>
      </GridComponent>
    </div>);
  };
  export default App;

```

APP.TEST.JSX

```

import React from 'react';
import { render } from '@testing-library/react';
import App from './App';
const { getComputedStyle } = global.window;
describe('Jest test case', () =>{
  beforeEach(() =>{
    window.crypto = jest.fn();
    window.crypto.getRandomValues = jest.fn();
    window.getComputedStyle = (elem, select) => getComputedStyle(elem,
select);
  });
  it('Length of the record', () => {
    var { container } = render(<App />);
    // eslint-disable-next-line testing-library/no-container, testing-
library/no-node-access
    var gridElement = container.getElementsByClassName('e-grid');
    var gridInstance = (gridElement)[0].ej2_instances[0];
    expect(gridInstance.dataSource).toHaveLength(5);
  });
});

```

SNAP.TEST.JSX

```

import React from 'react';
import { render } from '@testing-library/react';
import App from './App';
const { getComputedStyle } = global.window;
describe('Jest test case', () =>{
  beforeEach(() =>{
    window.crypto = jest.fn();
    window.crypto.getRandomValues = jest.fn();
    window.getComputedStyle = (elem, select) => getComputedStyle(elem,
select);
  });
  it('Snapshot testing', () => {
    var { container } = render(<App />);
    expect(container).toMatchSnapshot();
  });
});

```

DATASOURCE.TSX

```

export let customerData = [
  {
    'CustomerID': 'ALFKI',
    'ContactName': 'Maria ',
    'CompanyName': 'Alfreds Futterkiste',

```

```
'Address': 'Obere Str. 57',
'Country': 'Germany'
},
{
  'CustomerID': 'ANATR',
  'ContactName': 'Ana Trujillo',
  'CompanyName': 'Ana Trujillo Emparedados y helados',
  'Address': 'Avda. de la Constitución 2222',
  'Country': 'Mexico'
},
{
  'CustomerID': 'ANTON',
  'ContactName': 'Antonio Moreno',
  'CompanyName': 'Antonio Moreno Taquería',
  'Address': 'Mataderos 2312',
  'Country': 'Mexico'
},
{
  'CustomerID': 'AROUT',
  'ContactName': 'Thomas Hardy',
  'CompanyName': 'Around the Horn',
  'Address': '120 Hanover Sq.',
  'Country': 'UK'
},
{
  'CustomerID': 'BERGS',
  'ContactName': 'Christina Berglund',
  'CompanyName': 'Berglunds snabbköp',
  'Address': 'Berguvsvägen 8',
  'Country': 'Sweden'
},
{
  'CustomerID': 'BLAUS',
  'ContactName': 'Hanna Moos',
  'CompanyName': 'Blauer See Delikatessen',
  'Address': 'Forsterstr. 57',
  'Country': 'Germany'
},
{
  'CustomerID': 'BLONP',
  'ContactName': 'Frédérique Citeaux',
  'CompanyName': 'Blondesddsl père et fils',
  'Address': '24, place Kléber',
  'Country': 'France'
},
{
  'CustomerID': 'BOLID',
  'ContactName': 'Martín Sommer',
  'CompanyName': 'Bólido Comidas preparadas',
  'Address': 'C/ Araquil, 67',
  'Country': 'Spain'
},
{
  'CustomerID': 'BONAP',
  'ContactName': 'Laurence Lebihan',
  'CompanyName': 'Bon app',
  'Address': '12, rue des Bouchers',
```

```
    'Country': 'France'
  },
  {
    'CustomerID': 'BOTTM',
    'ContactName': 'Elizabeth Lincoln',
    'CompanyName': 'Bottom-Dollar Markets',
    'Address': '23 Tsawassen Blvd.',
    'Country': 'Canada'
  },
  {
    'CustomerID': 'BSBEV',
    'ContactName': 'Victoria Ashworth',
    'CompanyName': 'B\'s Beverages',
    'Address': 'Fauntleroy Circus',
    'Country': 'UK'
  },
  {
    'CustomerID': 'CACTU',
    'ContactName': 'Patricio Simpson',
    'CompanyName': 'Cactus Comidas para llevar',
    'Address': 'Cerrito 333',
    'Country': 'Argentina'
  },
  {
    'CustomerID': 'CENTC',
    'ContactName': 'Francisco Chang',
    'CompanyName': 'Centro comercial Moctezuma',
    'Address': 'Sierras de Granada 9993',
    'Country': 'Mexico'
  },
  {
    'CustomerID': 'CHOPS',
    'ContactName': 'Yang Wang',
    'CompanyName': 'Chop-suey Chinese',
    'Address': 'Hauptstr. 29',
    'Country': 'Switzerland'
  },
  {
    'CustomerID': 'COMMI',
    'ContactName': 'Pedro Afonso',
    'CompanyName': 'Comércio Mineiro',
    'Address': 'Av. dos Lusíadas, 23',
    'Country': 'Brazil'
  },
  {
    'CustomerID': 'CONSH',
    'ContactName': 'Elizabeth Brown',
    'CompanyName': 'Consolidated Holdings',
    'Address': 'Berkeley Gardens 12 Brewery',
    'Country': 'UK'
  },
  {
    'CustomerID': 'DRACD',
    'ContactName': 'Sven Ottlieb',
    'CompanyName': 'Drachenblut Delikatessen',
    'Address': 'Walserweg 21',
    'Country': 'Germany'
  }
```

```
},
{
  'CustomerID': 'DUMON',
  'ContactName': 'Janine Labrune',
  'CompanyName': 'Du monde entier',
  'Address': '67, rue des Cinquante Otages',
  'Country': 'France'
},
{
  'CustomerID': 'EASTC',
  'ContactName': 'Ann Devon',
  'CompanyName': 'Eastern Connection',
  'Address': '35 King George',
  'Country': 'UK'
},
{
  'CustomerID': 'ERNSH',
  'ContactName': 'Roland Mendel',
  'CompanyName': 'Ernst Handel',
  'Address': 'Kirchgasse 6',
  'Country': 'Austria'
},
{
  'CustomerID': 'FAMIA',
  'ContactName': 'Aria Cruz',
  'CompanyName': 'Familia Arquibaldo',
  'Address': 'Rua Orós, 92',
  'Country': 'Brazil'
},
{
  'CustomerID': 'FISSA',
  'ContactName': 'Diego Roel',
  'CompanyName': 'FISSA Fabrica Inter. Salchichas S.A.',
  'Address': 'C/ Moralzarzal, 86',
  'Country': 'Spain'
},
{
  'CustomerID': 'FOLIG',
  'ContactName': 'Martine Rancé',
  'CompanyName': 'Folies gourmandes',
  'Address': '184, chaussée de Tournai',
  'Country': 'France'
},
{
  'CustomerID': 'FOLKO',
  'ContactName': 'Maria Larsson',
  'CompanyName': 'Folk och fä HB',
  'Address': 'Åkergatan 24',
  'Country': 'Sweden'
},
{
  'CustomerID': 'FRANK',
  'ContactName': 'Peter Franken',
  'CompanyName': 'Frankenversand',
  'Address': 'Berliner Platz 43',
  'Country': 'Germany'
},
},
```

```
{
  'CustomerID': 'FRANR',
  'ContactName': 'Carine Schmitt',
  'CompanyName': 'France restauration',
  'Address': '54, rue Royale',
  'Country': 'France'
},
{
  'CustomerID': 'FRANS',
  'ContactName': 'Paolo Accorti',
  'CompanyName': 'Franchi S.p.A.',
  'Address': 'Via Monte Bianco 34',
  'Country': 'Italy'
},
{
  'CustomerID': 'FURIB',
  'ContactName': 'Lino Rodriguez',
  'CompanyName': 'Furia Bacalhau e Frutos do Mar',
  'Address': 'Jardim das rosas n. 32',
  'Country': 'Portugal'
},
{
  'CustomerID': 'GALED',
  'ContactName': 'Eduardo Saavedra',
  'CompanyName': 'Galería del gastrónomo',
  'Address': 'Rambla de Cataluña, 23',
  'Country': 'Spain'
},
{
  'CustomerID': 'GODOS',
  'ContactName': 'José Pedro Freyre',
  'CompanyName': 'Godos Cocina Típica',
  'Address': 'C/ Romero, 33',
  'Country': 'Spain'
},
{
  'CustomerID': 'GOURL',
  'ContactName': 'André Fonseca',
  'CompanyName': 'Gourmet Lanchonetes',
  'Address': 'Av. Brasil, 442',
  'Country': 'Brazil'
},
{
  'CustomerID': 'GREAL',
  'ContactName': 'Howard Snyder',
  'CompanyName': 'Great Lakes Food Market',
  'Address': '2732 Baker Blvd.',
  'Country': 'USA'
},
{
  'CustomerID': 'GROSR',
  'ContactName': 'Manuel Pereira',
  'CompanyName': 'GROSELLA-Restaurante',
  'Address': '5ª Ave. Los Palos Grandes',
  'Country': 'Venezuela'
},
{
```

```

    'CustomerID': 'HANAR',
    'ContactName': 'Mario Pontes',
    'CompanyName': 'Hanari Carnes',
    'Address': 'Rua do Paço, 67',
    'Country': 'Brazil'
  },
  {
    'CustomerID': 'HILAA',
    'ContactName': 'Carlos Hernández',
    'CompanyName': 'HILARION-Abastos',
    'Address': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'Country': 'Venezuela'
  },
  {
    'CustomerID': 'HUNGC',
    'ContactName': 'Yoshi Latimer',
    'CompanyName': 'Hungry Coyote Import Store',
    'Address': 'City Center Plaza 516 Main St.',
    'Country': 'USA'
  },
  {
    'CustomerID': 'HUNGO',
    'ContactName': 'Patricia McKenna',
    'CompanyName': 'Hungry Owl All-Night Grocers',
    'Address': '8 Johnstown Road',
    'Country': 'Ireland'
  },
  {
    'CustomerID': 'ISLAT',
    'ContactName': 'Helen Bennett',
    'CompanyName': 'Island Trading',
    'Address': 'Garden House Crowther Way',
    'Country': 'UK'
  },
  {
    'CustomerID': 'KOENE',
    'ContactName': 'Philip Cramer',
    'CompanyName': 'Königlich Essen',
    'Address': 'Maubelstr. 90',
    'Country': 'Germany'
  },
  {
    'CustomerID': 'LACOR',
    'ContactName': 'Daniel Tonini',
    'CompanyName': 'La corne d\'abondance',
    'Address': '67, avenue de l\'Europe',
    'Country': 'France'
  },
  {
    'CustomerID': 'LAMAI',
    'ContactName': 'Annette Roulet',
    'CompanyName': 'La maison d\'Asie',
    'Address': '1 rue Alsace-Lorraine',
    'Country': 'France'
  },
  {
    'CustomerID': 'LAUGB',

```

```

    'ContactName': 'Yoshi Tannamuri',
    'CompanyName': 'Laughing Bacchus Wine Cellars',
    'Address': '1900 Oak St.',
    'Country': 'Canada'
  },
  {
    'CustomerID': 'LAZYK',
    'ContactName': 'John Steel',
    'CompanyName': 'Lazy K Kountry Store',
    'Address': '12 Orchestra Terrace',
    'Country': 'USA'
  },
  {
    'CustomerID': 'LEHMS',
    'ContactName': 'Renate Messner',
    'CompanyName': 'Lehmanns Marktstand',
    'Address': 'Magazinweg 7',
    'Country': 'Germany'
  },
  {
    'CustomerID': 'LETSS',
    'ContactName': 'Jaime Yorres',
    'CompanyName': 'Let\'s Stop N Shop',
    'Address': '87 Polk St. Suite 5',
    'Country': 'USA'
  },
  {
    'CustomerID': 'LILAS',
    'ContactName': 'Carlos González',
    'CompanyName': 'LILA-Supermercado',
    'Address': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'Country': 'Venezuela'
  },
  {
    'CustomerID': 'LINOD',
    'ContactName': 'Felipe Izquierdo',
    'CompanyName': 'LINO-Delicateses',
    'Address': 'Ave. 5 de Mayo Porlamar',
    'Country': 'Venezuela'
  },
  {
    'CustomerID': 'LONEP',
    'ContactName': 'Fran Wilson',
    'CompanyName': 'Lonesome Pine Restaurant',
    'Address': '89 Chiaroscuro Rd.',
    'Country': 'USA'
  },
  {
    'CustomerID': 'MAGAA',
    'ContactName': 'Giovanni Rovelli',
    'CompanyName': 'Magazzini Alimentari Riuniti',
    'Address': 'Via Ludovico il Moro 22',
    'Country': 'Italy'
  },
  {
    'CustomerID': 'MAISD',
    'ContactName': 'Catherine Dewey',

```



```

    'CompanyName': 'Maison Dewey',
    'Address': 'Rue Joseph-Bens 532',
    'Country': 'Belgium'
  },
  {
    'CustomerID': 'MEREP',
    'ContactName': 'Jean Fresnière',
    'CompanyName': 'Mère Paillarde',
    'Address': '43 rue St. Laurent',
    'Country': 'Canada'
  },
  {
    'CustomerID': 'MORGK',
    'ContactName': 'Alexander Feuer',
    'CompanyName': 'Morgenstern Gesundkost',
    'Address': 'Heerstr. 22',
    'Country': 'Germany'
  },
  {
    'CustomerID': 'NORTS',
    'ContactName': 'Simon Crowther',
    'CompanyName': 'North/South',
    'Address': 'South House 300 Queensbridge',
    'Country': 'UK'
  },
  {
    'CustomerID': 'OCEAN',
    'ContactName': 'Yvonne Moncada',
    'CompanyName': 'Océano Atlántico Ltda.',
    'Address': 'Ing. Gustavo Moncada 8585 Piso 20-A',
    'Country': 'Argentina'
  },
  {
    'CustomerID': 'OLDWO',
    'ContactName': 'Rene Phillips',
    'CompanyName': 'Old World Delicatessen',
    'Address': '2743 Bering St.',
    'Country': 'USA'
  },
  {
    'CustomerID': 'OTTIK',
    'ContactName': 'Henriette Pfalzheim',
    'CompanyName': 'Ottilies Käseladen',
    'Address': 'Mehrheimerstr. 369',
    'Country': 'Germany'
  },
  {
    'CustomerID': 'PARIS',
    'ContactName': 'Marie Bertrand',
    'CompanyName': 'Paris spécialités',
    'Address': '265, boulevard Charonne',
    'Country': 'France'
  },
  {
    'CustomerID': 'PERIC',
    'ContactName': 'Guillermo Fernández',
    'CompanyName': 'Pericles Comidas clásicas',

```

```

        'Address': 'Calle Dr. Jorge Cash 321',
        'Country': 'Mexico'
    },
    {
        'CustomerID': 'PICCO',
        'ContactName': 'Georg Pipps',
        'CompanyName': 'Piccolo und mehr',
        'Address': 'Geislweg 14',
        'Country': 'Austria'
    },
    {
        'CustomerID': 'PRINI',
        'ContactName': 'Isabel de Castro',
        'CompanyName': 'Princesa Isabel Vinhos',
        'Address': 'Estrada da saúde n. 58',
        'Country': 'Portugal'
    },
    {
        'CustomerID': 'QUEDE',
        'ContactName': 'Bernardo Batista',
        'CompanyName': 'Que Delícia',
        'Address': 'Rua da Panificadora, 12',
        'Country': 'Brazil'
    },
    {
        'CustomerID': 'QUEEN',
        'ContactName': 'Lúcia Carvalho',
        'CompanyName': 'Queen Cozinha',
        'Address': 'Alameda dos Canários, 891',
        'Country': 'Brazil'
    },
    {
        'CustomerID': 'QUICK',
        'ContactName': 'Horst Kloss',
        'CompanyName': 'QUICK-Stop',
        'Address': 'Taucherstraße 10',
        'Country': 'Germany'
    },
    {
        'CustomerID': 'RANCH',
        'ContactName': 'Sergio Gutiérrez',
        'CompanyName': 'Rancho grande',
        'Address': 'Av. del Libertador 900',
        'Country': 'Argentina'
    },
    {
        'CustomerID': 'RATTC',
        'ContactName': 'Paula Wilson',
        'CompanyName': 'Rattlesnake Canyon Grocery',
        'Address': '2817 Milton Dr.',
        'Country': 'USA'
    },
    {
        'CustomerID': 'REGGC',
        'ContactName': 'Maurizio Moroni',
        'CompanyName': 'Reggiani Caseifici',
        'Address': 'Strada Provinciale 124',

```

```
    'Country': 'Italy'
  },
  {
    'CustomerID': 'RICAR',
    'ContactName': 'Janete Limeira',
    'CompanyName': 'Ricardo Adocicados',
    'Address': 'Av. Copacabana, 267',
    'Country': 'Brazil'
  },
  {
    'CustomerID': 'RICSU',
    'ContactName': 'Michael Holz',
    'CompanyName': 'Richter Supermarkt',
    'Address': 'Grenzacherweg 237',
    'Country': 'Switzerland'
  },
  {
    'CustomerID': 'ROMEY',
    'ContactName': 'Alejandra Camino',
    'CompanyName': 'Romero y tomillo',
    'Address': 'Gran Vía, 1',
    'Country': 'Spain'
  },
  {
    'CustomerID': 'SANTG',
    'ContactName': 'Jonas Bergulfsen',
    'CompanyName': 'Santé Gourmet',
    'Address': 'Erling Skakkess gate 78',
    'Country': 'Norway'
  },
  {
    'CustomerID': 'SAVEA',
    'ContactName': 'Jose Pavarotti',
    'CompanyName': 'Save-a-lot Markets',
    'Address': '187 Suffolk Ln.',
    'Country': 'USA'
  },
  {
    'CustomerID': 'SEVES',
    'ContactName': 'Hari Kumar',
    'CompanyName': 'Seven Seas Imports',
    'Address': '90 Wadhurst Rd.',
    'Country': 'UK'
  },
  {
    'CustomerID': 'SIMOB',
    'ContactName': 'Jytte Petersen',
    'CompanyName': 'Simons bistro',
    'Address': 'Vinbæltet 34',
    'Country': 'Denmark'
  },
  {
    'CustomerID': 'SPECB',
    'ContactName': 'Dominique Perrier',
    'CompanyName': 'Spécialités du monde',
    'Address': '25, rue Lauriston',
    'Country': 'France'
  }
```

```
},
{
  'CustomerID': 'SPLIR',
  'ContactName': 'Art Braunschweiger',
  'CompanyName': 'Split Rail Beer & Ale',
  'Address': 'P.O. Box 555',
  'Country': 'USA'
},
{
  'CustomerID': 'SUPRD',
  'ContactName': 'Pascale Cartrain',
  'CompanyName': 'Suprêmes délices',
  'Address': 'Boulevard Tirou, 255',
  'Country': 'Belgium'
},
{
  'CustomerID': 'THEBI',
  'ContactName': 'Liz Nixon',
  'CompanyName': 'The Big Cheese',
  'Address': '89 Jefferson Way Suite 2',
  'Country': 'USA'
},
{
  'CustomerID': 'THECR',
  'ContactName': 'Liu Wong',
  'CompanyName': 'The Cracker Box',
  'Address': '55 Grizzly Peak Rd.',
  'Country': 'USA'
},
{
  'CustomerID': 'TOMSP',
  'ContactName': 'Karin Josephs',
  'CompanyName': 'Toms Spezialitäten',
  'Address': 'Luisenstr. 48',
  'Country': 'Germany'
},
{
  'CustomerID': 'TORTU',
  'ContactName': 'Miguel Angel Paolino',
  'CompanyName': 'Tortuga Restaurante',
  'Address': 'Avda. Azteca 123',
  'Country': 'Mexico'
},
{
  'CustomerID': 'TRADH',
  'ContactName': 'Anabela Domingues',
  'CompanyName': 'Tradição Hipermercados',
  'Address': 'Av. Inês de Castro, 414',
  'Country': 'Brazil'
},
{
  'CustomerID': 'TRAIH',
  'ContactName': 'Helvetius Nagy',
  'CompanyName': 'Trail\'s Head Gourmet Provisioners',
  'Address': '722 DaVinci Blvd.',
  'Country': 'USA'
},
},
```

```
{
  'CustomerID': 'VAFPE',
  'ContactName': 'Palle Ibsen',
  'CompanyName': 'Vaffeljernet',
  'Address': 'Smagsloget 45',
  'Country': 'Denmark'
},
{
  'CustomerID': 'VICTE',
  'ContactName': 'Mary Saveley',
  'CompanyName': 'Victuailles en stock',
  'Address': '2, rue du Commerce',
  'Country': 'France'
},
{
  'CustomerID': 'VINET',
  'ContactName': 'Paul Henriot',
  'CompanyName': 'Vins et alcools Chevalier',
  'Address': '59 rue de l\'Abbaye',
  'Country': 'France'
},
{
  'CustomerID': 'WANDK',
  'ContactName': 'Rita Müller',
  'CompanyName': 'Die Wandernde Kuh',
  'Address': 'Adenauerallee 900',
  'Country': 'Germany'
},
{
  'CustomerID': 'WARTH',
  'ContactName': 'Pirkko Koskitalo',
  'CompanyName': 'Wartian Herkku',
  'Address': 'Torikatu 38',
  'Country': 'Finland'
},
{
  'CustomerID': 'WELLI',
  'ContactName': 'Paula Parente',
  'CompanyName': 'Wellington Importadora',
  'Address': 'Rua do Mercado, 12',
  'Country': 'Brazil'
},
{
  'CustomerID': 'WHITC',
  'ContactName': 'Karl Jablonski',
  'CompanyName': 'White Clover Markets',
  'Address': '305 - 14th Ave. S. Suite 3B',
  'Country': 'USA'
},
{
  'CustomerID': 'WILMK',
  'ContactName': 'Matti Karttunen',
  'CompanyName': 'Wilman Kala',
  'Address': 'Keskuskatu 45',
  'Country': 'Finland'
},
{
```

```
    'CustomerID': 'WOLZA',
    'ContactName': 'Zbyszek Piestrzeniewicz',
    'CompanyName': 'Wolski Zajazd',
    'Address': 'ul. Filtrowa 68',
    'Country': 'Poland'
  }
];
```

DATASOURCE.JSX

```
"use strict";
Object.defineProperty(exports, "__esModule", { value: true });
exports.customerData = void 0;
exports.customerData = [
  {
    'CustomerID': 'ALFKI',
    'ContactName': 'Maria ',
    'CompanyName': 'Alfreds Futterkiste',
    'Address': 'Obere Str. 57',
    'Country': 'Germany'
  },
  {
    'CustomerID': 'ANATR',
    'ContactName': 'Ana Trujillo',
    'CompanyName': 'Ana Trujillo Emparedados y helados',
    'Address': 'Avda. de la Constitución 2222',
    'Country': 'Mexico'
  },
  {
    'CustomerID': 'ANTON',
    'ContactName': 'Antonio Moreno',
    'CompanyName': 'Antonio Moreno Taquería',
    'Address': 'Mataderos 2312',
    'Country': 'Mexico'
  },
  {
    'CustomerID': 'AROUT',
    'ContactName': 'Thomas Hardy',
    'CompanyName': 'Around the Horn',
    'Address': '120 Hanover Sq.',
    'Country': 'UK'
  },
  {
    'CustomerID': 'BERGS',
    'ContactName': 'Christina Berglund',
    'CompanyName': 'Berglunds snabbköp',
    'Address': 'Berguvsvägen 8',
    'Country': 'Sweden'
  },
  {
    'CustomerID': 'BLAUS',
    'ContactName': 'Hanna Moos',
    'CompanyName': 'Blauer See Delikatessen',
    'Address': 'Forsterstr. 57',
    'Country': 'Germany'
  },
];
```

```
{
  'CustomerID': 'BLONP',
  'ContactName': 'Frédérique Citeaux',
  'CompanyName': 'Blondesddsl père et fils',
  'Address': '24, place Kléber',
  'Country': 'France'
},
{
  'CustomerID': 'BOLID',
  'ContactName': 'Martín Sommer',
  'CompanyName': 'Bólido Comidas preparadas',
  'Address': 'C/ Araquil, 67',
  'Country': 'Spain'
},
{
  'CustomerID': 'BONAP',
  'ContactName': 'Laurence Lebihan',
  'CompanyName': 'Bon app',
  'Address': '12, rue des Bouchers',
  'Country': 'France'
},
{
  'CustomerID': 'BOTTM',
  'ContactName': 'Elizabeth Lincoln',
  'CompanyName': 'Bottom-Dollar Markets',
  'Address': '23 Tsawassen Blvd.',
  'Country': 'Canada'
},
{
  'CustomerID': 'BSBEV',
  'ContactName': 'Victoria Ashworth',
  'CompanyName': 'B\'s Beverages',
  'Address': 'Fauntleroy Circus',
  'Country': 'UK'
},
{
  'CustomerID': 'CACTU',
  'ContactName': 'Patricio Simpson',
  'CompanyName': 'Cactus Comidas para llevar',
  'Address': 'Cerrito 333',
  'Country': 'Argentina'
},
{
  'CustomerID': 'CENTC',
  'ContactName': 'Francisco Chang',
  'CompanyName': 'Centro comercial Moctezuma',
  'Address': 'Sierras de Granada 9993',
  'Country': 'Mexico'
},
{
  'CustomerID': 'CHOPS',
  'ContactName': 'Yang Wang',
  'CompanyName': 'Chop-suey Chinese',
  'Address': 'Hauptstr. 29',
  'Country': 'Switzerland'
},
{
```

```
'CustomerID': 'COMMI',
'ContactName': 'Pedro Afonso',
'CompanyName': 'Comércio Mineiro',
'Address': 'Av. dos Lusíadas, 23',
'Country': 'Brazil'
},
{
  'CustomerID': 'CONSH',
  'ContactName': 'Elizabeth Brown',
  'CompanyName': 'Consolidated Holdings',
  'Address': 'Berkeley Gardens 12 Brewery',
  'Country': 'UK'
},
{
  'CustomerID': 'DRACD',
  'ContactName': 'Sven Ottlieb',
  'CompanyName': 'Drachenblut Delikatessen',
  'Address': 'Walserweg 21',
  'Country': 'Germany'
},
{
  'CustomerID': 'DUMON',
  'ContactName': 'Janine Labrune',
  'CompanyName': 'Du monde entier',
  'Address': '67, rue des Cinquante Otages',
  'Country': 'France'
},
{
  'CustomerID': 'EASTC',
  'ContactName': 'Ann Devon',
  'CompanyName': 'Eastern Connection',
  'Address': '35 King George',
  'Country': 'UK'
},
{
  'CustomerID': 'ERNSH',
  'ContactName': 'Roland Mendel',
  'CompanyName': 'Ernst Handel',
  'Address': 'Kirchgasse 6',
  'Country': 'Austria'
},
{
  'CustomerID': 'FAMIA',
  'ContactName': 'Aria Cruz',
  'CompanyName': 'Familia Arquibaldo',
  'Address': 'Rua Orós, 92',
  'Country': 'Brazil'
},
{
  'CustomerID': 'FISSA',
  'ContactName': 'Diego Roel',
  'CompanyName': 'FISSA Fabrica Inter. Salchichas S.A.',
  'Address': 'C/ Moralzarzal, 86',
  'Country': 'Spain'
},
{
  'CustomerID': 'FOLIG',
```



```
'ContactName': 'Martine Rancé',
'CompanyName': 'Folies gourmandes',
'Address': '184, chaussée de Tournai',
'Country': 'France'
},
{
  'CustomerID': 'FOLKO',
  'ContactName': 'Maria Larsson',
  'CompanyName': 'Folk och fä HB',
  'Address': 'Åkergatan 24',
  'Country': 'Sweden'
},
{
  'CustomerID': 'FRANK',
  'ContactName': 'Peter Franken',
  'CompanyName': 'Frankenversand',
  'Address': 'Berliner Platz 43',
  'Country': 'Germany'
},
{
  'CustomerID': 'FRANR',
  'ContactName': 'Carine Schmitt',
  'CompanyName': 'France restauration',
  'Address': '54, rue Royale',
  'Country': 'France'
},
{
  'CustomerID': 'FRANS',
  'ContactName': 'Paolo Accorti',
  'CompanyName': 'Franchi S.p.A.',
  'Address': 'Via Monte Bianco 34',
  'Country': 'Italy'
},
{
  'CustomerID': 'FURIB',
  'ContactName': 'Lino Rodriguez',
  'CompanyName': 'Furia Bacalhau e Frutos do Mar',
  'Address': 'Jardim das rosas n. 32',
  'Country': 'Portugal'
},
{
  'CustomerID': 'GALED',
  'ContactName': 'Eduardo Saavedra',
  'CompanyName': 'Galería del gastrónomo',
  'Address': 'Rambla de Cataluña, 23',
  'Country': 'Spain'
},
{
  'CustomerID': 'GODOS',
  'ContactName': 'José Pedro Freyre',
  'CompanyName': 'Godos Cocina Típica',
  'Address': 'C/ Romero, 33',
  'Country': 'Spain'
},
{
  'CustomerID': 'GOURL',
  'ContactName': 'André Fonseca',
```

```

    'CompanyName': 'Gourmet Lanchonetes',
    'Address': 'Av. Brasil, 442',
    'Country': 'Brazil'
  },
  {
    'CustomerID': 'GREAL',
    'ContactName': 'Howard Snyder',
    'CompanyName': 'Great Lakes Food Market',
    'Address': '2732 Baker Blvd.',
    'Country': 'USA'
  },
  {
    'CustomerID': 'GROSR',
    'ContactName': 'Manuel Pereira',
    'CompanyName': 'GROSELLA-Restaurante',
    'Address': '5ª Ave. Los Palos Grandes',
    'Country': 'Venezuela'
  },
  {
    'CustomerID': 'HANAR',
    'ContactName': 'Mario Pontes',
    'CompanyName': 'Hanari Carnes',
    'Address': 'Rua do Paço, 67',
    'Country': 'Brazil'
  },
  {
    'CustomerID': 'HILAA',
    'ContactName': 'Carlos Hernández',
    'CompanyName': 'HILARION-Abastos',
    'Address': 'Carrera 22 con Ave. Carlos Soublette #8-35',
    'Country': 'Venezuela'
  },
  {
    'CustomerID': 'HUNGC',
    'ContactName': 'Yoshi Latimer',
    'CompanyName': 'Hungry Coyote Import Store',
    'Address': 'City Center Plaza 516 Main St.',
    'Country': 'USA'
  },
  {
    'CustomerID': 'HUNGO',
    'ContactName': 'Patricia McKenna',
    'CompanyName': 'Hungry Owl All-Night Grocers',
    'Address': '8 Johnstown Road',
    'Country': 'Ireland'
  },
  {
    'CustomerID': 'ISLAT',
    'ContactName': 'Helen Bennett',
    'CompanyName': 'Island Trading',
    'Address': 'Garden House Crowther Way',
    'Country': 'UK'
  },
  {
    'CustomerID': 'KOENE',
    'ContactName': 'Philip Cramer',
    'CompanyName': 'Königlich Essen',

```

```

    'Address': 'Maubelstr. 90',
    'Country': 'Germany'
  },
  {
    'CustomerID': 'LACOR',
    'ContactName': 'Daniel Tonini',
    'CompanyName': 'La corne d\'abondance',
    'Address': '67, avenue de l\'Europe',
    'Country': 'France'
  },
  {
    'CustomerID': 'LAMAI',
    'ContactName': 'Annette Roulet',
    'CompanyName': 'La maison d\'Asie',
    'Address': '1 rue Alsace-Lorraine',
    'Country': 'France'
  },
  {
    'CustomerID': 'LAUGB',
    'ContactName': 'Yoshi Tannamuri',
    'CompanyName': 'Laughing Bacchus Wine Cellars',
    'Address': '1900 Oak St.',
    'Country': 'Canada'
  },
  {
    'CustomerID': 'LAZYK',
    'ContactName': 'John Steel',
    'CompanyName': 'Lazy K Kountry Store',
    'Address': '12 Orchestra Terrace',
    'Country': 'USA'
  },
  {
    'CustomerID': 'LEHMS',
    'ContactName': 'Renate Messner',
    'CompanyName': 'Lehmanns Marktstand',
    'Address': 'Magazinweg 7',
    'Country': 'Germany'
  },
  {
    'CustomerID': 'LETSS',
    'ContactName': 'Jaime Yorres',
    'CompanyName': 'Let\'s Stop N Shop',
    'Address': '87 Polk St. Suite 5',
    'Country': 'USA'
  },
  {
    'CustomerID': 'LILAS',
    'ContactName': 'Carlos González',
    'CompanyName': 'LILA-Supermercado',
    'Address': 'Carrera 52 con Ave. Bolívar #65-98 Llano Largo',
    'Country': 'Venezuela'
  },
  {
    'CustomerID': 'LINOD',
    'ContactName': 'Felipe Izquierdo',
    'CompanyName': 'LINO-Delicateses',
    'Address': 'Ave. 5 de Mayo Porlamar',

```

```

    'Country': 'Venezuela'
  },
  {
    'CustomerID': 'LONEP',
    'ContactName': 'Fran Wilson',
    'CompanyName': 'Lonesome Pine Restaurant',
    'Address': '89 Chiaroscuro Rd.',
    'Country': 'USA'
  },
  {
    'CustomerID': 'MAGAA',
    'ContactName': 'Giovanni Rovelli',
    'CompanyName': 'Magazzini Alimentari Riuniti',
    'Address': 'Via Ludovico il Moro 22',
    'Country': 'Italy'
  },
  {
    'CustomerID': 'MAISD',
    'ContactName': 'Catherine Dewey',
    'CompanyName': 'Maison Dewey',
    'Address': 'Rue Joseph-Bens 532',
    'Country': 'Belgium'
  },
  {
    'CustomerID': 'MEREP',
    'ContactName': 'Jean Fresnière',
    'CompanyName': 'Mère Paillarde',
    'Address': '43 rue St. Laurent',
    'Country': 'Canada'
  },
  {
    'CustomerID': 'MORGK',
    'ContactName': 'Alexander Feuer',
    'CompanyName': 'Morgenstern Gesundkost',
    'Address': 'Heerstr. 22',
    'Country': 'Germany'
  },
  {
    'CustomerID': 'NORTS',
    'ContactName': 'Simon Crowther',
    'CompanyName': 'North/South',
    'Address': 'South House 300 Queensbridge',
    'Country': 'UK'
  },
  {
    'CustomerID': 'OCEAN',
    'ContactName': 'Yvonne Moncada',
    'CompanyName': 'Océano Atlántico Ltda.',
    'Address': 'Ing. Gustavo Moncada 8585 Piso 20-A',
    'Country': 'Argentina'
  },
  {
    'CustomerID': 'OLDWO',
    'ContactName': 'Rene Phillips',
    'CompanyName': 'Old World Delicatessen',
    'Address': '2743 Bering St.',
    'Country': 'USA'
  }

```

```
},
{
  'CustomerID': 'OTTIK',
  'ContactName': 'Henriette Pfalzheim',
  'CompanyName': 'Ottilies Käseladen',
  'Address': 'Mehrheimerstr. 369',
  'Country': 'Germany'
},
{
  'CustomerID': 'PARIS',
  'ContactName': 'Marie Bertrand',
  'CompanyName': 'Paris spécialités',
  'Address': '265, boulevard Charonne',
  'Country': 'France'
},
{
  'CustomerID': 'PERIC',
  'ContactName': 'Guillermo Fernández',
  'CompanyName': 'Pericles Comidas clásicas',
  'Address': 'Calle Dr. Jorge Cash 321',
  'Country': 'Mexico'
},
{
  'CustomerID': 'PICCO',
  'ContactName': 'Georg Pipps',
  'CompanyName': 'Piccolo und mehr',
  'Address': 'Geislweg 14',
  'Country': 'Austria'
},
{
  'CustomerID': 'PRINI',
  'ContactName': 'Isabel de Castro',
  'CompanyName': 'Princesa Isabel Vinhos',
  'Address': 'Estrada da saúde n. 58',
  'Country': 'Portugal'
},
{
  'CustomerID': 'QUEDE',
  'ContactName': 'Bernardo Batista',
  'CompanyName': 'Que Delícia',
  'Address': 'Rua da Panificadora, 12',
  'Country': 'Brazil'
},
{
  'CustomerID': 'QUEEN',
  'ContactName': 'Lúcia Carvalho',
  'CompanyName': 'Queen Cozinha',
  'Address': 'Alameda dos Canários, 891',
  'Country': 'Brazil'
},
{
  'CustomerID': 'QUICK',
  'ContactName': 'Horst Kloss',
  'CompanyName': 'QUICK-Stop',
  'Address': 'Taucherstraße 10',
  'Country': 'Germany'
},
},
```

```
{
  'CustomerID': 'RANCH',
  'ContactName': 'Sergio Gutiérrez',
  'CompanyName': 'Rancho grande',
  'Address': 'Av. del Libertador 900',
  'Country': 'Argentina'
},
{
  'CustomerID': 'RATTC',
  'ContactName': 'Paula Wilson',
  'CompanyName': 'Rattlesnake Canyon Grocery',
  'Address': '2817 Milton Dr.',
  'Country': 'USA'
},
{
  'CustomerID': 'REGGC',
  'ContactName': 'Maurizio Moroni',
  'CompanyName': 'Reggiani Caseifici',
  'Address': 'Strada Provinciale 124',
  'Country': 'Italy'
},
{
  'CustomerID': 'RICAR',
  'ContactName': 'Janete Limeira',
  'CompanyName': 'Ricardo Adocicados',
  'Address': 'Av. Copacabana, 267',
  'Country': 'Brazil'
},
{
  'CustomerID': 'RICSU',
  'ContactName': 'Michael Holz',
  'CompanyName': 'Richter Supermarkt',
  'Address': 'Grenzacherweg 237',
  'Country': 'Switzerland'
},
{
  'CustomerID': 'ROMEY',
  'ContactName': 'Alejandra Camino',
  'CompanyName': 'Romero y tomillo',
  'Address': 'Gran Vía, 1',
  'Country': 'Spain'
},
{
  'CustomerID': 'SANTG',
  'ContactName': 'Jonas Bergulfsen',
  'CompanyName': 'Santé Gourmet',
  'Address': 'Erling Skakkes gate 78',
  'Country': 'Norway'
},
{
  'CustomerID': 'SAVEA',
  'ContactName': 'Jose Pavarotti',
  'CompanyName': 'Save-a-lot Markets',
  'Address': '187 Suffolk Ln.',
  'Country': 'USA'
},
{
```

```
'CustomerID': 'SEVES',
'ContactName': 'Hari Kumar',
'CompanyName': 'Seven Seas Imports',
'Address': '90 Wadhurst Rd.',
'Country': 'UK'
},
{
  'CustomerID': 'SIMOB',
  'ContactName': 'Jytte Petersen',
  'CompanyName': 'Simons bistro',
  'Address': 'Vinbæltet 34',
  'Country': 'Denmark'
},
{
  'CustomerID': 'SPECB',
  'ContactName': 'Dominique Perrier',
  'CompanyName': 'Spécialités du monde',
  'Address': '25, rue Lauriston',
  'Country': 'France'
},
{
  'CustomerID': 'SPLIR',
  'ContactName': 'Art Braunschweiger',
  'CompanyName': 'Split Rail Beer & Ale',
  'Address': 'P.O. Box 555',
  'Country': 'USA'
},
{
  'CustomerID': 'SUPRD',
  'ContactName': 'Pascale Cartrain',
  'CompanyName': 'Suprêmes délices',
  'Address': 'Boulevard Tirou, 255',
  'Country': 'Belgium'
},
{
  'CustomerID': 'THEBI',
  'ContactName': 'Liz Nixon',
  'CompanyName': 'The Big Cheese',
  'Address': '89 Jefferson Way Suite 2',
  'Country': 'USA'
},
{
  'CustomerID': 'THECR',
  'ContactName': 'Liu Wong',
  'CompanyName': 'The Cracker Box',
  'Address': '55 Grizzly Peak Rd.',
  'Country': 'USA'
},
{
  'CustomerID': 'TOMSP',
  'ContactName': 'Karin Josephs',
  'CompanyName': 'Toms Spezialitäten',
  'Address': 'Luisenstr. 48',
  'Country': 'Germany'
},
{
  'CustomerID': 'TORTU',
```

```
'ContactName': 'Miguel Angel Paolino',
'CompanyName': 'Tortuga Restaurante',
'Address': 'Avda. Azteca 123',
'Country': 'Mexico'
},
{
  'CustomerID': 'TRADH',
  'ContactName': 'Anabela Domingues',
  'CompanyName': 'Tradição Hipermercados',
  'Address': 'Av. Inês de Castro, 414',
  'Country': 'Brazil'
},
{
  'CustomerID': 'TRAIH',
  'ContactName': 'Helvetius Nagy',
  'CompanyName': 'Trail\'s Head Gourmet Provisioners',
  'Address': '722 DaVinci Blvd.',
  'Country': 'USA'
},
{
  'CustomerID': 'VAFFE',
  'ContactName': 'Palle Ibsen',
  'CompanyName': 'Vaffeljernet',
  'Address': 'Smagsloget 45',
  'Country': 'Denmark'
},
{
  'CustomerID': 'VICTE',
  'ContactName': 'Mary Saveley',
  'CompanyName': 'Victuailles en stock',
  'Address': '2, rue du Commerce',
  'Country': 'France'
},
{
  'CustomerID': 'VINET',
  'ContactName': 'Paul Henriot',
  'CompanyName': 'Vins et alcools Chevalier',
  'Address': '59 rue de l\'Abbaye',
  'Country': 'France'
},
{
  'CustomerID': 'WANDK',
  'ContactName': 'Rita Müller',
  'CompanyName': 'Die Wandernde Kuh',
  'Address': 'Adenauerallee 900',
  'Country': 'Germany'
},
{
  'CustomerID': 'WARTH',
  'ContactName': 'Pirkko Koskitalo',
  'CompanyName': 'Wartian Herkku',
  'Address': 'Torikatu 38',
  'Country': 'Finland'
},
{
  'CustomerID': 'WELLI',
  'ContactName': 'Paula Parente',
```



```

    'CompanyName': 'Wellington Importadora',
    'Address': 'Rua do Mercado, 12',
    'Country': 'Brazil'
  },
  {
    'CustomerID': 'WHITC',
    'ContactName': 'Karl Jablonski',
    'CompanyName': 'White Clover Markets',
    'Address': '305 - 14th Ave. S. Suite 3B',
    'Country': 'USA'
  },
  {
    'CustomerID': 'WILMK',
    'ContactName': 'Matti Karttunen',
    'CompanyName': 'Wilman Kala',
    'Address': 'Keskuskatu 45',
    'Country': 'Finland'
  },
  {
    'CustomerID': 'WOLZA',
    'ContactName': 'Zbyszek Piestrzeniewicz',
    'CompanyName': 'Wolski Zajazd',
    'Address': 'ul. Filtrowa 68',
    'Country': 'Poland'
  }
];

```

Run the Jest test case:

Run the following command to execute the Jest test case.

`

npm test

`

* This is only for local data. You can use the [currentViewData](#) property by rendering the remote data.

* You can find the sample of the Unit Jest testing in DataGrid [here](#)

How to create a routing sample in React Grid component

[React Router](#) is a popular routing library which is widely used for building single-page applications (SPA's) with React. It provides a way to handle navigation and routing in your application, allowing you to define different routes and render different components based on the current URL.

Steps to create a routing sample in React Grid component

1. Creating a React project and integrating the Syncfusion Grid component:

A simple React project can be created by following the steps under [getting started](#) section of this documentation. Run the following command in the terminal to install React Router.

`

npm install react-router-dom

`

To use React routing in your application, you need to create at least two components that can be navigated from one to another.

2. Setting up Router:

Import the `<BrowserRouter>` component from the `react-router-dom` library and wrap it around your list of `<Routes>` components

```
,  
  
import { BrowserRouter, Routes, Route } from 'react-router-dom';  
const App = () => {  
  return (  
    <BrowserRouter>  
      <Routes>  
    </Routes>  
  </BrowserRouter>  
);  
}  
export default App;  
,
```

3. Defining Routes:

Inside your application, you can define different routes using the `<Route>` component. Each route represents a URL pattern and the component to render when that pattern matches.

```
,  
  
import { BrowserRouter, Routes, Route } from 'react-router-dom';  
const App = () => {  
  return (  
    <BrowserRouter>  
      <Routes>  
        <Route path='Home' element={<Home />}></Route>  
        <Route path='Contact' element={<Contact />}></Route>  
        <Route path='About' element={<About />}></Route>  
      </Routes>  
    </BrowserRouter>  
  );  
};  
export default App;
```

4. Navigation between Routes:

You can navigate between routes using the <Link> component. It renders an anchor tag that triggers a route change when clicked, without causing a full page to reload.

```
import { Link } from 'react-router-dom';

const Header = () => {
  return (
    <div>
      <nav>
        <ul>
          <li><Link to='/'>Home</Link></li>
          <li><Link to='/About'>About</Link></li>
          <li><Link to='/Contact'>Contact</Link></li>
        </ul>
      </nav>
    </div>
  );
};

export default Header;
```

[Here](#), you can find the React Routing sample with Syncfusion DataGrid.

Customize the Empty Record Template in React Grid component

The empty record template feature in the Grid allows you to use custom content such as images, text, or other components, when the grid doesn't contain any records to display. This feature replaces the default message of 'No records to display' typically shown in the grid.

To activate this feature, set the `emptyRecordTemplate` property of the Grid. The [Link to the Video](#) property expects the HTML element or a function that returns the HTML element.

In the following example, an image and text have been rendered as a template to indicate that the grid has no data to display.

APP.JSX

```
import * as React from 'react';
import { GridComponent, ColumnsDirective, ColumnDirective, Edit, Toolbar,
Page, Inject } from '@syncfusion/ej2-react-grids';
import { DataManager } from '@syncfusion/ej2-data';
import { ddata } from './datasource';
function App() {
```

```

function emptyMessageTemplate() {
    return (<div className='emptyRecordTemplate'>
        <img src='./emptyRecordTemplate.svg' className='e-
emptyRecord' alt='No record' />
        <span>There is no data available to display at the
moment.</span>
    </div>);
}
const data = [];
const template = emptyMessageTemplate;
const toolbarOptions = ['Add', 'Edit', 'Delete', 'Update', 'Cancel'];
const editSettings = { allowEditing: true, allowAdding: true,
allowDeleting: true };
const orderidRules = { required: true, number: true };
const editparams = { params: { dataSource: new DataManager(ddata),
fields: { text: "ShipCountry", value: "ShipCountry" }, } };
const validationRule = { required: true };
const pageSettings = { pageCount: 5 };
const format = { type: 'dateTime', format: 'M/d/y hh:mm a' };
return (<div className='control-pane'>
    <div className='control-section'>
        <GridComponent dataSource={data}
emptyRecordTemplate={template.bind(this)} toolbar={toolbarOptions}
allowPaging={true} editSettings={editSettings} pageSettings={pageSettings}>
            <ColumnsDirective>
                <ColumnDirective field='OrderID' headerText='Order ID'
width='140' textAlign='Right' validationRules={orderidRules}
isPrimaryKey={true}></ColumnDirective>
                <ColumnDirective field='CustomerName'
headerText='Customer Name' width='150'
validationRules={validationRule}></ColumnDirective>
                <ColumnDirective field='Freight' headerText='Freight '
width='140' format='C2' textAlign='Right'
editType='numericedit'></ColumnDirective>
                <ColumnDirective field='OrderDate' headerText='Order
Date' editType='datetimepickeredit' format={format}
width='160'></ColumnDirective>
                <ColumnDirective field='ShipCountry' headerText='Ship
Country' width='150' editType='dropdownedit'
edit={editparams}></ColumnDirective>
            </ColumnsDirective>
            <Inject services={[Page, Edit, Toolbar]} />
        </GridComponent>
    </div>
</div>);
}
export default App;

```

APP.TSX

```

import * as ReactDOM from 'react-dom';
import * as React from 'react';
import { GridComponent, ColumnsDirective, ColumnDirective, Edit, Toolbar,
Page, Inject } from '@syncfusion/ej2-react-grids';
import { DataManager } from '@syncfusion/ej2-data';
import { ddata } from './datasource';

```

```

function App() {

    function emptyMessageTemplate(): any {
        return (
            <div className='emptyRecordTemplate'>
                <img src='./emptyRecordTemplate.svg' className='e-
emptyRecord' alt='No record' />
                <span>There is no data available to display at the
moment.</span>
            </div>
        );
    }

    const data: any = [];
    const template: any = emptyMessageTemplate;
    const toolbarOptions: any = ['Add', 'Edit', 'Delete', 'Update',
'Cancel'];
    const editSettings: any = { allowEditing: true, allowAdding: true,
allowDeleting: true };
    const orderidRules: Object = { required: true, number: true };
    const editparams: any = { params: { dataSource: new DataManager(ddata),
fields: { text: "ShipCountry", value: "ShipCountry"}, } };
    const validationRule: Object = { required: true };
    const pageSettings: Object = { pageCount: 5 };
    const format: any = { type: 'dateTime', format: 'M/d/y hh:mm a' };
    return (
        <div className='control-pane'>
            <div className='control-section'>
                <GridComponent dataSource={data}
emptyRecordTemplate={template.bind(this)} toolbar={toolbarOptions}
allowPaging={true} editSettings={editSettings} pageSettings={pageSettings}>
                    <ColumnsDirective>
                        <ColumnDirective field='OrderID' headerText='Order ID'
width='140' textAlign='Right' validationRules={orderidRules}
isPrimaryKey={true}></ColumnDirective>
                        <ColumnDirective field='CustomerName'
headerText='Customer Name' width='150'
validationRules={validationRule}></ColumnDirective>
                        <ColumnDirective field='Freight' headerText='Freight'
width='140' format='C2' textAlign='Right' editType='numericedit'
></ColumnDirective>
                        <ColumnDirective field='OrderDate' headerText='Order
Date' editType='datetimepickeredit' format={format} width='160'
></ColumnDirective>
                        <ColumnDirective field='ShipCountry' headerText='Ship
Country' width='150' editType='dropdownedit' edit={editparams}
></ColumnDirective>
                    </ColumnsDirective>
                    <Inject services={[Page, Edit, Toolbar]} />
                </GridComponent>
            </div>
        </div>
    )
}
export default App;

```

DATASOURCE.JSX

```
export let ddata = [
  {
    OrderID: 10248, CustomerID: 'VINET', Role: 'Admin', EmployeeID: 5,
    OrderDate: new Date(8364186e5),
    ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
    ShipAddress: '59 rue de l Abbaye',
    ShipRegion: 'CJ', Mask: '1111', ShipPostalCode: '51100', ShipCountry:
    'France', Freight: 32.38, Verified: !0
  },
  {
    OrderID: 10249, CustomerID: 'TOMSP', Role: 'Employee', EmployeeID: 6,
    OrderDate: new Date(836505e6),
    ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
    'Luisenstr. 48',
    ShipRegion: 'CJ', Mask: '2222', ShipPostalCode: '44087', ShipCountry:
    'Germany', Freight: 11.61, Verified: !1
  },
  {
    OrderID: 10250, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 4,
    OrderDate: new Date(8367642e5),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', Mask: '3333', ShipPostalCode: '05454-876',
    ShipCountry: 'Brazil', Freight: 65.83, Verified: !0
  },
  {
    OrderID: 10251, CustomerID: 'VICTE', Role: 'Manager', EmployeeID: 3,
    OrderDate: new Date(8367642e5),
    ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
    rue du Commerce',
    ShipRegion: 'CJ', Mask: '4444', ShipPostalCode: '69004', ShipCountry:
    'France', Freight: 41.34, Verified: !0
  },
  {
    OrderID: 10252, CustomerID: 'SUPRD', Role: 'Manager', EmployeeID: 4,
    OrderDate: new Date(8368506e5),
    ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
    'Boulevard Tirou, 255',
    ShipRegion: 'CJ', Mask: '5555', ShipPostalCode: 'B-6000',
    ShipCountry: 'Belgium', Freight: 51.3, Verified: !0
  },
  {
    OrderID: 10253, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 3,
    OrderDate: new Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
    'Rua do Paço, 67',
    ShipRegion: 'RJ', Mask: '6666', ShipPostalCode: '05454-876',
    ShipCountry: 'Brazil', Freight: 58.17, Verified: !0
  },
  {
    OrderID: 10254, CustomerID: 'CHOPS', Role: 'Employee', EmployeeID: 5,
    OrderDate: new Date(8370234e5),
    ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
    'Hauptstr. 31',
```

```

        ShipRegion: 'CJ', Mask: '7777', ShipPostalCode: '3012', ShipCountry:
'Switzerland', Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', Role: 'Admin', EmployeeID: 9,
OrderDate: new Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', Mask: '8888', ShipPostalCode: '1204', ShipCountry:
'Switzerland', Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', Role: 'Employee', EmployeeID: 3,
OrderDate: new Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', Mask: '9999', ShipPostalCode: '08737-363',
ShipCountry: 'Brazil', Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', Role: 'Admin', EmployeeID: 4,
OrderDate: new Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', Mask: '1234', ShipPostalCode: '5022',
ShipCountry: 'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', Role: 'Manager', EmployeeID: 1,
OrderDate: new Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', Mask: '2345', ShipPostalCode: '8010', ShipCountry:
'Austria', Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', Role: 'Admin', EmployeeID: 4,
OrderDate: new Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', Mask: '3456', ShipPostalCode: '05022', ShipCountry:
'Mexico', Freight: 3.25, Verified: !1
    },
    {
        OrderID: 10260, CustomerID: 'OTTIK', Role: 'Admin', EmployeeID: 4,
OrderDate: new Date(8377146e5),
        ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
        ShipRegion: 'CJ', Mask: '4567', ShipPostalCode: '50739', ShipCountry:
'Germany', Freight: 55.09, Verified: !0
    },
    {
        OrderID: 10261, CustomerID: 'QUEDE', Role: 'Manager', EmployeeID: 4,
OrderDate: new Date(8377146e5),
        ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',

```

```

        ShipRegion: 'RJ', Mask: '5678', ShipPostalCode: '02389-673',
        ShipCountry: 'Brazil', Freight: 3.05, Verified: !1
    },
    {
        OrderID: 10262, CustomerID: 'RATTC', Role: 'Employee', EmployeeID: 8,
        OrderDate: new Date(8379738e5),
        ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
        ShipAddress: '2817 Milton Dr.',
        ShipRegion: 'NM', Mask: '6789', ShipPostalCode: '87110', ShipCountry:
        'USA', Freight: 48.29, Verified: !0
    }
];

```

DATASOURCE.TSX

```

export let ddata: Object[] = [
    {
        OrderID: 10248, CustomerID: 'VINET', Role: 'Admin', EmployeeID: 5,
        OrderDate: new Date(8364186e5),
        ShipName: 'Vins et alcools Chevalier', ShipCity: 'Reims',
        ShipAddress: '59 rue de l Abbaye',
        ShipRegion: 'CJ', Mask: '1111', ShipPostalCode: '51100', ShipCountry:
        'France', Freight: 32.38, Verified: !0
    },
    {
        OrderID: 10249, CustomerID: 'TOMSP', Role: 'Employee', EmployeeID: 6,
        OrderDate: new Date(836505e6),
        ShipName: 'Toms Spezialitäten', ShipCity: 'Münster', ShipAddress:
        'Luisenstr. 48',
        ShipRegion: 'CJ', Mask: '2222', ShipPostalCode: '44087', ShipCountry:
        'Germany', Freight: 11.61, Verified: !1
    },
    {
        OrderID: 10250, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 4,
        OrderDate: new Date(8367642e5),
        ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
        'Rua do Paço, 67',
        ShipRegion: 'RJ', Mask: '3333', ShipPostalCode: '05454-876',
        ShipCountry: 'Brazil', Freight: 65.83, Verified: !0
    },
    {
        OrderID: 10251, CustomerID: 'VICTE', Role: 'Manager', EmployeeID: 3,
        OrderDate: new Date(8367642e5),
        ShipName: 'Victuailles en stock', ShipCity: 'Lyon', ShipAddress: '2,
        rue du Commerce',
        ShipRegion: 'CJ', Mask: '4444', ShipPostalCode: '69004', ShipCountry:
        'France', Freight: 41.34, Verified: !0
    },
    {
        OrderID: 10252, CustomerID: 'SUPRD', Role: 'Manager', EmployeeID: 4,
        OrderDate: new Date(8368506e5),
        ShipName: 'Suprêmes délices', ShipCity: 'Charleroi', ShipAddress:
        'Boulevard Tirou, 255',
        ShipRegion: 'CJ', Mask: '5555', ShipPostalCode: 'B-6000',
        ShipCountry: 'Belgium', Freight: 51.3, Verified: !0
    },
    {

```



```

    OrderID: 10253, CustomerID: 'HANAR', Role: 'Admin', EmployeeID: 3,
OrderDate: new Date(836937e6),
    ShipName: 'Hanari Carnes', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua do Paço, 67',
    ShipRegion: 'RJ', Mask: '6666', ShipPostalCode: '05454-876',
ShipCountry: 'Brazil', Freight: 58.17, Verified: !0
    },
    {
        OrderID: 10254, CustomerID: 'CHOPS', Role: 'Employee', EmployeeID: 5,
OrderDate: new Date(8370234e5),
        ShipName: 'Chop-suey Chinese', ShipCity: 'Bern', ShipAddress:
'Hauptstr. 31',
        ShipRegion: 'CJ', Mask: '7777', ShipPostalCode: '3012', ShipCountry:
'Switzerland', Freight: 22.98, Verified: !1
    },
    {
        OrderID: 10255, CustomerID: 'RICSU', Role: 'Admin', EmployeeID: 9,
OrderDate: new Date(8371098e5),
        ShipName: 'Richter Supermarkt', ShipCity: 'Genève', ShipAddress:
'Starenweg 5',
        ShipRegion: 'CJ', Mask: '8888', ShipPostalCode: '1204', ShipCountry:
'Switzerland', Freight: 148.33, Verified: !0
    },
    {
        OrderID: 10256, CustomerID: 'WELLI', Role: 'Employee', EmployeeID: 3,
OrderDate: new Date(837369e6),
        ShipName: 'Wellington Importadora', ShipCity: 'Resende', ShipAddress:
'Rua do Mercado, 12',
        ShipRegion: 'SP', Mask: '9999', ShipPostalCode: '08737-363',
ShipCountry: 'Brazil', Freight: 13.97, Verified: !1
    },
    {
        OrderID: 10257, CustomerID: 'HILAA', Role: 'Admin', EmployeeID: 4,
OrderDate: new Date(8374554e5),
        ShipName: 'HILARION-Abastos', ShipCity: 'San Cristóbal', ShipAddress:
'Carrera 22 con Ave. Carlos Soublette #8-35',
        ShipRegion: 'Táchira', Mask: '1234', ShipPostalCode: '5022',
ShipCountry: 'Venezuela', Freight: 81.91, Verified: !0
    },
    {
        OrderID: 10258, CustomerID: 'ERNSH', Role: 'Manager', EmployeeID: 1,
OrderDate: new Date(8375418e5),
        ShipName: 'Ernst Handel', ShipCity: 'Graz', ShipAddress: 'Kirchgasse
6',
        ShipRegion: 'CJ', Mask: '2345', ShipPostalCode: '8010', ShipCountry:
'Austria', Freight: 140.51, Verified: !0
    },
    {
        OrderID: 10259, CustomerID: 'CENTC', Role: 'Admin', EmployeeID: 4,
OrderDate: new Date(8376282e5),
        ShipName: 'Centro comercial Moctezuma', ShipCity: 'México D.F.',
ShipAddress: 'Sierras de Granada 9993',
        ShipRegion: 'CJ', Mask: '3456', ShipPostalCode: '05022', ShipCountry:
'Mexico', Freight: 3.25, Verified: !1
    },
    {

```

```

    OrderID: 10260, CustomerID: 'OTTIK', Role: 'Admin', EmployeeID: 4,
    OrderDate: new Date(8377146e5),
    ShipName: 'Ottilies Käseladen', ShipCity: 'Köln', ShipAddress:
'Mehrheimerstr. 369',
    ShipRegion: 'CJ', Mask: '4567', ShipPostalCode: '50739', ShipCountry:
'Germany', Freight: 55.09, Verified: !0
  },
  {
    OrderID: 10261, CustomerID: 'QUEDE', Role: 'Manager', EmployeeID: 4,
    OrderDate: new Date(8377146e5),
    ShipName: 'Que Delícia', ShipCity: 'Rio de Janeiro', ShipAddress:
'Rua da Panificadora, 12',
    ShipRegion: 'RJ', Mask: '5678', ShipPostalCode: '02389-673',
    ShipCountry: 'Brazil', Freight: 3.05, Verified: !1
  },
  {
    OrderID: 10262, CustomerID: 'RATTC', Role: 'Employee', EmployeeID: 8,
    OrderDate: new Date(8379738e5),
    ShipName: 'Rattlesnake Canyon Grocery', ShipCity: 'Albuquerque',
    ShipAddress: '2817 Milton Dr.',
    ShipRegion: 'NM', Mask: '6789', ShipPostalCode: '87110', ShipCountry:
'USA', Freight: 48.29, Verified: !0
  }
];

```

HeatMap Chart

Getting Started

This section explains the steps required to create a heat map and demonstrates the basic usage of the HeatMap component.

You can explore some useful features in the HeatMap component using the following video.

Dependencies

For using heat map, the following minimum requirements are needed.

```

`ts
|-- @syncfusion/ej2-react-heatmap
|-- @syncfusion/ej2-heatmap
|-- @syncfusion/ej2-base
|-- @syncfusion/ej2-data
|-- @syncfusion/ej2-svg-base
|-- @syncfusion/ej2-react-base
,

```

Installation and configuration

To get started with the React application, [create-react-app](#) can be used to setup the application. To install **create-react-app**, run the following command.

```

npm install -g create-react-app

```

`

To create basic React application, run the following command.

`

```
create-react-app quickstart
```

`

Now, the application is created in the **quickstart** folder. Run the following command to navigate to the **quickstart** folder, and install the required **npm** packages.

`

```
cd quickstart
```

`

In the **quickstart** application, the Syncfusion component is added in the JavaScript file.

Creating a React application with TypeScript

To create React application with TypeScript, use the following command.

`

```
create-react-app quickstart --template typescript
```

`

Now, the application is created in the **quickstart** folder. Run the following command to navigate to the **quickstart** folder, and install the required **npm** packages.

`

```
cd quickstart
```

`

Adding Syncfusion packages

All the available Essential JS 2 packages are published in [npmjs.com](https://www.npmjs.com) public registry. To install Heatmap package, use the following command.

`

```
npm install @syncfusion/ej2-react-heatmap --save
```

`

Adding HeatMap to the project

Now, you can start adding HeatMap component in the application. For getting started, add the HeatMap component in `src/App.tsx` file using following code.

```
`ts
```

```
import * as React from 'react';
```

```
import * as ReactDOM from 'react-dom';
```

```
import { HeatMapComponent } from '@syncfusion/ej2-react-heatmap';
```

```
export function App() {
```

```
return ( <HeatMapComponent id='heatmap'></HeatMapComponent> );  
}  
export default App;  
`
```

Use the `npm start` command to run the application in the browser.

```
npm start  
`
```

The below example shows a basic HeatMap.

INDEX.JSX

```
{% raw %}  
import * as React from 'react';  
import * as ReactDOM from 'react-dom';  
import { HeatMapComponent } from '@syncfusion/ej2-react-heatmap';  
export function App() {  
  return ( <HeatMapComponent ></HeatMapComponent> );  
}  
const root = ReactDOM.createRoot(document.getElementById('container'));  
root.render(<App />);  
{% endraw %}
```

INDEX.TSX

```
{% raw %}  
import * as React from 'react';  
import * as ReactDOM from 'react-dom';  
import { HeatMapComponent } from '@syncfusion/ej2-react-heatmap';  
export function App() {  
  return ( <HeatMapComponent ></HeatMapComponent> );  
}  
const root = ReactDOM.createRoot(document.getElementById('container'));  
root.render(<App />);  
{% endraw %}
```

Module injection

The heat map components are segregated into individual feature-wise modules. To use its feature, you need to inject its feature service in the AppModule. In the current application, the basic heat map is modified to visualize sales revenue data for week, and the tooltip and legend features of the heat map are used. Find the relevant feature modules and descriptions as follows.

- Legend - Provides the legend feature by injecting it.
- Tooltip - Provides the tooltip feature by injecting it.

Now, import the above-mentioned modules from the heat map package and inject them into `services`.

```
`ts
```

```
import * as React from "react";
import * as ReactDOM from "react-dom";
import { HeatMapComponent, Inject, Legend, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
  return(<HeatMapComponent id='heatmap'>
    <Inject services={[Legend, Tooltip]}/>
  </HeatMapComponent>
);
}

const root = ReactDOM.createRoot(document.getElementById('heatmap'));
root.render(<App />);
`
```

Populate heat map with data

This section explains how to populate the following two-dimensional array data to the heat map.

INDEX.JSX

```
{% raw %}
import { HeatMapComponent, Inject, Legend, Tooltip } from '@syncfusion/ej2-react-heatmap';
import * as ReactDOM from "react-dom";
import * as React from "react";
export function App() {
  var heatmapData = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
    [56, 69, 21, 86, 3, 33],
    [45, 7, 53, 81, 95, 79],
    [60, 77, 74, 68, 88, 51],
    [25, 25, 10, 12, 78, 14],
    [25, 56, 55, 58, 12, 82],
    [74, 33, 88, 23, 86, 59]];
  return ( <HeatMapComponent dataSource={heatmapData}>
    <Inject services={[Legend, Tooltip]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}
```

INDEX.TSX

```
{% raw %}
```

```
import { HeatMapComponent, Inject, Legend, Tooltip } from '@syncfusion/ej2-react-heatmap';
import * as ReactDOM from "react-dom";
import * as React from "react";
export function App() {
    let heatmapData : any[] = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]];
    return ( <HeatMapComponent dataSource={heatmapData}>
        <Inject services={[Legend, Tooltip]} />
        </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}
```

Enable axis labels

You can add axis labels to the heat map and format those labels using the [xAxis](#) and [yAxis](#) properties. Axis labels provide additional information about the data points populated in the heat map.

INDEX.JSX

```
{% raw %}
import * as React from "react";
import * as ReactDOM from "react-dom";
import { HeatMapComponent, Inject, Legend, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
    var heatmapData = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]];
    return (<HeatMapComponent
        xAxis = { {
            labels : ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert',
'Laura', 'Anne', 'Paul', 'Karin', 'Mario'],
```

```

    } }
    yAxis = { {
      labels : ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    } }
    dataSource={heatmapData}>
    <Inject services={[Legend, Tooltip]} />
  </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
  let heatmapData : any[] = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
    [56, 69, 21, 86, 3, 33],
    [45, 7, 53, 81, 95, 79],
    [60, 77, 74, 68, 88, 51],
    [25, 25, 10, 12, 78, 14],
    [25, 56, 55, 58, 12, 82],
    [74, 33, 88, 23, 86, 59]];
  return (<HeatMapComponent
    xAxis = { {
      labels : ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert',
      'Laura', 'Anne', 'Paul', 'Karin', 'Mario'],
    } }
    yAxis = { {
      labels : ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    } }
    dataSource={heatmapData}>
    <Inject services={[Legend, Tooltip]} />
  </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Add heat map title

Add a title using the [titleSettings](#) property to the heat map to provide quick information to the user about the data populated in the heat map.

INDEX.JSX

```
{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
    var heatmapData = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]];
    return ( <HeatMapComponent
        titleSettings = { {
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        } }
        xAxis = { {
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert',
'Laura', 'Anne', 'Paul', 'Karin', 'Mario']
        } }
        yAxis = { {
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
        } }
        dataSource={heatmapData}>
        <Inject services={[Legend, Tooltip]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}
```

INDEX.TSX

```
{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
    let heatmapData : any[] = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],

```



```

[99, 28, 22, 4, 66, 90],
[14, 26, 97, 69, 69, 3],
[7, 46, 47, 47, 88, 6],
[41, 55, 73, 23, 3, 79],
[56, 69, 21, 86, 3, 33],
[45, 7, 53, 81, 95, 79],
[60, 77, 74, 68, 88, 51],
[25, 25, 10, 12, 78, 14],
[25, 56, 55, 58, 12, 82],
[74, 33, 88, 23, 86, 59]];
return ( <HeatMapComponent
  titleSettings = { {
    text: 'Sales Revenue per Employee (in 1000 US$)',
    textStyle: {
      size: '15px',
      fontWeight: '500',
      fontStyle: 'Normal',
      fontFamily: 'Segoe UI'
    }
  } }
  xAxis = { {
    labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert',
  'Laura', 'Anne', 'Paul', 'Karin', 'Mario']
  } }
  yAxis = { {
    labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
  } }
  dataSource={heatmapData}>
  <Inject services={[Legend, Tooltip]} />
  </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Enable legend

Use a legend for the heat map in the [legendSettings](#) object by setting the [visible](#) property to **true** and injecting the **Legend** module into the **services**.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
  var heatmapData = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
    [56, 69, 21, 86, 3, 33],

```

```

[45, 7, 53, 81, 95, 79],
[60, 77, 74, 68, 88, 51],
[25, 25, 10, 12, 78, 14],
[25, 56, 55, 58, 12, 82],
[74, 33, 88, 23, 86, 59]];
return ( <HeatMapComponent
  titleSettings = { {
    text: 'Sales Revenue per Employee (in 1000 US$)',
    textStyle: {
      size: '15px',
      fontWeight: '500',
      fontStyle: 'Normal',
      fontFamily: 'Segoe UI'
    }
  } }
  xAxis = { {
    labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert',
  'Laura', 'Anne', 'Paul', 'Karin', 'Mario']
  } }
  yAxis = { {
    labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
  } }
  dataSource={heatmapData}
  legendSettings = { {
    visible:true,
    position: 'Right',
    showLabel: true,
    height: "150"
  } }>
  <Inject services={[Legend, Tooltip]} />
  </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% enddraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
  let heatmapData : any[] = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
    [56, 69, 21, 86, 3, 33],
    [45, 7, 53, 81, 95, 79],
    [60, 77, 74, 68, 88, 51],
    [25, 25, 10, 12, 78, 14],

```

```

[25, 56, 55, 58, 12, 82],
[74, 33, 88, 23, 86, 59]];
return ( <HeatMapComponent
  titleSettings = { {
    text: 'Sales Revenue per Employee (in 1000 US$)',
    textStyle: {
      size: '15px',
      fontWeight: '500',
      fontStyle: 'Normal',
      fontFamily: 'Segoe UI'
    }
  } }
  xAxis = { {
    labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert',
  'Laura', 'Anne', 'Paul', 'Karin', 'Mario']
  } }
  yAxis = { {
    labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
  } }
  dataSource={heatmapData}
  legendSettings = { {
    visible:true,
    position: 'Right',
    showLabel: true,
    height: "150"
  } }>
  <Inject services={[Legend, Tooltip]} />
</HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Add data label

Add data labels to improve the readability of the heat map. This can be achieved by setting the [showLabel](#) property to **true** in the [cellSettings](#) object.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
  var heatmapData = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
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    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
    [56, 69, 21, 86, 3, 33],
    [45, 7, 53, 81, 95, 79],
    [60, 77, 74, 68, 88, 51],

```

```

[25, 25, 10, 12, 78, 14],
[25, 56, 55, 58, 12, 82],
[74, 33, 88, 23, 86, 59]];
return ( <HeatMapComponent
  titleSettings= { {
    text: 'Sales Revenue per Employee (in 1000 US$)',
    textStyle: {
      size: '15px',
      fontWeight: '500',
      fontStyle: 'Normal',
      fontFamily: 'Segoe UI'
    }
  } }
  xAxis = { {
    labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert',
  'Laura', 'Anne', 'Paul', 'Karin', 'Mario']
  } }
  yAxis = { {
    labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
  } }
  cellSettings = { {
    showLabel: true,
  } }
  dataSource={heatmapData}
  legendSettings = { {
    position: 'Right',
    showLabel: true,
    height: "150"
  } }>
  <Inject services={[Legend, Tooltip]} />
</HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% enddraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
  let heatmapData : any[] = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
    [56, 69, 21, 86, 3, 33],
    [45, 7, 53, 81, 95, 79],
    [60, 77, 74, 68, 88, 51],
    [25, 25, 10, 12, 78, 14],
  ]

```

```

[25, 56, 55, 58, 12, 82],
[74, 33, 88, 23, 86, 59]];
return ( <HeatMapComponent
  titleSettings= { {
    text: 'Sales Revenue per Employee (in 1000 US$)',
    textStyle: {
      size: '15px',
      fontWeight: '500',
      fontStyle: 'Normal',
      fontFamily: 'Segoe UI'
    }
  } }
  xAxis = { {
    labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert',
  'Laura', 'Anne', 'Paul', 'Karin', 'Mario']
  } }
  yAxis = { {
    labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
  } }
  cellSettings = { {
    showLabel: true,
  } }
  dataSource={heatmapData}
  legendSettings = { {
    position: 'Right',
    showLabel: true,
    height: "150"
  } } >
  <Inject services={[Legend, Tooltip]} />
  </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Add custom cell palette

The default palette settings of the heat map cells can be customized by using the [paletteSettings](#) property. Using the [palette](#) property in `paletteSettings` object, you can change the color set for the cells. You can change the color mode of the cells to fixed or gradient mode using the [type](#) property.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from "react-dom";
import { HeatMapComponent, Inject, Legend, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
  var heatmapData = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
  ];

```

```

[56, 69, 21, 86, 3, 33],
[45, 7, 53, 81, 95, 79],
[60, 77, 74, 68, 88, 51],
[25, 25, 10, 12, 78, 14],
[25, 56, 55, 58, 12, 82],
[74, 33, 88, 23, 86, 59]];
return ( <HeatMapComponent
  titleSettings = { {
    text: 'Sales Revenue per Employee (in 1000 US$)',
    textStyle: {
      size: '15px',
      fontWeight: '500',
      fontStyle: 'Normal',
      fontFamily: 'Segoe UI'
    }
  } }
  xAxis = { {
    labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert',
  'Laura', 'Anne', 'Paul', 'Karin', 'Mario']
  } }
  yAxis = { {
    labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
  } }
  cellSettings = { {
    showLabel: true,
  } }
  paletteSettings = { {
    palette: [
      { value: 0, color: '#C06C84' },
      { value: 50, color: '#6C5B7B' },
      { value: 100, color: '#355C7D' }
    ],
    type: "Gradient"
  } }
  dataSource={heatmapData}
  legendSettings = { {
    position: 'Right',
    showLabel: true,
    height: "150"
  } }>
  <Inject services={[Legend, Tooltip]} />
</HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {

```

```

let heatmapData : any[] = [
  [73, 39, 26, 39, 94, 0],
  [93, 58, 53, 38, 26, 68],
  [99, 28, 22, 4, 66, 90],
  [14, 26, 97, 69, 69, 3],
  [7, 46, 47, 47, 88, 6],
  [41, 55, 73, 23, 3, 79],
  [56, 69, 21, 86, 3, 33],
  [45, 7, 53, 81, 95, 79],
  [60, 77, 74, 68, 88, 51],
  [25, 25, 10, 12, 78, 14],
  [25, 56, 55, 58, 12, 82],
  [74, 33, 88, 23, 86, 59]];
return ( <HeatMapComponent
  titleSettings = { {
    text: 'Sales Revenue per Employee (in 1000 US$)',
    textStyle: {
      size: '15px',
      fontWeight: '500',
      fontStyle: 'Normal',
      fontFamily: 'Segoe UI'
    }
  } }
  xAxis = { {
    labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert',
      'Laura', 'Anne', 'Paul', 'Karin', 'Mario']
  } }
  yAxis = { {
    labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
  } }
  cellSettings = { {
    showLabel: true,
  } }
  paletteSettings = { {
    palette: [
      { value: 0, color: '#C06C84' },
      { value: 50, color: '#6C5B7B' },
      { value: 100, color: '#355C7D' }
    ],
    type: "Gradient"
  } }
  dataSource={heatmapData}
  legendSettings = { {
    position: 'Right',
    showLabel: true,
    height: "150"
  } }>
  <Inject services={[Legend, Tooltip]} />
</HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% enddraw %}

```

Enable tooltip

The tooltip is used when you cannot display information by using the data labels due to space constraints. You can enable the tooltip by setting the [showTooltip](#) property to [Link to the Video](#) and injecting the **Tooltip** module into the **services**.

INDEX.JSX

```
{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
    var heatmapData = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]];
    return ( <HeatMapComponent
        titleSettings = { {
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        } }
        xAxis = { {
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert',
'Laura', 'Anne', 'Paul', 'Karin', 'Mario']
        } }
        yAxis = { {
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
        } }
        cellSettings = { {
            showLabel: true,
        } }
        dataSource={heatmapData}
        showTooltip={true}
        legendSettings = { {
            visible:true,
            position: 'Right',
            showLabel: true,
            height: "150"
        } }>
        <Inject services={[Legend, Tooltip]} />
```



```

        </HeatMapComponent> );
    }
    const root = ReactDOM.createRoot(document.getElementById('container'));
    root.render(<App />);
    {% enddraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from "react-dom";
import { HeatMapComponent, Inject, Legend, Tooltip } from "@syncfusion/ej2-react-heatmap";
export function App() {
    let heatmapData : any[] = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]];
    return ( <HeatMapComponent
        titleSettings = { {
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        } }
        xAxis = { {
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert',
        'Laura', 'Anne', 'Paul', 'Karin', 'Mario']
        } }
        yAxis = { {
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
        } }
        cellSettings = { {
            showLabel: true,
        } }
        dataSource={heatmapData}
        showTooltip={true}
        legendSettings = { {
            visible:true,
            position: 'Right',
            showLabel: true,
            height: "150"
        } }>

```

```

        <Inject services={[Legend, Tooltip]} />
        </HeatMapComponent> );
    }
    const root = ReactDOM.createRoot(document.getElementById('container'));
    root.render(<App />);
    {% endraw %}

```

Working with data in React HeatMap chart component

Heat map visualizes the JSON data and two-dimensional array data. Using the data adaptor support, data can be bound to the heat map.

You can explore how to bind data in the HeatMap component using the following video.

Data adaptor

Heat map supports the following types of data binding with the adaptor support.

- Array
- Table Binding
- Cell Binding
- JSON data
- Table Binding
- Cell Binding

Array - table binding

This data type is a collection of one dimensional array objects, at which each inner array contains data points for an X-axis data label. This is the default data binding type for heat map. You can also directly bind the array object to the [dataSource](#) property.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from "react-dom";
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor,
ITooltipEventArgs } from '@syncfusion/ej2-react-heatmap';
export function App() {
    var heatmapData = [
        [9.5, 2.2, 4.2, 8.2, -0.5, 3.2, 5.4, 7.4, 6.2, 1.4],
        [4.3, 8.9, 10.8, 6.5, 5.1, 6.2, 7.6, 7.5, 6.1, 7.6],
        [3.9, 2.7, 2.5, 3.7, 2.6, 5.1, 5.8, 2.9, 4.5, 5.1],
        [2.4, -3.7, 4.1, 6.0, 5.0, 2.4, 3.3, 4.6, 4.3, 2.7],
        [2.0, 7.0, -4.1, 8.9, 2.7, 5.9, 5.6, 1.9, -1.7, 2.9],
        [5.4, 1.1, 6.9, 4.5, 2.9, 3.4, 1.5, -2.8, -4.6, 1.2],
        [-1.3, 3.9, 3.5, 6.6, 5.2, 7.7, 1.4, -3.6, 6.6, 4.3],
        [-1.6, 2.3, 2.9, -2.5, 1.3, 4.9, 10.1, 3.2, 4.8, 2.0],
        [10.8, -1.6, 4.0, 6.0, 7.7, 2.6, 5.6, -2.5, 3.8, -1.9],
        [6.2, 9.8, -1.5, 2.0, -1.5, 4.3, 6.7, 3.8, -1.2, 2.4],
        [1.2, 10.9, 4.0, -1.4, 2.2, 1.6, -2.6, 2.3, 1.7, 2.4],
        [5.1, -2.4, 8.2, -1.1, 3.5, 6.0, -1.3, 7.2, 9.0, 4.2]
    ];
    function tooltipTemplate(args) {
        args.content = [args.yLabel + ' | ' + args.xLabel + ' : ' + args.value +
        ' %'];
    }
}

```

```
return (  
  <HeatMapComponent  
    titleSettings={{  
      text: 'GDP Growth Rate for Major Economies (in Percentage)',  
      textStyle: {  
        size: '15px',  
        fontWeight: '500',  
        fontStyle: 'Normal',  
        fontFamily: 'Segoe UI'  
      }  
    }}  
    xAxis={{  
      labels: [  
        'China',  
        'India',  
        'Australia',  
        'Mexico',  
        'Canada',  
        'Brazil',  
        'USA',  
        'UK',  
        'Germany',  
        'Russia',  
        'France',  
        'Japan'  
      ],  
      labelRotation: 45,  
      labelIntersectAction: 'None'  
    }}  
    yAxis={{  
      labels: [  
        '2008',  
        '2009',  
        '2010',  
        '2011',  
        '2012',  
        '2013',  
        '2014',  
        '2015',  
        '2016',  
        '2017'  
      ]  
    }}  
    paletteSettings={{  
      palette: [  
        { value: -1, color: '#F0D6AD' },  
        { value: 0, color: '#9da49a' },  
        { value: 3.5, color: '#d7c7a7' },  
        { value: 6.0, color: '#6e888f' },  
        { value: 7.5, color: '#466f86' },  
        { value: 10, color: '#19547B' }  
      ]  
    }}  
    legendSettings={{  
      visible: false  
    }}  
    tooltipRender={tooltipTemplate}  
  >  
</HeatMapComponent>  
)
```

```

        dataSource={heatmapData}
      >
        <Inject services={[Legend, Tooltip, Adaptor]} />
      </HeatMapComponent>
    );
  }
  const root = ReactDOM.createRoot(document.getElementById('container'));
  root.render(<App />);
  {% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor,
ITooltipEventArgs } from '@syncfusion/ej2-react-heatmap';
export function App() {
  let heatmapData : any[] = [
    [9.5, 2.2, 4.2, 8.2, -0.5, 3.2, 5.4, 7.4, 6.2, 1.4],
    [4.3, 8.9, 10.8, 6.5, 5.1, 6.2, 7.6, 7.5, 6.1, 7.6],
    [3.9, 2.7, 2.5, 3.7, 2.6, 5.1, 5.8, 2.9, 4.5, 5.1],
    [2.4, -3.7, 4.1, 6.0, 5.0, 2.4, 3.3, 4.6, 4.3, 2.7],
    [2.0, 7.0, -4.1, 8.9, 2.7, 5.9, 5.6, 1.9, -1.7, 2.9],
    [5.4, 1.1, 6.9, 4.5, 2.9, 3.4, 1.5, -2.8, -4.6, 1.2],
    [-1.3, 3.9, 3.5, 6.6, 5.2, 7.7, 1.4, -3.6, 6.6, 4.3],
    [-1.6, 2.3, 2.9, -2.5, 1.3, 4.9, 10.1, 3.2, 4.8, 2.0],
    [10.8, -1.6, 4.0, 6.0, 7.7, 2.6, 5.6, -2.5, 3.8, -1.9],
    [6.2, 9.8, -1.5, 2.0, -1.5, 4.3, 6.7, 3.8, -1.2, 2.4],
    [1.2, 10.9, 4.0, -1.4, 2.2, 1.6, -2.6, 2.3, 1.7, 2.4],
    [5.1, -2.4, 8.2, -1.1, 3.5, 6.0, -1.3, 7.2, 9.0, 4.2]
  ];
  function tooltipTemplate(args: ITooltipEventArgs): void {
    args.content = [args.yLabel + ' | ' + args.xLabel + ' : ' + args.value +
    ' %'];
  }
  return (
    <HeatMapComponent
      titleSettings={{
        text: 'GDP Growth Rate for Major Economies (in Percentage)',
        textStyle: {
          size: '15px',
          fontWeight: '500',
          fontStyle: 'Normal',
          fontFamily: 'Segoe UI'
        }
      }}
      xAxis={{
        labels: [
          'China',
          'India',
          'Australia',
          'Mexico',
          'Canada',
          'Brazil',
          'USA',

```

```

        'UK',
        'Germany',
        'Russia',
        'France',
        'Japan'
    ],
    labelRotation: 45,
    labelIntersectAction: 'None'
  }}
  yAxis={{
    labels: [
      '2008',
      '2009',
      '2010',
      '2011',
      '2012',
      '2013',
      '2014',
      '2015',
      '2016',
      '2017'
    ]
  }}
  paletteSettings={{
    palette: [
      { value: -1, color: '#F0D6AD' },
      { value: 0, color: '#9da49a' },
      { value: 3.5, color: '#d7c7a7' },
      { value: 6.0, color: '#6e888f' },
      { value: 7.5, color: '#466f86' },
      { value: 10, color: '#19547B' }
    ]
  }}
  legendSettings={{
    visible: false
  }}
  tooltipRender={tooltipTemplate as any}
  dataSource={heatmapData}
>
  <Inject services={[Legend, Tooltip, Adaptor]} />
</HeatMapComponent>
);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Array - cell binding

This data type is a collection of array objects that contain information about the row index, column index, and data value for each cell. You can bind the data to heat map by using the [data](#) property in the [dataSource](#) and setting the [adaptorType](#) property to **Cell**.

INDEX.JSX

```

{% raw %}
import * as React from "react";

```

```
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Adaptor, Tooltip,
ITooltipEventArgs } from '@syncfusion/ej2-react-heatmap';
export function App() {
    var heatmapData = [
        [0, 0, 10.75],
        [0, 1, 14.5],
        [0, 2, 25.5],
        [0, 3, 39.5],
        [0, 4, 59.75],
        [0, 5, 35.5],
        [0, 6, 75.5],
        [1, 0, 20.75],
        [1, 1, 35.5],
        [1, 2, 29.5],
        [1, 3, 75.5],
        [1, 4, 80],
        [1, 5, 65],
        [1, 6, 85],
        [2, 0, 6],
        [2, 1, 18.5],
        [2, 2, 30.05],
        [2, 3, 35.5],
        [2, 4, 40.75],
        [2, 5, 50.75],
        [2, 6, 65],
        [3, 0, 30.5],
        [3, 1, 20.5],
        [3, 2, 45.3],
        [3, 3, 50],
        [3, 4, 55],
        [3, 5, 85.8],
        [3, 6, 87.5],
        [4, 0, 10.5],
        [4, 1, 20.75],
        [4, 2, 35.5],
        [4, 3, 35.5],
        [4, 4, 45.5],
        [4, 5, 65],
        [4, 6, 75.5],
        [5, 0, 45.5],
        [5, 1, 20.75],
        [5, 2, 45.5],
        [5, 3, 50.75],
        [5, 4, 79.3],
        [5, 5, 84.2],
        [5, 6, 87.36],
        [6, 0, 26.82],
        [6, 1, 70],
        [6, 2, 75],
        [6, 3, 79.5],
        [6, 4, 88.5],
        [6, 5, 89.5],
        [6, 6, 91.75],
        [7, 0, 15.75],
        [7, 1, 20.75],
        [7, 2, 25.5],
```

```

[7, 3, 42.35],
[7, 4, 45.15],
[7, 5, 76.5],
[7, 6, 80.5],
[8, 0, 1.98],
[8, 1, 15.23],
[8, 2, 43],
[8, 3, 49],
[8, 4, 63.8],
[8, 5, 67.97],
[8, 6, 70.52],
[9, 0, 14.31],
[9, 1, 42.87],
[9, 2, 77.28],
[9, 3, 77.82],
[9, 4, 81.44],
[9, 5, 81.92],
[9, 6, 83.75],
[10, 0, 25.5],
[10, 1, 35.5],
[10, 2, 40.5],
[10, 3, 45.05],
[10, 4, 50.5],
[10, 5, 75.5],
[10, 6, 90.58]
];
function tooltipTemplate(args) {
  args.content = [args.yLabel + ' | ' + args.xLabel + ' : ' + args.value +
    '%'];
}
return (
  <HeatMapComponent
    titleSettings={{
      text: 'Percentage of Individuals Using Internet by Country',
      textStyle: {
        size: '15px',
        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'Segoe UI'
      }
    }}
    xAxis={{
      labels: [
        'China',
        'Australia',
        'Mexico',
        'Canada',
        'Brazil',
        'USA',
        'UK',
        'Germany',
        'Russia',
        'France',
        'Japan'
      ]
    }}
    yAxis={{

```

```

        labels: ['2000', '2005', '2010', '2011', '2012', '2013', '2014']
      }}
      dataSource={heatmapData}
      dataSourceSettings={{
        isJsonData: false,
        adaptorType: 'Cell'
      }}
      paletteSettings={{
        palette: [{ color: '#3498DB' }, { color: '#2C3E50' }]
      }}
      cellSettings={{
        border: {
          width: 0
        },
        textStyle: {
          color: 'white'
        },
        format: '{value} %'
      }}
      legendSettings={{
        visible: false
      }}
      tooltipRender={tooltipTemplate}
    >
    <Inject services={[Legend, Tooltip, Adaptor]} />
  </HeatMapComponent>
);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% enddraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from "react-dom";
import { HeatMapComponent, Inject, Legend, Adaptor, Tooltip,
ITooltipEventArgs } from '@syncfusion/ej2-react-heatmap';
export function App() {
  let heatmapData : any[] = [
    [0, 0, 10.75],
    [0, 1, 14.5],
    [0, 2, 25.5],
    [0, 3, 39.5],
    [0, 4, 59.75],
    [0, 5, 35.5],
    [0, 6, 75.5],
    [1, 0, 20.75],
    [1, 1, 35.5],
    [1, 2, 29.5],
    [1, 3, 75.5],
    [1, 4, 80],
    [1, 5, 65],
    [1, 6, 85],
    [2, 0, 6],

```



```
[2, 1, 18.5],  
[2, 2, 30.05],  
[2, 3, 35.5],  
[2, 4, 40.75],  
[2, 5, 50.75],  
[2, 6, 65],  
[3, 0, 30.5],  
[3, 1, 20.5],  
[3, 2, 45.3],  
[3, 3, 50],  
[3, 4, 55],  
[3, 5, 85.8],  
[3, 6, 87.5],  
[4, 0, 10.5],  
[4, 1, 20.75],  
[4, 2, 35.5],  
[4, 3, 35.5],  
[4, 4, 45.5],  
[4, 5, 65],  
[4, 6, 75.5],  
[5, 0, 45.5],  
[5, 1, 20.75],  
[5, 2, 45.5],  
[5, 3, 50.75],  
[5, 4, 79.3],  
[5, 5, 84.2],  
[5, 6, 87.36],  
[6, 0, 26.82],  
[6, 1, 70],  
[6, 2, 75],  
[6, 3, 79.5],  
[6, 4, 88.5],  
[6, 5, 89.5],  
[6, 6, 91.75],  
[7, 0, 15.75],  
[7, 1, 20.75],  
[7, 2, 25.5],  
[7, 3, 42.35],  
[7, 4, 45.15],  
[7, 5, 76.5],  
[7, 6, 80.5],  
[8, 0, 1.98],  
[8, 1, 15.23],  
[8, 2, 43],  
[8, 3, 49],  
[8, 4, 63.8],  
[8, 5, 67.97],  
[8, 6, 70.52],  
[9, 0, 14.31],  
[9, 1, 42.87],  
[9, 2, 77.28],  
[9, 3, 77.82],  
[9, 4, 81.44],  
[9, 5, 81.92],  
[9, 6, 83.75],  
[10, 0, 25.5],  
[10, 1, 35.5],
```

```

        [10, 2, 40.5],
        [10, 3, 45.05],
        [10, 4, 50.5],
        [10, 5, 75.5],
        [10, 6, 90.58]
    ];
    function tooltipTemplate(args: ITooltipEventArgs): void {
        args.content = [args.yLabel + ' | ' + args.xLabel + ' : ' + args.value +
        ' %'];
    }
    return (
        <HeatMapComponent
            titleSettings={{
                text: 'Percentage of Individuals Using Internet by Country',
                textStyle: {
                    size: '15px',
                    fontWeight: '500',
                    fontStyle: 'Normal',
                    fontFamily: 'Segoe UI'
                }
            }}
            xAxis={{
                labels: [
                    'China',
                    'Australia',
                    'Mexico',
                    'Canada',
                    'Brazil',
                    'USA',
                    'UK',
                    'Germany',
                    'Russia',
                    'France',
                    'Japan'
                ]
            }}
            yAxis={{
                labels: ['2000', '2005', '2010', '2011', '2012', '2013', '2014']
            }}
            dataSource={heatmapData}
            dataSourceSettings={{
                isJsonData: false,
                adaptorType: 'Cell'
            }}
            paletteSettings={{
                palette: [{ color: '#3498DB' }, { color: '#2C3E50' }]
            }}
            cellSettings={{
                border: {
                    width: 0
                },
                textStyle: {
                    color: 'white'
                },
                format: '{value} %'
            }}
            legendSettings={{

```

```

        visible: false
      }}
      tooltipRender={tooltipTemplate as any}
    >
      <Inject services={[Legend, Tooltip, Adaptor]} />
    </HeatMapComponent>
  );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

JSON data - table binding

In JSON table data binding, each JSON object contains an X-axis data point as row header and all the corresponding Y-axis data values. You can bind the JSON table data to the heat map using the [data](#) property in [dataSource](#). To achieve this, you should enable the [isJsonData](#) property and define the [adaptorType](#) property as **Table**. The [xDataMapping](#) property is used to map the row header in JSON data.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Adaptor, Tooltip,
ITooltipEventArgs } from '@syncfusion/ej2-react-heatmap';
export function App() {
  var heatmapData = [
    { Region: 'USA', '2000': 93, '2004': 101, '2008': 112, '2012': 103,
'2016': 121 },
    { Region: 'GBR', '2000': 28, '2004': 30, '2008': 49, '2012': 65, '2016':
67 },
    { Region: 'China', '2000': 58, '2004': 63, '2008': 100, '2012': 91,
'2016': 70 },
    { Region: 'Russia', '2000': 89, '2004': 90, '2008': 60, '2012': 69,
'2016': 55 },
    { Region: 'Germany', '2000': 56, '2004': 49, '2008': 41, '2012': 44,
'2016': 42 },
    { Region: 'Japan', '2000': 18, '2004': 37, '2008': 25, '2012': 38,
'2016': 41 },
    { Region: 'France', '2000': 38, '2004': 33, '2008': 43, '2012': 35,
'2016': 42 },
    { Region: 'KOR', '2000': 28, '2004': 30, '2008': 32, '2012': 30, '2016':
21 },
    { Region: 'Italy', '2000': 34, '2004': 32, '2008': 27, '2012': 28,
'2016': 28 }
  ];
  function tooltipTemplate(args) {
    args.content = [args.yLabel + ' | ' + args.xLabel + ' : ' + args.value +
' medals'];
  }
  return (
    <HeatMapComponent
      titleSettings={{
        text: 'Olympic Medal Achievements of most Successful Countries',

```

```

        textStyle: {
            size: '15px',
            fontWeight: '500',
            fontStyle: 'Normal',
            fontFamily: 'Segoe UI'
        }
    }}
    xAxis={{
        labels: [
            'China',
            'France',
            'GBR',
            'Germany',
            'Italy',
            'Japan',
            'KOR',
            'Russia',
            'USA'
        ],
        labelRotation: 45,
        labelIntersectAction: 'None'
    }}
    yAxis={{
        title: { text: 'Olympic Year' },
        labels: ['2000', '2004', '2008', '2012', '2016']
    }}
    dataSource={heatmapData}
    dataSourceSettings={{
        isJsonData: true,
        adaptorType: 'Table',
        xDataMapping: 'Region'
    }}
    paletteSettings={{
        palette: [{ color: '#F0C27B' }, { color: '#4B1248' }]
    }}
    cellSettings={{
        border: {
            width: 1,
            radius: 4,
            color: 'white'
        }
    }}
    legendSettings={{
        visible: false
    }}
    tooltipRender={tooltipTemplate}
>
    <Inject services={[Adaptor, Tooltip, Legend]} />
</HeatMapComponent>
);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% enddraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from "react-dom";
import { HeatMapComponent, Inject, Legend, Adaptor, Tooltip,
ITooltipEventArgs } from '@syncfusion/ej2-react-heatmap';
export function App() {
    let heatmapData : any[] = [
        { Region: 'USA', '2000': 93, '2004': 101, '2008': 112, '2012': 103,
'2016': 121 },
        { Region: 'GBR', '2000': 28, '2004': 30, '2008': 49, '2012': 65, '2016':
67 },
        { Region: 'China', '2000': 58, '2004': 63, '2008': 100, '2012': 91,
'2016': 70 },
        { Region: 'Russia', '2000': 89, '2004': 90, '2008': 60, '2012': 69,
'2016': 55 },
        { Region: 'Germany', '2000': 56, '2004': 49, '2008': 41, '2012': 44,
'2016': 42 },
        { Region: 'Japan', '2000': 18, '2004': 37, '2008': 25, '2012': 38,
'2016': 41 },
        { Region: 'France', '2000': 38, '2004': 33, '2008': 43, '2012': 35,
'2016': 42 },
        { Region: 'KOR', '2000': 28, '2004': 30, '2008': 32, '2012': 30, '2016':
21 },
        { Region: 'Italy', '2000': 34, '2004': 32, '2008': 27, '2012': 28,
'2016': 28 }
    ];
    function tooltipTemplate(args: ITooltipEventArgs): void {
        args.content = [args.yLabel + ' | ' + args.xLabel + ' : ' + args.value +
' medals'];
    }
    return (
        <HeatMapComponent
            titleSettings={{
                text: 'Olympic Medal Achievements of most Successful Countries',
                textStyle: {
                    size: '15px',
                    fontWeight: '500',
                    fontStyle: 'Normal',
                    fontFamily: 'Segoe UI'
                }
            }}
            xAxis={{
                labels: [
                    'China',
                    'France',
                    'GBR',
                    'Germany',
                    'Italy',
                    'Japan',
                    'KOR',
                    'Russia',
                    'USA'
                ],
                labelRotation: 45,
                labelIntersectAction: 'None'
            }}
            yAxis={{

```

```

        title: { text: 'Olympic Year' },
        labels: [ '2000', '2004', '2008', '2012', '2016' ]
    }}
    dataSource={heatmapData}
    dataSourceSettings={{
        isJsonData: true,
        adaptorType: 'Table',
        xDataMapping: 'Region'
    }}
    paletteSettings={{
        palette: [ { color: '#F0C27B' }, { color: '#4B1248' } ]
    }}
    cellSettings={{
        border: {
            width: 1,
            radius: 4,
            color: 'white'
        }
    }}
    legendSettings={{
        visible: false
    }}
    tooltipRender={tooltipTemplate as any}
>
    <Inject services={[Adaptor, Tooltip, Legend]} />
</HeatMapComponent>
);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

JSON data - Cell binding

In JSON cell data binding, each JSON object consists a value for each cell along with a mapping value for row and column. You can bind the JSON cell data having information for each cell to the heat map using the [data](#) property in [dataSource](#). To achieve this, you should define the [adaptorType](#) property as **Cell**, and enable the [isJsonData](#) property. Now, map the fields of data by using the [valueMapping](#), [xDataMapping](#) and [yDataMapping](#) properties.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Adaptor, Tooltip } from
'@syncfusion/ej2-react-heatmap';
export function App() {
    var heatmapData = [
        { 'rowid': 'France', 'columnid': '2010', 'value': '77.6' },
        { 'rowid': 'France', 'columnid': '2011', 'value': '79.4' },
        { 'rowid': 'France', 'columnid': '2012', 'value': '80.8' },
        { 'rowid': 'France', 'columnid': '2013', 'value': '86.6' },
        { 'rowid': 'France', 'columnid': '2014', 'value': '83.7' },
        { 'rowid': 'France', 'columnid': '2015', 'value': '84.5' },
        { 'rowid': 'France', 'columnid': '2016', 'value': '82.6' },
    ];
}

```

```

{ 'rowid': 'USA', 'columnid': '2010', 'value': '60.6' },
{ 'rowid': 'USA', 'columnid': '2011', 'value': '65.4' },
{ 'rowid': 'USA', 'columnid': '2012', 'value': '70.8' },
{ 'rowid': 'USA', 'columnid': '2013', 'value': '73.8' },
{ 'rowid': 'USA', 'columnid': '2014', 'value': '75.3' },
{ 'rowid': 'USA', 'columnid': '2015', 'value': '77.5' },
{ 'rowid': 'USA', 'columnid': '2016', 'value': '77.6' },
{ 'rowid': 'Spain', 'columnid': '2010', 'value': '64.9' },
{ 'rowid': 'Spain', 'columnid': '2011', 'value': '52.6' },
{ 'rowid': 'Spain', 'columnid': '2012', 'value': '60.8' },
{ 'rowid': 'Spain', 'columnid': '2013', 'value': '65.6' },
{ 'rowid': 'Spain', 'columnid': '2014', 'value': '52.6' },
{ 'rowid': 'Spain', 'columnid': '2015', 'value': '68.5' },
{ 'rowid': 'Spain', 'columnid': '2016', 'value': '75.6' },
{ 'rowid': 'China', 'columnid': '2010', 'value': '55.6' },
{ 'rowid': 'China', 'columnid': '2011', 'value': '52.3' },
{ 'rowid': 'China', 'columnid': '2012', 'value': '54.8' },
{ 'rowid': 'China', 'columnid': '2013', 'value': '51.1' },
{ 'rowid': 'China', 'columnid': '2014', 'value': '55.6' },
{ 'rowid': 'China', 'columnid': '2015', 'value': '56.9' },
{ 'rowid': 'China', 'columnid': '2016', 'value': '59.3' },
{ 'rowid': 'Italy', 'columnid': '2010', 'value': '43.6' },
{ 'rowid': 'Italy', 'columnid': '2011', 'value': '43.2' },
{ 'rowid': 'Italy', 'columnid': '2012', 'value': '55.8' },
{ 'rowid': 'Italy', 'columnid': '2013', 'value': '50.1' },
{ 'rowid': 'Italy', 'columnid': '2014', 'value': '48.5' },
{ 'rowid': 'Italy', 'columnid': '2015', 'value': '50.7' },
{ 'rowid': 'Italy', 'columnid': '2016', 'value': '52.4' },
{ 'rowid': 'UK', 'columnid': '2010', 'value': '28.2' },
{ 'rowid': 'UK', 'columnid': '2011', 'value': '31.6' },
{ 'rowid': 'UK', 'columnid': '2012', 'value': '29.8' },
{ 'rowid': 'UK', 'columnid': '2013', 'value': '33.1' },
{ 'rowid': 'UK', 'columnid': '2014', 'value': '32.6' },
{ 'rowid': 'UK', 'columnid': '2015', 'value': '34.4' },
{ 'rowid': 'UK', 'columnid': '2016', 'value': '35.8' },
{ 'rowid': 'Germany', 'columnid': '2010', 'value': '26.8' },
{ 'rowid': 'Germany', 'columnid': '2011', 'value': '29' },
{ 'rowid': 'Germany', 'columnid': '2012', 'value': '26.8' },
{ 'rowid': 'Germany', 'columnid': '2013', 'value': '27.6' },
{ 'rowid': 'Germany', 'columnid': '2014', 'value': '33' },
{ 'rowid': 'Germany', 'columnid': '2015', 'value': '35' },
{ 'rowid': 'Germany', 'columnid': '2016', 'value': '35.6' },
{ 'rowid': 'Mexico', 'columnid': '2010', 'value': '23.2' },
{ 'rowid': 'Mexico', 'columnid': '2011', 'value': '24.9' },
{ 'rowid': 'Mexico', 'columnid': '2012', 'value': '30.1' },
{ 'rowid': 'Mexico', 'columnid': '2013', 'value': '22.2' },
{ 'rowid': 'Mexico', 'columnid': '2014', 'value': '29.3' },
{ 'rowid': 'Mexico', 'columnid': '2015', 'value': '32.1' },
{ 'rowid': 'Mexico', 'columnid': '2016', 'value': '35' },
{ 'rowid': 'Thailand', 'columnid': '2010', 'value': '15.9' },
{ 'rowid': 'Thailand', 'columnid': '2011', 'value': '19.8' },
{ 'rowid': 'Thailand', 'columnid': '2012', 'value': '21.8' },
{ 'rowid': 'Thailand', 'columnid': '2013', 'value': '23.5' },
{ 'rowid': 'Thailand', 'columnid': '2014', 'value': '24.8' },
{ 'rowid': 'Thailand', 'columnid': '2015', 'value': '29.9' },
{ 'rowid': 'Thailand', 'columnid': '2016', 'value': '32.6' },
{ 'rowid': 'Austria', 'columnid': '2010', 'value': '22' },

```

```

        { 'rowid': 'Austria', 'columnid': '2011', 'value': '21.3' },
        { 'rowid': 'Austria', 'columnid': '2012', 'value': '24.2' },
        { 'rowid': 'Austria', 'columnid': '2013', 'value': '23.2' },
        { 'rowid': 'Austria', 'columnid': '2014', 'value': '25' },
        { 'rowid': 'Austria', 'columnid': '2015', 'value': '26.7' },
        { 'rowid': 'Austria', 'columnid': '2016', 'value': '28.1' },
    ];
    return ( <HeatMapComponent
        titleSettings = { {
            text: 'Most Visited Destinations by International Tourist
Arrivals',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        } }
        xAxis = { {
            labels: ['Austria', 'China', 'France', 'Germany', 'Italy',
'Mexico', 'Spain', 'Thailand', 'UK', 'USA'],
        } }
        yAxis = { {
            labels: ['2010', '2011', '2012', '2013', '2014', '2015',
'2016'],
        } }
        dataSource={heatmapData}
        dataSourceSettings={ {
            isJsonData: true,
            adaptorType: 'Cell',
            xDataMapping: 'rowid',
            yDataMapping: 'columnid',
            valueMapping: 'value'
        } }
        paletteSettings = { {
            palette: [{ color: '#DCD57E' },
                { color: '#A6DC7E' },
                { color: '#7EDCA2' },
                { color: '#6EB5D0' }
            ],
        } }
        cellSettings = { {
            border: {
                radius: 4,
                width: 1,
                color: 'white'
            },
            showLabel: true,
            format: '{value} M',
        } } >
        <Inject services={[Legend, Tooltip, Adaptor]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% enddraw %}

```


INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from "react-dom";
import { HeatMapComponent, Inject, Legend, Adaptor, Tooltip } from
"@syncfusion/ej2-react-heatmap";
export function App() {
  let heatmapData : any[] = [
    { 'rowid': 'France', 'columnid': '2010', 'value': '77.6' },
    { 'rowid': 'France', 'columnid': '2011', 'value': '79.4' },
    { 'rowid': 'France', 'columnid': '2012', 'value': '80.8' },
    { 'rowid': 'France', 'columnid': '2013', 'value': '86.6' },
    { 'rowid': 'France', 'columnid': '2014', 'value': '83.7' },
    { 'rowid': 'France', 'columnid': '2015', 'value': '84.5' },
    { 'rowid': 'France', 'columnid': '2016', 'value': '82.6' },
    { 'rowid': 'USA', 'columnid': '2010', 'value': '60.6' },
    { 'rowid': 'USA', 'columnid': '2011', 'value': '65.4' },
    { 'rowid': 'USA', 'columnid': '2012', 'value': '70.8' },
    { 'rowid': 'USA', 'columnid': '2013', 'value': '73.8' },
    { 'rowid': 'USA', 'columnid': '2014', 'value': '75.3' },
    { 'rowid': 'USA', 'columnid': '2015', 'value': '77.5' },
    { 'rowid': 'USA', 'columnid': '2016', 'value': '77.6' },
    { 'rowid': 'Spain', 'columnid': '2010', 'value': '64.9' },
    { 'rowid': 'Spain', 'columnid': '2011', 'value': '52.6' },
    { 'rowid': 'Spain', 'columnid': '2012', 'value': '60.8' },
    { 'rowid': 'Spain', 'columnid': '2013', 'value': '65.6' },
    { 'rowid': 'Spain', 'columnid': '2014', 'value': '52.6' },
    { 'rowid': 'Spain', 'columnid': '2015', 'value': '68.5' },
    { 'rowid': 'Spain', 'columnid': '2016', 'value': '75.6' },
    { 'rowid': 'China', 'columnid': '2010', 'value': '55.6' },
    { 'rowid': 'China', 'columnid': '2011', 'value': '52.3' },
    { 'rowid': 'China', 'columnid': '2012', 'value': '54.8' },
    { 'rowid': 'China', 'columnid': '2013', 'value': '51.1' },
    { 'rowid': 'China', 'columnid': '2014', 'value': '55.6' },
    { 'rowid': 'China', 'columnid': '2015', 'value': '56.9' },
    { 'rowid': 'China', 'columnid': '2016', 'value': '59.3' },
    { 'rowid': 'Italy', 'columnid': '2010', 'value': '43.6' },
    { 'rowid': 'Italy', 'columnid': '2011', 'value': '43.2' },
    { 'rowid': 'Italy', 'columnid': '2012', 'value': '55.8' },
    { 'rowid': 'Italy', 'columnid': '2013', 'value': '50.1' },
    { 'rowid': 'Italy', 'columnid': '2014', 'value': '48.5' },
    { 'rowid': 'Italy', 'columnid': '2015', 'value': '50.7' },
    { 'rowid': 'Italy', 'columnid': '2016', 'value': '52.4' },
    { 'rowid': 'UK', 'columnid': '2010', 'value': '28.2' },
    { 'rowid': 'UK', 'columnid': '2011', 'value': '31.6' },
    { 'rowid': 'UK', 'columnid': '2012', 'value': '29.8' },
    { 'rowid': 'UK', 'columnid': '2013', 'value': '33.1' },
    { 'rowid': 'UK', 'columnid': '2014', 'value': '32.6' },
    { 'rowid': 'UK', 'columnid': '2015', 'value': '34.4' },
    { 'rowid': 'UK', 'columnid': '2016', 'value': '35.8' },
    { 'rowid': 'Germany', 'columnid': '2010', 'value': '26.8' },
    { 'rowid': 'Germany', 'columnid': '2011', 'value': '29' },
    { 'rowid': 'Germany', 'columnid': '2012', 'value': '26.8' },
    { 'rowid': 'Germany', 'columnid': '2013', 'value': '27.6' },
  ]
}

```

```

    { 'rowid': 'Germany', 'columnid': '2014', 'value': '33' },
    { 'rowid': 'Germany', 'columnid': '2015', 'value': '35' },
    { 'rowid': 'Germany', 'columnid': '2016', 'value': '35.6' },
    { 'rowid': 'Mexico', 'columnid': '2010', 'value': '23.2' },
    { 'rowid': 'Mexico', 'columnid': '2011', 'value': '24.9' },
    { 'rowid': 'Mexico', 'columnid': '2012', 'value': '30.1' },
    { 'rowid': 'Mexico', 'columnid': '2013', 'value': '22.2' },
    { 'rowid': 'Mexico', 'columnid': '2014', 'value': '29.3' },
    { 'rowid': 'Mexico', 'columnid': '2015', 'value': '32.1' },
    { 'rowid': 'Mexico', 'columnid': '2016', 'value': '35' },
    { 'rowid': 'Thailand', 'columnid': '2010', 'value': '15.9' },
    { 'rowid': 'Thailand', 'columnid': '2011', 'value': '19.8' },
    { 'rowid': 'Thailand', 'columnid': '2012', 'value': '21.8' },
    { 'rowid': 'Thailand', 'columnid': '2013', 'value': '23.5' },
    { 'rowid': 'Thailand', 'columnid': '2014', 'value': '24.8' },
    { 'rowid': 'Thailand', 'columnid': '2015', 'value': '29.9' },
    { 'rowid': 'Thailand', 'columnid': '2016', 'value': '32.6' },
    { 'rowid': 'Austria', 'columnid': '2010', 'value': '22' },
    { 'rowid': 'Austria', 'columnid': '2011', 'value': '21.3' },
    { 'rowid': 'Austria', 'columnid': '2012', 'value': '24.2' },
    { 'rowid': 'Austria', 'columnid': '2013', 'value': '23.2' },
    { 'rowid': 'Austria', 'columnid': '2014', 'value': '25' },
    { 'rowid': 'Austria', 'columnid': '2015', 'value': '26.7' },
    { 'rowid': 'Austria', 'columnid': '2016', 'value': '28.1' },
  ];
  return ( <HeatMapComponent
    titleSettings = { {
      text: 'Most Visited Destinations by International Tourist
Arrivals',
      textStyle: {
        size: '15px',
        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'Segoe UI'
      }
    } }
    xAxis = { {
      labels: ['Austria', 'China', 'France', 'Germany', 'Italy',
'Mexico', 'Spain', 'Thailand', 'UK', 'USA'],
    } }
    yAxis = { {
      labels: ['2010', '2011', '2012', '2013', '2014', '2015',
'2016'],
    } }
    dataSource={heatmapData}
    dataSourceSettings={ {
      isJsonData: true,
      adaptorType: 'Cell',
      xDataMapping: 'rowid',
      yDataMapping: 'columnid',
      valueMapping: 'value'
    } }
    paletteSettings = { {
      palette: [{ color: '#DCD57E' },
        { color: '#A6DC7E' },
        { color: '#7EDCA2' },
        { color: '#6EB5D0' }
      ]
    } }
  );

```

```

    ],
  } }
  cellSettings = { {
    border: {
      radius: 4,
      width: 1,
      color: 'white'
    },
    showLabel: true,
    format: '{value} M',
  } }>
  <Inject services={[Legend, Tooltip, Adaptor]} />
  </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Empty points

The data points that use the **null** or **undefined** or empty string as value are considered as empty points. Empty data points are ignored and not displayed in the heat map, and these points are rendered with default palette. You can customize the empty data point color value using the [emptyPointColor](#) property.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Adaptor, Tooltip, Legend } from
'@syncfusion/ej2-react-heatmap';
export function App() {
  var heatmapData = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
    [99, 28, null, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, "", 79],
    [56, 69, 21, 86, 3, 33],
    [45, 7, undefined, 81, 95, 79],
    [60, 77, 74, 68, 88, 51],
    [25, 25, 10, 12, 78, 14],
    [25, 56, 55, 58, 12, 82],
    [74, 33, 88, 23, 86, 59]
  ];
  return ( <HeatMapComponent
    xAxis = { {
      valueType:"DateTime",
      minimum: new Date(2007,0,1),
      intervalType:"Years",
      labelFormat:"yyyy",
    } }
    yAxis = { {
      valueType:"Numeric"
    } }
  
```

```

        dataSource={heatmapData}
        legendSettings = { {
            visible:false,
        } }>
        <Inject services={[Adaptor, Tooltip, Legend]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Adaptor, Tooltip, Legend } from
'@syncfusion/ej2-react-heatmap';
export function App() {
    let heatmapData : any[] = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, null, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, "", 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, undefined, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return ( <HeatMapComponent
        xAxis = { {
            valueType:"DateTime",
            minimum: new Date(2007,0,1),
            intervalType:"Years",
            labelFormat:"YYYY",
        } }
        yAxis = { {
            valueType:"Numeric"
        } }
        dataSource={heatmapData}
        legendSettings = { {
            visible:false,
        } }>
        <Inject services={[Adaptor, Tooltip, Legend]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Binding nested JSON data

In complex data binding, you can bind the nested JSON data to the data points in the heat map. The nested data can be mapped using the [xDataMapping](#), [yDataMapping](#), [valueMapping](#) and [bubbleDataMapping](#) properties as string value concatenated by a dot.

INDEX.JSX

```
{% raw %}
import * as React from "react";
import * as ReactDOM from "react-dom";
import { HeatMapComponent, Inject, Legend, Adaptor, Tooltip } from
"@syncfusion/ej2-react-heatmap";
export function App() {
    var heatmapData = [
        { 'Labels':{ 'Xlabel': 'France', 'Ylabel': '2010' }, 'data':{ 'value':
'77.6' } },
        { 'Labels':{ 'Xlabel': 'France', 'Ylabel': '2011' }, 'data':{ 'value':
'79.4' } },
        { 'Labels':{ 'Xlabel': 'France', 'Ylabel': '2012' }, 'data':{ 'value':
'80.8' } },
        { 'Labels':{ 'Xlabel': 'France', 'Ylabel': '2013' }, 'data':{ 'value':
'86.6' } },
        { 'Labels':{ 'Xlabel': 'France', 'Ylabel': '2014' }, 'data':{ 'value':
'83.7' } },
        { 'Labels':{ 'Xlabel': 'France', 'Ylabel': '2015' }, 'data':{ 'value':
'84.5' } },
        { 'Labels':{ 'Xlabel': 'France', 'Ylabel': '2016' }, 'data':{ 'value':
'82.6' } },
        { 'Labels':{ 'Xlabel': 'USA', 'Ylabel': '2010' }, 'data':{ 'value':
'60.6' } },
        { 'Labels':{ 'Xlabel': 'USA', 'Ylabel': '2011' }, 'data':{ 'value':
'65.4' } },
        { 'Labels':{ 'Xlabel': 'USA', 'Ylabel': '2012' }, 'data':{ 'value':
'70.8' } },
        { 'Labels':{ 'Xlabel': 'USA', 'Ylabel': '2013' }, 'data':{ 'value':
'73.8' } },
        { 'Labels':{ 'Xlabel': 'USA', 'Ylabel': '2014' }, 'data':{ 'value':
'75.3' } },
        { 'Labels':{ 'Xlabel': 'USA', 'Ylabel': '2015' }, 'data':{ 'value':
'77.5' } },
        { 'Labels':{ 'Xlabel': 'USA', 'Ylabel': '2016' }, 'data':{ 'value':
'77.6' } },
        { 'Labels':{ 'Xlabel': 'Spain', 'Ylabel': '2010' }, 'data':{ 'value':
'64.9' } },
        { 'Labels':{ 'Xlabel': 'Spain', 'Ylabel': '2011' }, 'data':{ 'value':
'52.6' } },
        { 'Labels':{ 'Xlabel': 'Spain', 'Ylabel': '2012' }, 'data':{ 'value':
'60.8' } },
        { 'Labels':{ 'Xlabel': 'Spain', 'Ylabel': '2013' }, 'data':{ 'value':
'65.6' } },
        { 'Labels':{ 'Xlabel': 'Spain', 'Ylabel': '2014' }, 'data':{ 'value':
'52.6' } },
        { 'Labels':{ 'Xlabel': 'Spain', 'Ylabel': '2015' }, 'data':{ 'value':
'68.5' } },
        { 'Labels':{ 'Xlabel': 'Spain', 'Ylabel': '2016' }, 'data':{ 'value':
'75.6' } },
    ]
}
```

```

    { 'Labels':{ 'Xlabel': 'China', 'Ylabel': '2010'}, 'data':{ 'value':
'55.6' }},
    { 'Labels':{ 'Xlabel': 'China', 'Ylabel': '2011'}, 'data':{ 'value':
'52.3' }},
    { 'Labels':{ 'Xlabel': 'China', 'Ylabel': '2012'}, 'data':{ 'value':
'54.8' }},
    { 'Labels':{ 'Xlabel': 'China', 'Ylabel': '2013'}, 'data':{ 'value':
'51.1' }},
    { 'Labels':{ 'Xlabel': 'China', 'Ylabel': '2014'}, 'data':{ 'value':
'55.6' }},
    { 'Labels':{ 'Xlabel': 'China', 'Ylabel': '2015'}, 'data':{ 'value':
'56.9' }},
    { 'Labels':{ 'Xlabel': 'China', 'Ylabel': '2016'}, 'data':{ 'value':
'59.3' }},
    { 'Labels':{ 'Xlabel': 'Italy', 'Ylabel': '2010'}, 'data':{ 'value':
'43.6' }},
    { 'Labels':{ 'Xlabel': 'Italy', 'Ylabel': '2011'}, 'data':{ 'value':
'43.2' }},
    { 'Labels':{ 'Xlabel': 'Italy', 'Ylabel': '2012'}, 'data':{ 'value':
'55.8' }},
    { 'Labels':{ 'Xlabel': 'Italy', 'Ylabel': '2013'}, 'data':{ 'value':
'50.1' }},
    { 'Labels':{ 'Xlabel': 'Italy', 'Ylabel': '2014'}, 'data':{ 'value':
'48.5' }},
    { 'Labels':{ 'Xlabel': 'Italy', 'Ylabel': '2015'}, 'data':{ 'value':
'50.7' }},
    { 'Labels':{ 'Xlabel': 'Italy', 'Ylabel': '2016'}, 'data':{ 'value':
'52.4' }},
    { 'Labels':{ 'Xlabel': 'UK', 'Ylabel': '2010'}, 'data':{ 'value':
'28.2' }},
    { 'Labels':{ 'Xlabel': 'UK', 'Ylabel': '2011'}, 'data':{ 'value':
'31.6' }},
    { 'Labels':{ 'Xlabel': 'UK', 'Ylabel': '2012'}, 'data':{ 'value':
'29.8' }},
    { 'Labels':{ 'Xlabel': 'UK', 'Ylabel': '2013'}, 'data':{ 'value':
'33.1' }},
    { 'Labels':{ 'Xlabel': 'UK', 'Ylabel': '2014'}, 'data':{ 'value':
'32.6' }},
    { 'Labels':{ 'Xlabel': 'UK', 'Ylabel': '2015'}, 'data':{ 'value':
'34.4' }},
    { 'Labels':{ 'Xlabel': 'UK', 'Ylabel': '2016'}, 'data':{ 'value':
'35.8' }},
    { 'Labels':{ 'Xlabel': 'Germany', 'Ylabel': '2010'}, 'data':{ 'value':
'26.8' }},
    { 'Labels':{ 'Xlabel': 'Germany', 'Ylabel': '2011'}, 'data':{ 'value':
'29' }},
    { 'Labels':{ 'Xlabel': 'Germany', 'Ylabel': '2012'}, 'data':{ 'value':
'26.8' }},
    { 'Labels':{ 'Xlabel': 'Germany', 'Ylabel': '2013'}, 'data':{ 'value':
'27.6' }},
    { 'Labels':{ 'Xlabel': 'Germany', 'Ylabel': '2014'}, 'data':{ 'value':
'33' }},
    { 'Labels':{ 'Xlabel': 'Germany', 'Ylabel': '2015'}, 'data':{ 'value':
'35' }},
    { 'Labels':{ 'Xlabel': 'Germany', 'Ylabel': '2016'}, 'data':{ 'value':
'35.6' }},

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    { 'Labels':{ 'Xlabel': 'Mexico', 'Ylabel': '2010'}, 'data':{ 'value':
'23.2' }},
    { 'Labels':{ 'Xlabel': 'Mexico', 'Ylabel': '2011'}, 'data':{ 'value':
'24.9' }},
    { 'Labels':{ 'Xlabel': 'Mexico', 'Ylabel': '2012'}, 'data':{ 'value':
'30.1' }},
    { 'Labels':{ 'Xlabel': 'Mexico', 'Ylabel': '2013'}, 'data':{ 'value':
'22.2' }},
    { 'Labels':{ 'Xlabel': 'Mexico', 'Ylabel': '2014'}, 'data':{ 'value':
'29.3' }},
    { 'Labels':{ 'Xlabel': 'Mexico', 'Ylabel': '2015'}, 'data':{ 'value':
'32.1' }},
    { 'Labels':{ 'Xlabel': 'Mexico', 'Ylabel': '2016'}, 'data':{ 'value':
'35' }},
    { 'Labels':{ 'Xlabel': 'Thailand', 'Ylabel': '2010'}, 'data':{ 'value':
'15.9' }},
    { 'Labels':{ 'Xlabel': 'Thailand', 'Ylabel': '2011'}, 'data':{ 'value':
'19.8' }},
    { 'Labels':{ 'Xlabel': 'Thailand', 'Ylabel': '2012'}, 'data':{ 'value':
'21.8' }},
    { 'Labels':{ 'Xlabel': 'Thailand', 'Ylabel': '2013'}, 'data':{ 'value':
'23.5' }},
    { 'Labels':{ 'Xlabel': 'Thailand', 'Ylabel': '2014'}, 'data':{ 'value':
'24.8' }},
    { 'Labels':{ 'Xlabel': 'Thailand', 'Ylabel': '2015'}, 'data':{ 'value':
'29.9' }},
    { 'Labels':{ 'Xlabel': 'Thailand', 'Ylabel': '2016'}, 'data':{ 'value':
'32.6' }},
    { 'Labels':{ 'Xlabel': 'Austria', 'Ylabel': '2010'}, 'data':{ 'value':
'22' }},
    { 'Labels':{ 'Xlabel': 'Austria', 'Ylabel': '2011'}, 'data':{ 'value':
'21.3' }},
    { 'Labels':{ 'Xlabel': 'Austria', 'Ylabel': '2012'}, 'data':{ 'value':
'24.2' }},
    { 'Labels':{ 'Xlabel': 'Austria', 'Ylabel': '2013'}, 'data':{ 'value':
'23.2' }},
    { 'Labels':{ 'Xlabel': 'Austria', 'Ylabel': '2014'}, 'data':{ 'value':
'25' }},
    { 'Labels':{ 'Xlabel': 'Austria', 'Ylabel': '2015'}, 'data':{ 'value':
'26.7' }},
    { 'Labels':{ 'Xlabel': 'Austria', 'Ylabel': '2016'}, 'data':{ 'value':
'28.1' }}
  ];
  return ( <HeatMapComponent
    titleSettings = { {
      text: 'Most Visited Destinations by International Tourist
Arrivals',
      textStyle: {
        size: '15px',
        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'Segoe UI'
      }
    } }
    xAxis = { {
      labels: ['Austria', 'China', 'France', 'Germany', 'Italy',
'Mexico', 'Spain', 'Thailand', 'UK', 'USA'],

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```

    } }
    yAxis = { {
      labels: ['2010', '2011', '2012', '2013', '2014', '2015',
'2016'],
    } }
    dataSource={heatmapData}
    dataSourceSettings={ {
      isJsonData: true,
      adaptorType: 'Cell',
      xDataMapping: 'Labels.Xlabel',
      yDataMapping: 'Labels.Ylabel',
      valueMapping: 'data.value'
    } }
    paletteSettings = { {
      palette: [{ color: '#DCD57E' },
        { color: '#A6DC7E' },
        { color: '#7EDCA2' },
        { color: '#6EB5D0' }
      ],
    } }
    cellSettings = { {
      border: {
        radius: 4,
        width: 1,
        color: 'white'
      },
      showLabel: true,
      format: '{value} M',
    } }>
    <Inject services={[Legend, Tooltip, Adaptor]} />
    </HeatMapComponent> );
  }
  const root = ReactDOM.createRoot(document.getElementById('container'));
  root.render(<App />);
  {% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Adaptor, Tooltip } from
'@syncfusion/ej2-react-heatmap';
export function App() {
  let heatmapData : any[] = [
    { 'Labels':{'Xlabel': 'France','Ylabel': '2010' },'data':{'value':
'77.6' }},
    { 'Labels':{'Xlabel': 'France','Ylabel': '2011'},'data':{'value':
'79.4'}},
    { 'Labels':{'Xlabel': 'France','Ylabel': '2012'},'data':{'value':
'80.8'}},
    { 'Labels':{'Xlabel': 'France','Ylabel': '2013'},'data':{'value':
'86.6'}},
    { 'Labels':{'Xlabel': 'France','Ylabel': '2014'},'data':{'value':
'83.7'}},

```



```

{ 'Labels':{ 'Xlabel': 'France', 'Ylabel': '2015'}, 'data':{ 'value':
'84.5' }},
{ 'Labels':{ 'Xlabel': 'France', 'Ylabel': '2016'}, 'data':{ 'value':
'82.6' }},
{ 'Labels':{ 'Xlabel': 'USA', 'Ylabel': '2010'}, 'data':{ 'value':
'60.6' }},
{ 'Labels':{ 'Xlabel': 'USA', 'Ylabel': '2011'}, 'data':{ 'value':
'65.4' }},
{ 'Labels':{ 'Xlabel': 'USA', 'Ylabel': '2012'}, 'data':{ 'value':
'70.8' }},
{ 'Labels':{ 'Xlabel': 'USA', 'Ylabel': '2013'}, 'data':{ 'value':
'73.8' }},
{ 'Labels':{ 'Xlabel': 'USA', 'Ylabel': '2014'}, 'data':{ 'value':
'75.3' }},
{ 'Labels':{ 'Xlabel': 'USA', 'Ylabel': '2015'}, 'data':{ 'value':
'77.5' }},
{ 'Labels':{ 'Xlabel': 'USA', 'Ylabel': '2016'}, 'data':{ 'value':
'77.6' }},
{ 'Labels':{ 'Xlabel': 'Spain', 'Ylabel': '2010'}, 'data':{ 'value':
'64.9' }},
{ 'Labels':{ 'Xlabel': 'Spain', 'Ylabel': '2011'}, 'data':{ 'value':
'52.6' }},
{ 'Labels':{ 'Xlabel': 'Spain', 'Ylabel': '2012'}, 'data':{ 'value':
'60.8' }},
{ 'Labels':{ 'Xlabel': 'Spain', 'Ylabel': '2013'}, 'data':{ 'value':
'65.6' }},
{ 'Labels':{ 'Xlabel': 'Spain', 'Ylabel': '2014'}, 'data':{ 'value':
'52.6' }},
{ 'Labels':{ 'Xlabel': 'Spain', 'Ylabel': '2015'}, 'data':{ 'value':
'68.5' }},
{ 'Labels':{ 'Xlabel': 'Spain', 'Ylabel': '2016'}, 'data':{ 'value':
'75.6' }},
{ 'Labels':{ 'Xlabel': 'China', 'Ylabel': '2010'}, 'data':{ 'value':
'55.6' }},
{ 'Labels':{ 'Xlabel': 'China', 'Ylabel': '2011'}, 'data':{ 'value':
'52.3' }},
{ 'Labels':{ 'Xlabel': 'China', 'Ylabel': '2012'}, 'data':{ 'value':
'54.8' }},
{ 'Labels':{ 'Xlabel': 'China', 'Ylabel': '2013'}, 'data':{ 'value':
'51.1' }},
{ 'Labels':{ 'Xlabel': 'China', 'Ylabel': '2014'}, 'data':{ 'value':
'55.6' }},
{ 'Labels':{ 'Xlabel': 'China', 'Ylabel': '2015'}, 'data':{ 'value':
'56.9' }},
{ 'Labels':{ 'Xlabel': 'China', 'Ylabel': '2016'}, 'data':{ 'value':
'59.3' }},
{ 'Labels':{ 'Xlabel': 'Italy', 'Ylabel': '2010'}, 'data':{ 'value':
'43.6' }},
{ 'Labels':{ 'Xlabel': 'Italy', 'Ylabel': '2011'}, 'data':{ 'value':
'43.2' }},
{ 'Labels':{ 'Xlabel': 'Italy', 'Ylabel': '2012'}, 'data':{ 'value':
'55.8' }},
{ 'Labels':{ 'Xlabel': 'Italy', 'Ylabel': '2013'}, 'data':{ 'value':
'50.1' }},
{ 'Labels':{ 'Xlabel': 'Italy', 'Ylabel': '2014'}, 'data':{ 'value':
'48.5' }},

```

```

    { 'Labels':{ 'Xlabel': 'Italy', 'Ylabel': '2015'}, 'data':{ 'value':
'50.7' }},
    { 'Labels':{ 'Xlabel': 'Italy', 'Ylabel': '2016'}, 'data':{ 'value':
'52.4' }},
    { 'Labels':{ 'Xlabel': 'UK', 'Ylabel': '2010'}, 'data':{ 'value':
'28.2' }},
    { 'Labels':{ 'Xlabel': 'UK', 'Ylabel': '2011'}, 'data':{ 'value':
'31.6' }},
    { 'Labels':{ 'Xlabel': 'UK', 'Ylabel': '2012'}, 'data':{ 'value':
'29.8' }},
    { 'Labels':{ 'Xlabel': 'UK', 'Ylabel': '2013'}, 'data':{ 'value':
'33.1' }},
    { 'Labels':{ 'Xlabel': 'UK', 'Ylabel': '2014'}, 'data':{ 'value':
'32.6' }},
    { 'Labels':{ 'Xlabel': 'UK', 'Ylabel': '2015'}, 'data':{ 'value':
'34.4' }},
    { 'Labels':{ 'Xlabel': 'UK', 'Ylabel': '2016'}, 'data':{ 'value':
'35.8' }},
    { 'Labels':{ 'Xlabel': 'Germany', 'Ylabel': '2010'}, 'data':{ 'value':
'26.8' }},
    { 'Labels':{ 'Xlabel': 'Germany', 'Ylabel': '2011'}, 'data':{ 'value':
'29' }},
    { 'Labels':{ 'Xlabel': 'Germany', 'Ylabel': '2012'}, 'data':{ 'value':
'26.8' }},
    { 'Labels':{ 'Xlabel': 'Germany', 'Ylabel': '2013'}, 'data':{ 'value':
'27.6' }},
    { 'Labels':{ 'Xlabel': 'Germany', 'Ylabel': '2014'}, 'data':{ 'value':
'33' }},
    { 'Labels':{ 'Xlabel': 'Germany', 'Ylabel': '2015'}, 'data':{ 'value':
'35' }},
    { 'Labels':{ 'Xlabel': 'Germany', 'Ylabel': '2016'}, 'data':{ 'value':
'35.6' }},
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'23.2' }},
    { 'Labels':{ 'Xlabel': 'Mexico', 'Ylabel': '2011'}, 'data':{ 'value':
'24.9' }},
    { 'Labels':{ 'Xlabel': 'Mexico', 'Ylabel': '2012'}, 'data':{ 'value':
'30.1' }},
    { 'Labels':{ 'Xlabel': 'Mexico', 'Ylabel': '2013'}, 'data':{ 'value':
'22.2' }},
    { 'Labels':{ 'Xlabel': 'Mexico', 'Ylabel': '2014'}, 'data':{ 'value':
'29.3' }},
    { 'Labels':{ 'Xlabel': 'Mexico', 'Ylabel': '2015'}, 'data':{ 'value':
'32.1' }},
    { 'Labels':{ 'Xlabel': 'Mexico', 'Ylabel': '2016'}, 'data':{ 'value':
'35' }},
    { 'Labels':{ 'Xlabel': 'Thailand', 'Ylabel': '2010'}, 'data':{ 'value':
'15.9' }},
    { 'Labels':{ 'Xlabel': 'Thailand', 'Ylabel': '2011'}, 'data':{ 'value':
'19.8' }},
    { 'Labels':{ 'Xlabel': 'Thailand', 'Ylabel': '2012'}, 'data':{ 'value':
'21.8' }},
    { 'Labels':{ 'Xlabel': 'Thailand', 'Ylabel': '2013'}, 'data':{ 'value':
'23.5' }},
    { 'Labels':{ 'Xlabel': 'Thailand', 'Ylabel': '2014'}, 'data':{ 'value':
'24.8' }},

```

```

    { 'Labels':{ 'Xlabel': 'Thailand', 'Ylabel': '2015'}, 'data':{ 'value':
'29.9' }},
    { 'Labels':{ 'Xlabel': 'Thailand', 'Ylabel': '2016'}, 'data':{ 'value':
'32.6' }},
    { 'Labels':{ 'Xlabel': 'Austria', 'Ylabel': '2010'}, 'data':{ 'value':
'22' }},
    { 'Labels':{ 'Xlabel': 'Austria', 'Ylabel': '2011'}, 'data':{ 'value':
'21.3' }},
    { 'Labels':{ 'Xlabel': 'Austria', 'Ylabel': '2012'}, 'data':{ 'value':
'24.2' }},
    { 'Labels':{ 'Xlabel': 'Austria', 'Ylabel': '2013'}, 'data':{ 'value':
'23.2' }},
    { 'Labels':{ 'Xlabel': 'Austria', 'Ylabel': '2014'}, 'data':{ 'value':
'25' }},
    { 'Labels':{ 'Xlabel': 'Austria', 'Ylabel': '2015'}, 'data':{ 'value':
'26.7' }},
    { 'Labels':{ 'Xlabel': 'Austria', 'Ylabel': '2016'}, 'data':{ 'value':
'28.1' }}
    ];
    return ( <HeatMapComponent
      titleSettings = { {
        text: 'Most Visited Destinations by International Tourist
Arrivals',
        textStyle: {
          size: '15px',
          fontWeight: '500',
          fontStyle: 'Normal',
          fontFamily: 'Segoe UI'
        }
      } }
      xAxis = { {
        labels: ['Austria', 'China', 'France', 'Germany', 'Italy',
'Mexico', 'Spain', 'Thailand', 'UK', 'USA'],
      } }
      yAxis = { {
        labels: ['2010', '2011', '2012', '2013', '2014', '2015',
'2016'],
      } }
      dataSource={heatmapData}
      dataSourceSettings={ {
        isJsonData: true,
        adaptorType: 'Cell',
        xDataMapping: 'Labels.Xlabel',
        yDataMapping: 'Labels.Ylabel',
        valueMapping: 'data.value'
      } }
      paletteSettings = { {
        palette: [{ color: '#DCD57E' },
          { color: '#A6DC7E' },
          { color: '#7EDCA2' },
          { color: '#6EB5D0' }
        ],
      } }
      cellSettings = { {
        border: {
          radius: 4,
          width: 1,

```

```

        color: 'white'
      },
      showLabel: true,
      format: '{value} M',
    } }>
    <Inject services={[Legend, Tooltip, Adaptor]} />
  </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

See Also

- [To bind data for bubble heat map with size and color attributes](#)

Bubble heatmap in React Heatmap chart component

Data points represent the data source values with **gradient** or **fixed** colors in the HeatMap. You can customize the appearance of these data points by changing the **color** and **size** attributes.

The data points can be represented in color fill or bubble shape by defining the **tileType** property.

By default, the data points are color filled with gradient or fixed colors and this depiction of data points is defined as **Rect** in the **tileType** property.

The cell customizations and color mapping for rect tile type is defined in [appearance](#) and [palette](#) sections in detail.

Bubble types

The data points can be represented in the bubble along with its attributes by setting the **tileType** property to **Bubble**.

In bubble HeatMap, you can display the data points with bubble size, bubble colors, and sector attributes of the bubble.

Bubble size

In this bubble HeatMap type, the size factor of the bubble is used to denote the data variations. The radius of the bubble varies according to data values.

By default, the bubble with small size denotes the data value with small magnitude and the larger bubble size denotes the data value with larger magnitude. This behavior can be inversed by using the [isInversedbubblesize](#) property.

To render a bubble HeatMap with size series, set the **bubbleType** property to **Size**.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Adaptor } from '@syncfusion/ej2-react-heatmap';
export function App() {
  var heatmapData = [
    [73, 39, 26, 39, 94, 0],

```

```

    [93, 58, 53, 38, 26, 68],
    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
    [56, 69, 21, 86, 3, 33],
    [45, 7, 53, 81, 95, 79],
    [60, 77, 74, 68, 88, 51],
    [25, 25, 10, 12, 78, 14],
    [25, 56, 55, 58, 12, 82],
    [74, 33, 88, 23, 86, 59]
  ];
  return (<HeatMapComponent
    titleSettings={{
      text: 'Sales Revenue per Employee (in 1000 US$)',
      textStyle: {
        size: '15px',
        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'Segoe UI'
      }
    }}
    xAxis={{
      labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
        'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    }}
    yAxis={{
      labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    }}
    paletteSettings={{
      palette: [
        { color: '#C06C84' },
        { color: '#6C5B7B' },
        { color: '#355C7D' }
      ],
      type: "Gradient"
    }}
    legendSettings={{
      visible: true
    }}
    cellSettings={{
      border: {
        width: 1
      },
      tileType: 'Bubble',
      bubbleType: 'Size',
      showLabel: false
    }}
    dataSource={heatmapData}>
    <Inject services={[Legend, Adaptor]} />
  </HeatMapComponent>);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Adaptor } from '@syncfusion/ej2-react-heatmap';
export function App() {
    let heatmapData: any[] = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return (<HeatMapComponent
        titleSettings={{
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        }}
        xAxis={{
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
                'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
        }}
        yAxis={{
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
        }}
        paletteSettings={{
            palette: [
                { color: '#C06C84' },
                { color: '#6C5B7B' },
                { color: '#355C7D' }
            ],
            type: "Gradient"
        }}
        legendSettings={{
            visible: true
        }}
        cellSettings={{
            border: {
                width: 1
            },

```

```

        tileType: 'Bubble',
        bubbleType: 'Size',
        showLabel: false
    }}
    dataSource={heatmapData}>
    <Inject services={[Legend, Adaptor]} />
</HeatMapComponent>;
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Bubble color

In HeatMap, defined with this tile type, the data points will be represented with same sized bubbles and the data value variations are represented with the bubble colors.

To represent the data points with variations in bubble colors, set the [bubbleType](#) property to **Color**.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Adaptor, Tooltip } from
'@syncfusion/ej2-react-heatmap';
export function App() {
    var heatmapData = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return (<HeatMapComponent
        titleSettings={{
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        }}
        xAxis={{
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
                'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
            labelRotation: 45,
            labelIntersectAction: 'None'

```

```

    }}
    yAxis={{
      labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    }}
    paletteSettings={{
      palette: [
        { color: '#C06C84' },
        { color: '#6C5B7B' },
        { color: '#355C7D' }
      ],
      type: "Gradient"
    }}
    legendSettings={{
      visible: true
    }}
    cellSettings={{
      border: {
        width: 1
      },
      tileType: 'Bubble',
      bubbleType: 'Color'
    }}
    dataSource={heatmapData}>
    <Inject services={[Legend, Adaptor, Tooltip]} />
  </HeatMapComponent>;
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Adaptor, Tooltip } from
'@syncfusion/ej2-react-heatmap';
export function App() {
  let heatmapData: any[] = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
    [56, 69, 21, 86, 3, 33],
    [45, 7, 53, 81, 95, 79],
    [60, 77, 74, 68, 88, 51],
    [25, 25, 10, 12, 78, 14],
    [25, 56, 55, 58, 12, 82],
    [74, 33, 88, 23, 86, 59]
  ];
  return (<HeatMapComponent
    titleSettings={{
      text: 'Sales Revenue per Employee (in 1000 US$)',
      textStyle: {

```



```

        size: '15px',
        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'Segoe UI'
    }
  })
  xAxis={{
    labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
      'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    labelRotation: 45,
    labelIntersectAction: 'None'
  }}
  yAxis={{
    labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
  }}
  paletteSettings={{
    palette: [
      { color: '#C06C84' },
      { color: '#6C5B7B' },
      { color: '#355C7D' }
    ],
    type: "Gradient"
  }}
  legendSettings={{
    visible: true
  }}
  cellSettings={{
    border: {
      width: 1
    },
    tileType: 'Bubble',
    bubbleType: 'Color'
  }}
  dataSource={heatmapData}>
  <Inject services={[Legend, Adaptor, Tooltip]} />
</HeatMapComponent>;
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Bubble sector

In this bubble HeatMap type, the sector of the bubble decides the magnitude of data point. If the sector is large, then the data point value will be high.

To render the data points with bubble sector, set the [bubbleType](#) property to **Sector**.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Adaptor, Tooltip } from
'@syncfusion/ej2-react-heatmap';
export function App() {

```

```

var heatmapData = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
    [56, 69, 21, 86, 3, 33],
    [45, 7, 53, 81, 95, 79],
    [60, 77, 74, 68, 88, 51],
    [25, 25, 10, 12, 78, 14],
    [25, 56, 55, 58, 12, 82],
    [74, 33, 88, 23, 86, 59]
];

return ( <HeatMapComponent
    titleSettings = { {
        text: 'Sales Revenue per Employee (in 1000 US$)',
        textStyle: {
            size: '15px',
            fontWeight: '500',
            fontStyle: 'Normal',
            fontFamily: 'Segoe UI'
        }
    } }
    xAxis = { {
        labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    } }
    yAxis = { {
        labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    } }
    paletteSettings = { {
        palette: [
            { color: '#C06C84'},
            { color: '#6C5B7B'},
            { color: '#355C7D'}
        ],
        type: "Gradient"
    } }
    legendSettings = { {
        visible: true
    } }
    cellSettings = { {
        border: {
            width: 1
        },
        tileType: 'Bubble',
        bubbleType: 'Sector'
    } }
    dataSource={heatmapData}>
    <Inject services={[Legend, Adaptor, Tooltip]} />
    </HeatMapComponent> );
}

const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% enddraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Adaptor, Tooltip } from
'@syncfusion/ej2-react-heatmap';
export function App() {
  let heatmapData: any[] = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
    [56, 69, 21, 86, 3, 33],
    [45, 7, 53, 81, 95, 79],
    [60, 77, 74, 68, 88, 51],
    [25, 25, 10, 12, 78, 14],
    [25, 56, 55, 58, 12, 82],
    [74, 33, 88, 23, 86, 59]
  ];
  return (<HeatMapComponent
    titleSettings={{
      text: 'Sales Revenue per Employee (in 1000 US$)',
      textStyle: {
        size: '15px',
        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'Segoe UI'
      }
    }}
    xAxis={{
      labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
        'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    }}
    yAxis={{
      labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    }}
    paletteSettings={{
      palette: [
        { color: '#C06C84' },
        { color: '#6C5B7B' },
        { color: '#355C7D' }
      ],
      type: "Gradient"
    }}
    legendSettings={{
      visible: true
    }}
    cellSettings={{
      border: {
        width: 1
      },

```

```

        tileType: 'Bubble',
        bubbleType: 'Sector'
    }}
    dataSource={heatmapData}>
    <Inject services={[Legend, Adaptor, Tooltip]} />
</HeatMapComponent>);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% enddraw %}

```

Combining size and color bubble types

In this bubble HeatMap type, size and color of the bubble represents the data value variation. To render this bubble HeatMap type, set the [bubbleType](#) property to **SizeAndColor**.

The following examples demonstrate different data binding with the **SizeAndColor** bubble type set in the HeatMap.

<!-- markdownlint-disable MD036 -->

Array binding

When an array of numbers is specified as the data source, the bubble HeatMap can be rendered with different sizes and colors depending on the bound data.

<!-- markdownlint-disable MD036 -->

Table

The following example illustrates how to render a bubble HeatMap with different sizes and colors using array table binding.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Adaptor, Tooltip } from
'@syncfusion/ej2-react-heatmap';
export function App() {
    var heatmapData = [
        [[4, 39], [3, 8], [1, 3], [1, 10], [4, 4], [2, 15]],
        [[4, 28], [5, 92], [5, 73], [3, 1], [3, 4], [4, 126]],
        [[4, 45], [5, 152], [0, 44], [4, 54], [5, 243], [2, 45]]
    ];
    function tooltipTemplate(args) {
        args.content = [
            'Year ' +
            ' : ' +
            args.xLabel +
            '<br/>' +
            'Months ' +
            ' : ' +
            args.yLabel +
            '<br/>' +
            'Accidents ' +
            ' : ' +

```

```

        (args.value)[0].bubbleData +
        '<br/>' +
        'Fatalities ' +
        ' : ' +
        (args.value)[1].bubbleData
    ];
}
return (
    <HeatMapComponent
        titleSettings={{
            text: 'Commercial Aviation Accidents and Fatalities by year 2012 -
2017',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        }}
        xAxis={{
            labels: ['2017', '2016', '2015']
        }}
        yAxis={{
            labels: ['Jan-Feb', 'Mar-Apr', 'May-Jun', 'Jul-Aug', 'Sep-Oct', 'Nov-
Dec']
        }}
        paletteSettings={{
            palette: [{ color: '#C06C84' }, { color: '#6C5B7B' }, { color:
'#355C7D' }],
            type: 'Gradient'
        }}
        legendSettings={{
            visible: true
        }}
        cellSettings={{
            border: {
                width: 1
            },
            tileType: 'Bubble',
            bubbleType: 'SizeAndColor'
        }}
        tooltipRender={tooltipTemplate}
        dataSource={heatmapData}
    >
        <Inject services={[Legend, Adaptor, Tooltip]} />
    </HeatMapComponent>
);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";

```

```

import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Adaptor, Tooltip,
BubbleTooltipData, ITooltipEventArgs } from '@syncfusion/ej2-react-heatmap';
export function App() {
    let heatmapData: any[] = [
        [[4, 39], [3, 8], [1, 3], [1, 10], [4, 4], [2, 15]],
        [[4, 28], [5, 92], [5, 73], [3, 1], [3, 4], [4, 126]],
        [[4, 45], [5, 152], [0, 44], [4, 54], [5, 243], [2, 45]]
    ];
    function tooltipTemplate(args: ITooltipEventArgs): void {
        args.content = [
            'Year ' +
            ' : ' +
            args.xLabel +
            '<br/>' +
            'Months ' +
            ' : ' +
            args.yLabel +
            '<br/>' +
            'Accidents ' +
            ' : ' +
            (args.value as BubbleTooltipData[])[0].bubbleData +
            '<br/>' +
            'Fatalities ' +
            ' : ' +
            (args.value as BubbleTooltipData[])[1].bubbleData
        ];
    }
    return (
        <HeatMapComponent
            titleSettings={{
                text: 'Commercial Aviation Accidents and Fatalities by year 2012 -
2017',
                textStyle: {
                    size: '15px',
                    fontWeight: '500',
                    fontStyle: 'Normal',
                    fontFamily: 'Segoe UI'
                }
            }}
            xAxis={{
                labels: ['2017', '2016', '2015']
            }}
            yAxis={{
                labels: ['Jan-Feb', 'Mar-Apr', 'May-Jun', 'Jul-Aug', 'Sep-Oct', 'Nov-
Dec']
            }}
            paletteSettings={{
                palette: [{ color: '#C06C84' }, { color: '#6C5B7B' }, { color:
'#355C7D' }],
                type: 'Gradient'
            }}
            legendSettings={{
                visible: true
            }}
            cellSettings={{
                border: {

```

```

        width: 1
      },
      tileType: 'Bubble',
      bubbleType: 'SizeAndColor'
    })
    tooltipRender={tooltipTemplate as any}
    dataSource={heatmapData}
  >
  <Inject services={[Legend, Adaptor, Tooltip]} />
</HeatMapComponent>
);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

<!-- markdownlint-disable MD036 -->

Cell

The following example illustrates how to render a bubble HeatMap with different sizes and colors using array cell binding.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Adaptor, Tooltip } from
'@syncfusion/ej2-react-heatmap';
export function App() {
  var heatmapData = [
    [0, 0, [4, 39]], [0, 1, [3, 8]], [0, 2, [1, 3]], [0, 3, [1, 10]], [0,
4, [4, 4]], [0, 5, [2, 15]],
    [1, 0, [4, 28]], [1, 1, [5, 92]], [1, 2, [5, 73]], [1, 3, [3, 1]],
    [1, 4, [3, 4]], [1, 5, [4, 126]],
    [2, 0, [4, 45]], [2, 1, [5, 152]], [2, 2, [0, 44]], [2, 3, [4, 54]],
    [2, 4, [5, 243]], [2, 5, [2, 45]]
  ];
  function tooltipTemplate(args) {
    args.content = ['Year ' + ' : ' + args.xLabel + '<br/>' + 'Months ' +
' : ' + args.yLabel + '<br/>'
      + 'Accidents ' + ' : ' + (args.value)[0].bubbleData + '<br/>' +
'Fatalities ' + ' : '
      + (args.value)[1].bubbleData];
  };
  return (<HeatMapComponent
    titleSettings={{
      text: 'Commercial Aviation Accidents and Fatalities by year 2012
- 2017',
      textStyle: {
        size: '15px',
        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'Segoe UI'
      }
    }}
  >

```

```

        xAxis={{
            labels: ['2017', '2016', '2015']
        }}
        yAxis={{
            labels: ['Jan-Feb', 'Mar-Apr', 'May-Jun', 'Jul-Aug', 'Sep-Oct',
'Nov-Dec']
        }}
        paletteSettings={{
            palette: [
                { color: '#C06C84' },
                { color: '#6C5B7B' },
                { color: '#355C7D' }
            ],
            type: "Gradient"
        }}
        legendSettings={{
            visible: true
        }}
        cellSettings={{
            border: {
                width: 1
            },
            tileType: 'Bubble',
            bubbleType: 'SizeAndColor'
        }}
        tooltipRender={tooltipTemplate}
        dataSource={heatmapData}
        dataSourceSettings={{
            isJsonData: false,
            adaptorType: 'Cell'
        }}
    <Inject services={[Legend, Adaptor, Tooltip]} />
</HeatMapComponent>;
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Adaptor, Tooltip,
BubbleTooltipData, ITooltipEventArgs } from '@syncfusion/ej2-react-heatmap';
export function App() {
    let heatmapData: any[] = [
        [0, 0, [4, 39]], [0, 1, [3, 8]], [0, 2, [1, 3]], [0, 3, [1, 10]], [0,
4, [4, 4]], [0, 5, [2, 15]],
        [1, 0, [4, 28]], [1, 1, [5, 92]], [1, 2, [5, 73]], [1, 3, [3, 1]],
[1, 4, [3, 4]], [1, 5, [4, 126]],
        [2, 0, [4, 45]], [2, 1, [5, 152]], [2, 2, [0, 44]], [2, 3, [4, 54]],
[2, 4, [5, 243]], [2, 5, [2, 45]]
    ];
    function tooltipTemplate(args: ITooltipEventArgs): void {

```



```

        args.content = ['Year ' + ' : ' + args.xLabel + '<br/>' + 'Months ' +
        ' : ' + args.yLabel + '<br/>'
        + 'Accidents ' + ' : ' + (args.value as
BubbleTooltipData[])[0].bubbleData + '<br/>' + 'Fatalities ' + ' : '
        + (args.value as BubbleTooltipData[])[1].bubbleData];
    };
    return (<HeatMapComponent
        titleSettings={{
            text: 'Commercial Aviation Accidents and Fatalities by year 2012
- 2017',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        }}
        xAxis={{
            labels: ['2017', '2016', '2015']
        }}
        yAxis={{
            labels: ['Jan-Feb', 'Mar-Apr', 'May-Jun', 'Jul-Aug', 'Sep-Oct',
'Nov-Dec']
        }}
        paletteSettings={{
            palette: [
                { color: '#C06C84' },
                { color: '#6C5B7B' },
                { color: '#355C7D' }
            ],
            type: "Gradient"
        }}
        legendSettings={{
            visible: true
        }}
        cellSettings={{
            border: {
                width: 1
            },
            tileType: 'Bubble',
            bubbleType: 'SizeAndColor'
        }}
        tooltipRender={tooltipTemplate}
        dataSource={heatmapData}
        dataSourceSettings={{
            isJsonData: false,
            adaptorType: 'Cell'
        }}
        <Inject services={[Legend, Adaptor, Tooltip]} />
    </HeatMapComponent>;
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

<!-- markdownlint-disable MD036 -->

JSON binding

When a list of JSON objects are specified as data source, the bubble HeatMap can be rendered with different sizes and colors depending on the bound data.

<!-- markdownlint-disable MD036 -->

Table

The following example illustrates how to render a bubble HeatMap with different sizes and colors using JSON table binding.

INDEX.JSX

```
{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Adaptor, Tooltip } from
'@syncfusion/ej2-react-heatmap';
export function App() {
  var heatmapData = [
    {
      Year: '2017',
      'Jan-Feb': [4, 39],
      'Mar-Apr': [3, 8],
      'May-Jun': [1, 3],
      'Jul-Aug': [1, 10],
      'Sep-Oct': [4, 4],
      'Nov-Dec': [2, 15]
    },
    {
      Year: '2016',
      'Jan-Feb': [4, 28],
      'Mar-Apr': [5, 92],
      'May-Jun': [5, 73],
      'Jul-Aug': [3, 1],
      'Sep-Oct': [3, 4],
      'Nov-Dec': [4, 126]
    },
    {
      Year: '2015',
      'Jan-Feb': [4, 45],
      'Mar-Apr': [5, 152],
      'May-Jun': [0, 44],
      'Jul-Aug': [4, 54],
      'Sep-Oct': [5, 243],
      'Nov-Dec': [2, 45]
    }
  ];
  function tooltipTemplate(args) {
    args.content = [
      'Year ' +
      ' : ' +
      args.xLabel +
      '<br/>' +
      'Months ' +
      ' : ' +
      args.yLabel +

```

```

        '<br/>' +
        'Accidents ' +
        ' : ' +
        (args.value)[0].bubbleData +
        '<br/>' +
        'Fatalities ' +
        ' : ' +
        (args.value)[1].bubbleData
    ];
}
return (
    <HeatMapComponent
        titleSettings={{
            text: 'Commercial Aviation Accidents and Fatalities by year 2012 -
2017',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        }}
        xAxis={{
            labels: ['2017', '2016', '2015']
        }}
        yAxis={{
            labels: ['Jan-Feb', 'Mar-Apr', 'May-Jun', 'Jul-Aug', 'Sep-Oct', 'Nov-
Dec']
        }}
        paletteSettings={{
            palette: [{ color: '#C06C84' }, { color: '#6C5B7B' }, { color:
'#355C7D' }],
            type: 'Gradient'
        }}
        legendSettings={{
            visible: true
        }}
        cellSettings={{
            border: {
                width: 1
            },
            tileType: 'Bubble',
            bubbleType: 'SizeAndColor'
        }}
        tooltipRender={tooltipTemplate}
        dataSource={heatmapData}
        dataSourceSettings={{
            isJsonData: true,
            adaptorType: 'Table',
            xDataMapping: 'Year'
        }}
    >
    <Inject services={[Legend, Adaptor, Tooltip]} />
    </HeatMapComponent>
);
}
const root = ReactDOM.createRoot(document.getElementById('container'));

```

```
root.render(<App />);
{% endraw %}
```

INDEX.TSX

```
{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Adaptor, Tooltip,
BubbleTooltipData, ITooltipEventArgs } from '@syncfusion/ej2-react-heatmap';
export function App() {
  let heatmapData: any[] = [
    {
      Year: '2017',
      'Jan-Feb': [4, 39],
      'Mar-Apr': [3, 8],
      'May-Jun': [1, 3],
      'Jul-Aug': [1, 10],
      'Sep-Oct': [4, 4],
      'Nov-Dec': [2, 15]
    },
    {
      Year: '2016',
      'Jan-Feb': [4, 28],
      'Mar-Apr': [5, 92],
      'May-Jun': [5, 73],
      'Jul-Aug': [3, 1],
      'Sep-Oct': [3, 4],
      'Nov-Dec': [4, 126]
    },
    {
      Year: '2015',
      'Jan-Feb': [4, 45],
      'Mar-Apr': [5, 152],
      'May-Jun': [0, 44],
      'Jul-Aug': [4, 54],
      'Sep-Oct': [5, 243],
      'Nov-Dec': [2, 45]
    }
  ];
  function tooltipTemplate(args: ITooltipEventArgs): void {
    args.content = [
      'Year ' +
      ' : ' +
      args.xLabel +
      '<br/>' +
      'Months ' +
      ' : ' +
      args.yLabel +
      '<br/>' +
      'Accidents ' +
      ' : ' +
      (args.value as BubbleTooltipData[])[0].bubbleData +
      '<br/>' +
      'Fatalities ' +
      ' : ' +

```

```

    (args.value as BubbleTooltipData[]) [1].bubbleData
  ];
}
return (
  <HeatMapComponent
    titleSettings={{
      text: 'Commercial Aviation Accidents and Fatalities by year 2012 -
2017',
      textStyle: {
        size: '15px',
        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'Segoe UI'
      }
    }}
    xAxis={{
      labels: ['2017', '2016', '2015']
    }}
    yAxis={{
      labels: ['Jan-Feb', 'Mar-Apr', 'May-Jun', 'Jul-Aug', 'Sep-Oct', 'Nov-
Dec']
    }}
    paletteSettings={{
      palette: [{ color: '#C06C84' }, { color: '#6C5B7B' }, { color:
'#355C7D' }],
      type: 'Gradient'
    }}
    legendSettings={{
      visible: true
    }}
    cellSettings={{
      border: {
        width: 1
      },
      tileType: 'Bubble',
      bubbleType: 'SizeAndColor'
    }}
    tooltipRender={tooltipTemplate as any}
    dataSource={heatmapData}
    dataSourceSettings={{
      isJsonData: true,
      adaptorType: 'Table',
      xDataMapping: 'Year'
    }}
  >
  <Inject services={[Legend, Adaptor, Tooltip]} />
</HeatMapComponent>
);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

<!-- markdownlint-disable MD036 -->

Cell

The following example illustrates how to render a bubble HeatMap with different sizes and colors using JSON cell binding.

INDEX.JSX

```
{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Adaptor, Tooltip } from
'@syncfusion/ej2-react-heatmap';
export function App() {
  var heatmapData = [
    { Year: '2017', Months: 'Jan-Feb', Accidents: 4, Fatalities: 39 },
    { Year: '2017', Months: 'Mar-Apr', Accidents: 3, Fatalities: 8 },
    { Year: '2017', Months: 'May-Jun', Accidents: 1, Fatalities: 3 },
    { Year: '2017', Months: 'Jul-Aug', Accidents: 1, Fatalities: 10 },
    { Year: '2017', Months: 'Sep-Oct', Accidents: 4, Fatalities: 4 },
    { Year: '2017', Months: 'Nov-Dec', Accidents: 2, Fatalities: 15 },
    { Year: '2016', Months: 'Jan-Feb', Accidents: 4, Fatalities: 28 },
    { Year: '2016', Months: 'Mar-Apr', Accidents: 5, Fatalities: 92 },
    { Year: '2016', Months: 'May-Jun', Accidents: 5, Fatalities: 73 },
    { Year: '2016', Months: 'Jul-Aug', Accidents: 3, Fatalities: 1 },
    { Year: '2016', Months: 'Sep-Oct', Accidents: 3, Fatalities: 4 },
    { Year: '2016', Months: 'Nov-Dec', Accidents: 4, Fatalities: 126 },
    { Year: '2015', Months: 'Jan-Feb', Accidents: 4, Fatalities: 45 },
    { Year: '2015', Months: 'Mar-Apr', Accidents: 5, Fatalities: 152 },
    { Year: '2015', Months: 'May-Jun', Accidents: 0, Fatalities: 0 },
    { Year: '2015', Months: 'Jul-Aug', Accidents: 4, Fatalities: 54 },
    { Year: '2015', Months: 'Sep-Oct', Accidents: 5, Fatalities: 243 },
    { Year: '2015', Months: 'Nov-Dec', Accidents: 2, Fatalities: 45 }
  ];
  function tooltipTemplate(args) {
    args.content = [
      'Year ' +
      ' : ' +
      args.xLabel +
      '<br/>' +
      'Months ' +
      ' : ' +
      args.yLabel +
      '<br/>' +
      'Accidents ' +
      ' : ' +
      (args.value)[0].bubbleData +
      '<br/>' +
      'Fatalities ' +
      ' : ' +
      (args.value)[1].bubbleData
    ];
  }
  return (
    <HeatMapComponent
      titleSettings={{
        text: 'Commercial Aviation Accidents and Fatalities by year 2012 -
2017',
        textStyle: {
          size: '15px',

```

```

        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'Segoe UI'
    }
  })
  xAxis={{
    labels: ['2017', '2016', '2015']
  }}
  yAxis={{
    labels: ['Jan-Feb', 'Mar-Apr', 'May-Jun', 'Jul-Aug', 'Sep-Oct', 'Nov-Dec']
  }}
  paletteSettings={{
    palette: [{ color: '#C06C84' }, { color: '#6C5B7B' }, { color: '#355C7D' }],
    type: 'Gradient'
  }}
  legendSettings={{
    visible: true
  }}
  cellSettings={{
    border: {
      width: 1
    },
    tileType: 'Bubble',
    bubbleType: 'SizeAndColor'
  }}
  tooltipRender={tooltipTemplate}
  dataSource={heatmapData}
  dataSourceSettings={{
    isJsonData: true,
    adaptorType: 'Cell',
    xDataMapping: 'Year',
    yDataMapping: 'Months',
    bubbleDataMapping: { size: 'Accidents', color: 'Fatalities' }
  }}
  >
  <Inject services={[Legend, Adaptor, Tooltip]} />
</HeatMapComponent>
);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% enddraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Adaptor, Tooltip,
BubbleTooltipData, ITooltipEventArgs } from '@syncfusion/ej2-react-heatmap';
export function App() {
  let heatmapData: any[] = [
    { Year: '2017', Months: 'Jan-Feb', Accidents: 4, Fatalities: 39 },
    { Year: '2017', Months: 'Mar-Apr', Accidents: 3, Fatalities: 8 },

```

```

    { Year: '2017', Months: 'May-Jun', Accidents: 1, Fatalities: 3 },
    { Year: '2017', Months: 'Jul-Aug', Accidents: 1, Fatalities: 10 },
    { Year: '2017', Months: 'Sep-Oct', Accidents: 4, Fatalities: 4 },
    { Year: '2017', Months: 'Nov-Dec', Accidents: 2, Fatalities: 15 },
    { Year: '2016', Months: 'Jan-Feb', Accidents: 4, Fatalities: 28 },
    { Year: '2016', Months: 'Mar-Apr', Accidents: 5, Fatalities: 92 },
    { Year: '2016', Months: 'May-Jun', Accidents: 5, Fatalities: 73 },
    { Year: '2016', Months: 'Jul-Aug', Accidents: 3, Fatalities: 1 },
    { Year: '2016', Months: 'Sep-Oct', Accidents: 3, Fatalities: 4 },
    { Year: '2016', Months: 'Nov-Dec', Accidents: 4, Fatalities: 126 },
    { Year: '2015', Months: 'Jan-Feb', Accidents: 4, Fatalities: 45 },
    { Year: '2015', Months: 'Mar-Apr', Accidents: 5, Fatalities: 152 },
    { Year: '2015', Months: 'May-Jun', Accidents: 0, Fatalities: 0 },
    { Year: '2015', Months: 'Jul-Aug', Accidents: 4, Fatalities: 54 },
    { Year: '2015', Months: 'Sep-Oct', Accidents: 5, Fatalities: 243 },
    { Year: '2015', Months: 'Nov-Dec', Accidents: 2, Fatalities: 45 }
  ];
  function tooltipTemplate(args: ITooltipEventArgs): void {
    args.content = [
      'Year ' +
      ' : ' +
      args.xLabel +
      '<br/>' +
      'Months ' +
      ' : ' +
      args.yLabel +
      '<br/>' +
      'Accidents ' +
      ' : ' +
      (args.value as BubbleTooltipData[])[0].bubbleData +
      '<br/>' +
      'Fatalities ' +
      ' : ' +
      (args.value as BubbleTooltipData[])[1].bubbleData
    ];
  }
  return (
    <HeatMapComponent
      titleSettings={{
        text: 'Commercial Aviation Accidents and Fatalities by year 2012 -
2017',
        textStyle: {
          size: '15px',
          fontWeight: '500',
          fontStyle: 'Normal',
          fontFamily: 'Segoe UI'
        }
      }}
      xAxis={{
        labels: ['2017', '2016', '2015']
      }}
      yAxis={{
        labels: ['Jan-Feb', 'Mar-Apr', 'May-Jun', 'Jul-Aug', 'Sep-Oct', 'Nov-
Dec']
      }}
      paletteSettings={{

```



```

    palette: [{ color: '#C06C84' }, { color: '#6C5B7B' }, { color:
'#355C7D' }],
    type: 'Gradient'
  }}
  legendSettings={{
    visible: true
  }}
  cellSettings={{
    border: {
      width: 1
    },
    tileType: 'Bubble',
    bubbleType: 'SizeAndColor'
  }}
  tooltipRender={tooltipTemplate as any}
  dataSource={heatmapData}
  dataSourceSettings={{
    isJsonData: true,
    adaptorType: 'Cell',
    xDataMapping: 'Year',
    yDataMapping: 'Months',
    bubbleDataMapping: { size: 'Accidents', color: 'Fatalities' }
  }}
>
<Inject services={[Legend, Adaptor, Tooltip]} />
</HeatMapComponent>
);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

<!-- markdownlint-disable MD036 -->

Binding size and color values from datasource

The size and color of the bubbles in the **SizeAndColor** bubble HeatMap type can be customized by binding the datasource field name that holds the size and color values to the [size](#) and [color](#) properties in the [bubbleDataMapping](#).

The `bubbleDataMapping` supports only for the JSON data with cell adaptor type.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from "react-dom";
import { HeatMapComponent, Inject, Legend, Adaptor, Tooltip } from
"@syncfusion/ej2-react-heatmap";
export function App() {
  var heatmapData = [
    { Year: '2017', Months: 'Jan-Feb', Accidents: 4, Fatalities: 39 },
    { Year: '2017', Months: 'Mar-Apr', Accidents: 3, Fatalities: 8 },
    { Year: '2017', Months: 'May-Jun', Accidents: 1, Fatalities: 3 },
    { Year: '2017', Months: 'Jul-Aug', Accidents: 1, Fatalities: 10 },
    { Year: '2017', Months: 'Sep-Oct', Accidents: 4, Fatalities: 4 },
    { Year: '2017', Months: 'Nov-Dec', Accidents: 2, Fatalities: 15 },
  ];

```

```

    { Year: '2016', Months: 'Jan-Feb', Accidents: 4, Fatalities: 28 },
    { Year: '2016', Months: 'Mar-Apr', Accidents: 5, Fatalities: 92 },
    { Year: '2016', Months: 'May-Jun', Accidents: 5, Fatalities: 73 },
    { Year: '2016', Months: 'Jul-Aug', Accidents: 3, Fatalities: 1 },
    { Year: '2016', Months: 'Sep-Oct', Accidents: 3, Fatalities: 4 },
    { Year: '2016', Months: 'Nov-Dec', Accidents: 4, Fatalities: 126 },
    { Year: '2015', Months: 'Jan-Feb', Accidents: 4, Fatalities: 45 },
    { Year: '2015', Months: 'Mar-Apr', Accidents: 5, Fatalities: 152 },
    { Year: '2015', Months: 'May-Jun', Accidents: 0, Fatalities: 0 },
    { Year: '2015', Months: 'Jul-Aug', Accidents: 4, Fatalities: 54 },
    { Year: '2015', Months: 'Sep-Oct', Accidents: 5, Fatalities: 243 },
    { Year: '2015', Months: 'Nov-Dec', Accidents: 2, Fatalities: 45 }
  ];
  function tooltipTemplate(args) {
    args.content = [
      'Year ' +
      ' : ' +
      args.xLabel +
      '<br/>' +
      'Months ' +
      ' : ' +
      args.yLabel +
      '<br/>' +
      'Accidents ' +
      ' : ' +
      (args.value)[0].bubbleData +
      '<br/>' +
      'Fatalities ' +
      ' : ' +
      (args.value)[1].bubbleData
    ];
  }
  return (
    <HeatMapComponent
      titleSettings={{
        text: 'Commercial Aviation Accidents and Fatalities by year 2012 -
2017',
        textStyle: {
          size: '15px',
          fontWeight: '500',
          fontStyle: 'Normal',
          fontFamily: 'Segoe UI'
        }
      }}
      xAxis={{
        labels: ['2017', '2016', '2015']
      }}
      yAxis={{
        labels: ['Jan-Feb', 'Mar-Apr', 'May-Jun', 'Jul-Aug', 'Sep-Oct', 'Nov-
Dec']
      }}
      paletteSettings={{
        palette: [{ color: '#C06C84' }, { color: '#6C5B7B' }, { color:
'#355C7D' }],
        type: 'Gradient'
      }}
      legendSettings={{

```

```

        visible: true
      }}
      cellSettings={{
        border: {
          width: 1
        },
        tileType: 'Bubble',
        bubbleType: 'SizeAndColor'
      }}
      tooltipRender={tooltipTemplate}
      dataSource={heatmapData}
      dataSourceSettings={{
        isJsonData: true,
        adaptorType: 'Cell',
        xDataMapping: 'Year',
        yDataMapping: 'Months',
        bubbleDataMapping: { size: 'Accidents', color: 'Fatalities' }
      }}
    >
    <Inject services={[Legend, Adaptor, Tooltip]} />
  </HeatMapComponent>
);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Adaptor, Tooltip,
BubbleTooltipData, ITooltipEventArgs } from '@syncfusion/ej2-react-heatmap';
export function App() {
  let heatmapData: any[] = [
    { Year: '2017', Months: 'Jan-Feb', Accidents: 4, Fatalities: 39 },
    { Year: '2017', Months: 'Mar-Apr', Accidents: 3, Fatalities: 8 },
    { Year: '2017', Months: 'May-Jun', Accidents: 1, Fatalities: 3 },
    { Year: '2017', Months: 'Jul-Aug', Accidents: 1, Fatalities: 10 },
    { Year: '2017', Months: 'Sep-Oct', Accidents: 4, Fatalities: 4 },
    { Year: '2017', Months: 'Nov-Dec', Accidents: 2, Fatalities: 15 },
    { Year: '2016', Months: 'Jan-Feb', Accidents: 4, Fatalities: 28 },
    { Year: '2016', Months: 'Mar-Apr', Accidents: 5, Fatalities: 92 },
    { Year: '2016', Months: 'May-Jun', Accidents: 5, Fatalities: 73 },
    { Year: '2016', Months: 'Jul-Aug', Accidents: 3, Fatalities: 1 },
    { Year: '2016', Months: 'Sep-Oct', Accidents: 3, Fatalities: 4 },
    { Year: '2016', Months: 'Nov-Dec', Accidents: 4, Fatalities: 126 },
    { Year: '2015', Months: 'Jan-Feb', Accidents: 4, Fatalities: 45 },
    { Year: '2015', Months: 'Mar-Apr', Accidents: 5, Fatalities: 152 },
    { Year: '2015', Months: 'May-Jun', Accidents: 0, Fatalities: 0 },
    { Year: '2015', Months: 'Jul-Aug', Accidents: 4, Fatalities: 54 },
    { Year: '2015', Months: 'Sep-Oct', Accidents: 5, Fatalities: 243 },
    { Year: '2015', Months: 'Nov-Dec', Accidents: 2, Fatalities: 45 }
  ];
  function tooltipTemplate(args: ITooltipEventArgs): void {

```

```

    args.content = [
      'Year ' +
      ' : ' +
      args.xLabel +
      '<br/>' +
      'Months ' +
      ' : ' +
      args.yLabel +
      '<br/>' +
      'Accidents ' +
      ' : ' +
      (args.value as BubbleTooltipData[])[0].bubbleData +
      '<br/>' +
      'Fatalities ' +
      ' : ' +
      (args.value as BubbleTooltipData[])[1].bubbleData
    ];
  }
  return (
    <HeatMapComponent
      titleSettings={{
        text: 'Commercial Aviation Accidents and Fatalities by year 2012 -
2017',
        textStyle: {
          size: '15px',
          fontWeight: '500',
          fontStyle: 'Normal',
          fontFamily: 'Segoe UI'
        }
      }}
      xAxis={{
        labels: ['2017', '2016', '2015']
      }}
      yAxis={{
        labels: ['Jan-Feb', 'Mar-Apr', 'May-Jun', 'Jul-Aug', 'Sep-Oct', 'Nov-
Dec']
      }}
      paletteSettings={{
        palette: [{ color: '#C06C84' }, { color: '#6C5B7B' }, { color:
'#355C7D' }],
        type: 'Gradient'
      }}
      legendSettings={{
        visible: true
      }}
      cellSettings={{
        border: {
          width: 1
        },
        tileType: 'Bubble',
        bubbleType: 'SizeAndColor'
      }}
      tooltipRender={tooltipTemplate as any}
      dataSource={heatmapData}
      dataSourceSettings={{
        isJsonData: true,
        adaptorType: 'Cell',

```

```

        xDataMapping: 'Year',
        yDataMapping: 'Months',
        bubbleDataMapping: { size: 'Accidents', color: 'Fatalities' }
    }}
    >
    <Inject services={[Legend, Adaptor, Tooltip]} />
    </HeatMapComponent>
  );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Rendering mode in React Heatmap chart component

Heat map can be displayed using **Canvas** or **Scalable Vector Graphics (SVG)** rendering logic to improve the initial load performance and scalability. Heat map can also be automatically switched between **Canvas** and **SVG** modes based on dataset size. You can enable this mode by setting the [renderingMode](#) property to **Auto**.

If the **Auto** mode is enabled in the heat map and there are more than 10,000 data points, then the heat map will be rendered in a **Canvas** mode; Otherwise, the heat map will be rendered in a **SVG** mode.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
    var heatmapData = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return ( <HeatMapComponent
        titleSettings = { {
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        } }
        xAxis = { {

```

```

        labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    } }
    yAxis = { {
        labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    } }
    cellSettings = { {
        showLabel: true,
    } }
    renderingMode = { 'SVG' }
    showTooltip = { true }
    dataSource={heatmapData}>
    <Inject services={[Legend, Tooltip, Adaptor]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
    let heatmapData : any[] = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return ( <HeatMapComponent
        titleSettings = { {
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        } }
        xAxis = { {
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],

```

```

    } }
    yAxis = { {
      labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    } }
    cellSettings = { {
      showLabel: true,
    } }
    renderingMode = { 'SVG' }
    showTooltip = { true }
    dataSource={heatmapData}>
    <Inject services={[Legend, Tooltip, Adaptor]} />
  </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Axis in React HeatMap chart component

HeatMap consists of two axes namely, X-axis and Y-axis that displays the row headers and column headers to plot the data points respectively. You can define the type, format, and other customizing options for both axes in the HeatMap.

Types

There are three different axis types available in the HeatMap, which defines the data type of the axis labels. You can define the axis type by using the [valueType](#) property in the HeatMap.

Category axis

Category axis type is used to represent the string values in axis labels.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
  var heatmapData = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
    [56, 69, 21, 86, 3, 33],
    [45, 7, 53, 81, 95, 79],
    [60, 77, 74, 68, 88, 51],
    [25, 25, 10, 12, 78, 14],
    [25, 56, 55, 58, 12, 82],
    [74, 33, 88, 23, 86, 59]
  ];
  return ( <HeatMapComponent
    xAxis = { {
      valueType:"Category",
      labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',

```

```

        'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    } }
    yAxis = { {
        valueType:"Category",
        labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    } }
    dataSource={heatmapData}>
    <Inject services={[Adaptor, Legend, Tooltip]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
    let heatmapData : any[] = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return ( <HeatMapComponent
        xAxis = { {
            valueType:"Category",
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
        } }
        yAxis = { {
            valueType:"Category",
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
        } }
        dataSource={heatmapData}>
        <Inject services={[Adaptor, Legend, Tooltip]} />
        </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```


Numeric axis

Numeric axis type is used to represent the numeric values in axis labels.

INDEX.JSX

```
{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
    var heatmapData = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return ( <HeatMapComponent
        xAxis = { {
            valueType:"Numeric",
            minimum: 1,
            maximum: 11,
        } }
        yAxis = { {
            valueType:"Numeric",
            minimum: 1,
            maximum: 5,
        } }
        dataSource={heatmapData}>
        <Inject services={[Adaptor, Legend, Tooltip]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}
```

INDEX.TSX

```
{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
    let heatmapData : any[] = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
    ];
    return ( <HeatMapComponent
        xAxis = { {
            valueType:"Numeric",
            minimum: 1,
            maximum: 11,
        } }
        yAxis = { {
            valueType:"Numeric",
            minimum: 1,
            maximum: 5,
        } }
        dataSource={heatmapData}>
        <Inject services={[Adaptor, Legend, Tooltip]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}
```

```

        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return ( <HeatMapComponent
        xAxis = { {
            valueType:"Numeric",
            minimum: 1,
            maximum: 11,
        } }
        yAxis = { {
            valueType:"Numeric",
            minimum: 1,
            maximum: 5,
        } }
        dataSource={heatmapData}>
        <Inject services={[Adaptor, Legend, Tooltip]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% enddraw %}

```

Date-time axis

Date-time axis type is used to represent the date-time values in axis labels with a specific format. In date-time axis, you can define the start and end date/time using the [minimum](#) and [maximum](#) properties.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
    var heatmapData = [
        [36371, 25675, 28292, 33399, 35980, 38585, 39351, 39964, 36543,
        30529, 33298, 36985],
        [34702, 27618, 31063, 34525, 36772, 35410, 38750, 39467, 35390,
        34196, 35302, 35703],
        [34522, 31324, 32128, 34231, 36817, 34381, 37180, 38255, 32776,
        32645, 31539, 32981],
        [32213, 28755, 29517, 31214, 33747, 33507, 35763, 36837, 32910,
        33437, 30659, 31965],
        [31282, 28663, 32952, 33941, 34506, 36875, 38836, 35497, 34285,
        34094, 32256, 33699],
        [31714, 29405, 33745, 32838, 33461, 35034, 36122, 37943, 34128,
        30624, 32398, 33522],
    ];

```

```

        [32064, 28387, 33751, 32537, 34034, 35977, 37196, 38301, 33627,
        34115, 31072, 33939],
        [32417, 27868, 30807, 33386, 35284, 36126, 39753, 40978, 35777,
        35277, 31281, 35411],
        [32494, 29848, 34385, 35804, 37943, 38722, 41315, 41335, 37177,
        37443, 32457, 37304],
        [34378, 29576, 30547, 35664, 36622, 38145, 40347, 41868, 38252,
        36505, 29576, 36450],
        [35219, 31670, 32589, 34927, 36998, 39825, 41126, 42002, 37021,
        36583, 32408, 37108]
    ];
    return ( <HeatMapComponent
        titleSettings = { {
            text: 'Monthly Flight Traffic at JFK Airport',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        } }
        xAxis = { {
            valueType:"DateTime",
            minimum: new Date(2007,0,1),
            maximum: new Date(2017,0,1),
            intervalType:"Years",
            labelFormat:"yyyy",
            labelRotation: 45,
            labelIntersectAction: 'None'
        } }
        yAxis = { {
            labels: ['Jan', 'Feb', 'Mar', 'Apr', 'May',
                'Jun', 'July', 'Aug', 'Sept', 'Oct', 'Nov', 'Dec'],
        } }
        cellSettings = { {
            showLabel: false,
            border: {
                width: 0,
            },
            format: '{value} flights'
        } }
        legendSettings = { {
            visible:false,
        } }
        dataSource={heatmapData}>
        <Inject services={[Adaptor, Tooltip]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";

```

```

import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
 '@syncfusion/ej2-react-heatmap';
export function App() {
    let heatmapData : any[] = [
        [36371, 25675, 28292, 33399, 35980, 38585, 39351, 39964, 36543,
30529, 33298, 36985],
        [34702, 27618, 31063, 34525, 36772, 35410, 38750, 39467, 35390,
34196, 35302, 35703],
        [34522, 31324, 32128, 34231, 36817, 34381, 37180, 38255, 32776,
32645, 31539, 32981],
        [32213, 28755, 29517, 31214, 33747, 33507, 35763, 36837, 32910,
33437, 30659, 31965],
        [31282, 28663, 32952, 33941, 34506, 36875, 38836, 35497, 34285,
34094, 32256, 33699],
        [31714, 29405, 33745, 32838, 33461, 35034, 36122, 37943, 34128,
30624, 32398, 33522],
        [32064, 28387, 33751, 32537, 34034, 35977, 37196, 38301, 33627,
34115, 31072, 33939],
        [32417, 27868, 30807, 33386, 35284, 36126, 39753, 40978, 35777,
35277, 31281, 35411],
        [32494, 29848, 34385, 35804, 37943, 38722, 41315, 41335, 37177,
37443, 32457, 37304],
        [34378, 29576, 30547, 35664, 36622, 38145, 40347, 41868, 38252,
36505, 29576, 36450],
        [35219, 31670, 32589, 34927, 36998, 39825, 41126, 42002, 37021,
36583, 32408, 37108]
    ];
    return ( <HeatMapComponent
        titleSettings = { {
            text: 'Monthly Flight Traffic at JFK Airport',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        } }
        xAxis = { {
            valueType:"DateTime",
            minimum: new Date(2007,0,1),
            maximum: new Date(2017,0,1),
            intervalType:"Years",
            labelFormat:"yyyy",
            labelRotation: 45,
            labelIntersectAction: 'None'
        } }
        yAxis = { {
            labels: ['Jan', 'Feb', 'Mar', 'Apr', 'May',
'Jun', 'July', 'Aug', 'Sept', 'Oct', 'Nov', 'Dec'],
        } }
        cellSettings = { {
            showLabel: false,
            border: {
                width: 0,
            },
            format: '{value} flights'

```

```

    } }
    legendSettings = { {
        visible: false,
    } }
    dataSource={heatmapData}>
    <Inject services={[Adaptor, Tooltip]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Inversed axis

HeatMap supports inverting the axis origin for both axes, where the axis labels are placed in an inversed manner. You can enable axis inverting by enabling the [isInversed](#) property.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
    var heatmapData = [
        [36371, 25675, 28292, 33399, 35980, 38585, 39351, 39964, 36543,
30529, 33298, 36985],
        [34702, 27618, 31063, 34525, 36772, 35410, 38750, 39467, 35390,
34196, 35302, 35703],
        [34522, 31324, 32128, 34231, 36817, 34381, 37180, 38255, 32776,
32645, 31539, 32981],
        [32213, 28755, 29517, 31214, 33747, 33507, 35763, 36837, 32910,
33437, 30659, 31965],
        [31282, 28663, 32952, 33941, 34506, 36875, 38836, 35497, 34285,
34094, 32256, 33699],
        [31714, 29405, 33745, 32838, 33461, 35034, 36122, 37943, 34128,
30624, 32398, 33522],
        [32064, 28387, 33751, 32537, 34034, 35977, 37196, 38301, 33627,
34115, 31072, 33939],
        [32417, 27868, 30807, 33386, 35284, 36126, 39753, 40978, 35777,
35277, 31281, 35411],
        [32494, 29848, 34385, 35804, 37943, 38722, 41315, 41335, 37177,
37443, 32457, 37304],
        [34378, 29576, 30547, 35664, 36622, 38145, 40347, 41868, 38252,
36505, 29576, 36450],
        [35219, 31670, 32589, 34927, 36998, 39825, 41126, 42002, 37021,
36583, 32408, 37108]
    ];
    return ( <HeatMapComponent
        titleSettings = { {
            text: 'Monthly Flight Traffic at JFK Airport',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        }
    >

```

```

    }
  }
  xAxis = { {
    valueType:"DateTime",
    minimum: new Date(2007,0,1),
    maximum: new Date(2017,0,1),
    intervalType:"Years",
    labelFormat:"yyyy",
    labelRotation: 45,
    labelIntersectAction: 'None',
    isInversed:true
  } }
  yAxis = { {
    labels: ['Jan', 'Feb', 'Mar', 'Apr', 'May',
    'Jun', 'July', 'Aug', 'Sept', 'Oct', 'Nov', 'Dec'],
  } }
  cellSettings = { {
    showLabel: false,
    border: {
      width: 0,
    },
    format: '{value} flights'
  } }
  legendSettings = { {
    visible:false,
  } }
  dataSource={heatmapData}>
<Inject services={[Adaptor, Tooltip]} />
</HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
  let heatmapData : any[] = [
    [36371, 25675, 28292, 33399, 35980, 38585, 39351, 39964, 36543,
    30529, 33298, 36985],
    [34702, 27618, 31063, 34525, 36772, 35410, 38750, 39467, 35390,
    34196, 35302, 35703],
    [34522, 31324, 32128, 34231, 36817, 34381, 37180, 38255, 32776,
    32645, 31539, 32981],
    [32213, 28755, 29517, 31214, 33747, 33507, 35763, 36837, 32910,
    33437, 30659, 31965],
    [31282, 28663, 32952, 33941, 34506, 36875, 38836, 35497, 34285,
    34094, 32256, 33699],
    [31714, 29405, 33745, 32838, 33461, 35034, 36122, 37943, 34128,
    30624, 32398, 33522],
  ]
}

```

```

        [32064, 28387, 33751, 32537, 34034, 35977, 37196, 38301, 33627,
        34115, 31072, 33939],
        [32417, 27868, 30807, 33386, 35284, 36126, 39753, 40978, 35777,
        35277, 31281, 35411],
        [32494, 29848, 34385, 35804, 37943, 38722, 41315, 41335, 37177,
        37443, 32457, 37304],
        [34378, 29576, 30547, 35664, 36622, 38145, 40347, 41868, 38252,
        36505, 29576, 36450],
        [35219, 31670, 32589, 34927, 36998, 39825, 41126, 42002, 37021,
        36583, 32408, 37108]
    ];
    return ( <HeatMapComponent
        titleSettings = { {
            text: 'Monthly Flight Traffic at JFK Airport',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        } }
        xAxis = { {
            valueType:"DateTime",
            minimum: new Date(2007,0,1),
            maximum: new Date(2017,0,1),
            intervalType:"Years",
            labelFormat:"yyyy",
            labelRotation: 45,
            labelIntersectAction: 'None',
            isInversed:true
        } }
        yAxis = { {
            labels: ['Jan', 'Feb', 'Mar', 'Apr', 'May',
                'Jun', 'July', 'Aug', 'Sept', 'Oct', 'Nov', 'Dec'],
        } }
        cellSettings = { {
            showLabel: false,
            border: {
                width: 0,
            },
            format: '{value} flights'
        } }
        legendSettings = { {
            visible:false,
        } }
        dataSource={heatmapData}>
        <Inject services={[Adaptor, Tooltip]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% enddraw %}

```

Opposed axis

In HeatMap, you can place the axis label in an opposite position of its default axis label position by using the [opposedPosition](#) property.

INDEX.JSX

```
{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
    var heatmapData = [
        [36371, 25675, 28292, 33399, 35980, 38585, 39351, 39964, 36543,
30529, 33298, 36985],
        [34702, 27618, 31063, 34525, 36772, 35410, 38750, 39467, 35390,
34196, 35302, 35703],
        [34522, 31324, 32128, 34231, 36817, 34381, 37180, 38255, 32776,
32645, 31539, 32981],
        [32213, 28755, 29517, 31214, 33747, 33507, 35763, 36837, 32910,
33437, 30659, 31965],
        [31282, 28663, 32952, 33941, 34506, 36875, 38836, 35497, 34285,
34094, 32256, 33699],
        [31714, 29405, 33745, 32838, 33461, 35034, 36122, 37943, 34128,
30624, 32398, 33522],
        [32064, 28387, 33751, 32537, 34034, 35977, 37196, 38301, 33627,
34115, 31072, 33939],
        [32417, 27868, 30807, 33386, 35284, 36126, 39753, 40978, 35777,
35277, 31281, 35411],
        [32494, 29848, 34385, 35804, 37943, 38722, 41315, 41335, 37177,
37443, 32457, 37304],
        [34378, 29576, 30547, 35664, 36622, 38145, 40347, 41868, 38252,
36505, 29576, 36450],
        [35219, 31670, 32589, 34927, 36998, 39825, 41126, 42002, 37021,
36583, 32408, 37108]
    ];
    return ( <HeatMapComponent
        titleSettings = { {
            text: 'Monthly Flight Traffic at JFK Airport',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        } }
        xAxis = { {
            valueType:"DateTime",
            minimum: new Date(2007,0,1),
            maximum: new Date(2017,0,1),
            intervalType:"Years",
            labelFormat:"yyyy",
            labelRotation: 45,
            labelIntersectAction: 'None',
            opposedPosition:true
        } }
        yAxis = { {
```



```

        labels: ['Jan', 'Feb', 'Mar', 'Apr', 'May',
        'Jun', 'July', 'Aug', 'Sept', 'Oct', 'Nov', 'Dec'],
    } }
    cellSettings = { {
        showLabel: false,
        border: {
            width: 0,
        },
        format: '{value} flights'
    } }
    legendSettings = { {
        visible: false,
    } }
    dataSource={heatmapData}>
    <Inject services={[Adaptor, Tooltip]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
    let heatmapData : any[] = [
        [36371, 25675, 28292, 33399, 35980, 38585, 39351, 39964, 36543,
30529, 33298, 36985],
        [34702, 27618, 31063, 34525, 36772, 35410, 38750, 39467, 35390,
34196, 35302, 35703],
        [34522, 31324, 32128, 34231, 36817, 34381, 37180, 38255, 32776,
32645, 31539, 32981],
        [32213, 28755, 29517, 31214, 33747, 33507, 35763, 36837, 32910,
33437, 30659, 31965],
        [31282, 28663, 32952, 33941, 34506, 36875, 38836, 35497, 34285,
34094, 32256, 33699],
        [31714, 29405, 33745, 32838, 33461, 35034, 36122, 37943, 34128,
30624, 32398, 33522],
        [32064, 28387, 33751, 32537, 34034, 35977, 37196, 38301, 33627,
34115, 31072, 33939],
        [32417, 27868, 30807, 33386, 35284, 36126, 39753, 40978, 35777,
35277, 31281, 35411],
        [32494, 29848, 34385, 35804, 37943, 38722, 41315, 41335, 37177,
37443, 32457, 37304],
        [34378, 29576, 30547, 35664, 36622, 38145, 40347, 41868, 38252,
36505, 29576, 36450],
        [35219, 31670, 32589, 34927, 36998, 39825, 41126, 42002, 37021,
36583, 32408, 37108]
    ];
    return ( <HeatMapComponent
        titleSettings = { {
            text: 'Monthly Flight Traffic at JFK Airport',

```

```

        textStyle: {
            size: '15px',
            fontWeight: '500',
            fontStyle: 'Normal',
            fontFamily: 'Segoe UI'
        }
    } }
    xAxis = { {
        valueType: "DateTime",
        minimum: new Date(2007, 0, 1),
        maximum: new Date(2017, 0, 1),
        intervalType: "Years",
        labelFormat: "yyyy",
        labelRotation: 45,
        labelIntersectAction: 'None',
        opposedPosition: true
    } }
    yAxis = { {
        labels: ['Jan', 'Feb', 'Mar', 'Apr', 'May',
            'Jun', 'July', 'Aug', 'Sept', 'Oct', 'Nov', 'Dec'],
    } }
    cellSettings = { {
        showLabel: false,
        border: {
            width: 0,
        },
        format: '{value} flights'
    } }
    legendSettings = { {
        visible: false,
    } }
    dataSource={heatmapData}>
    <Inject services={[Adaptor, Tooltip]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% enddraw %}

```

Axis labels customization

Customizing the text style

The text style of the axis labels can be customized using the following options available in the [textStyle](#) property.

- [color](#) - It is used to change the text color of the axis labels.
- [fontFamily](#) - It is used to change the font family of the axis labels.
- [fontStyle](#) - It is used to change the font style of the axis labels.
- [fontWeight](#) - It is used to change the font weight of the axis labels.
- [size](#) - It is used to change the font size of the axis labels.
- [textAlignment](#) - It is used to position and align the axis labels. This property allows you to specify values such as **Near**, **Center**, and **Far**.
- [textOverflow](#) - When the axis label exceeds the intended space, this property is used to trim or wrap it. This property takes values such as **None**, **Trim**, and **Wrap**.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
    var heatmapData = [
        [52, 65, 67, 45, 37, 52, 32],
        [68, 52, 63, 51, 30, 51, 51],
        [60, 50, 42, 53, 66, 70, 41],
        [66, 64, 46, 40, 47, 41, 45],
        [65, 42, 58, 32, 36, 44, 49],
        [54, 46, 61, 46, 40, 39, 41],
        [48, 46, 61, 47, 49, 41, 41],
        [69, 52, 41, 44, 41, 52, 46],
        [50, 59, 44, 43, 27, 42, 26],
        [47, 49, 66, 53, 50, 34, 31],
        [61, 40, 62, 26, 34, 54, 56]
    ];
    return (<HeatMapComponent
        titleSettings={{
            text: 'Product wise Monthly sales revenue for a e-commerce
website',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        }}
        xAxis={{
            labels: [
                'Month of Feburary 2023',
                'Month of March 2023',
                'Month of April 2023',
                'Month of May 2023',
                'Month of June 2023',
                'Month of July 2023',
                'Month of August 2023',
                'Month of September 2023',
                'Month of October 2023',
                'Month of November 2023',
                'Month of December 2023'
            ],
            textStyle: {
                color: 'red',
                size: '15px',
                fontWeight: '650',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI',
                textAlign: 'Center',
                textOverflow: 'Wrap'
            },
            opposedPosition: true,
        }}
    >);
}

```

```

        yAxis={{
          labels: [
            'Ace Apparels',
            'Alpha Apparels',
            'RL Garments',
            'RRD Garments',
            'RRD Apparels',
            'RR Garments',
            'SR Garments'
          ],
          textStyle: {
            color: 'red',
            size: '15px',
            fontWeight: '650',
            fontStyle: 'Normal',
            fontFamily: 'Segoe UI',
            textAlignment: 'Center',
            textOverflow: 'Wrap',
          },
          maxLabelLength: 70
        }}
        paletteSettings={{
          palette: [
            { color: '#F0C27B' },
            { color: '#4B1248' }
          ],
        }}
        legendSettings={{
          visible: false
        }}
        dataSource={heatmapData}>
        <Inject services={[Tooltip]} />
      </HeatMapComponent>;
    }
    const root = ReactDOM.createRoot(document.getElementById('container'));
    root.render(<App />);
    {% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
  let heatmapData: any[] = [
    [52, 65, 67, 45, 37, 52, 32],
    [68, 52, 63, 51, 30, 51, 51],
    [60, 50, 42, 53, 66, 70, 41],
    [66, 64, 46, 40, 47, 41, 45],
    [65, 42, 58, 32, 36, 44, 49],
    [54, 46, 61, 46, 40, 39, 41],
    [48, 46, 61, 47, 49, 41, 41],
    [69, 52, 41, 44, 41, 52, 46],
    [50, 59, 44, 43, 27, 42, 26],

```

```

        [47, 49, 66, 53, 50, 34, 31],
        [61, 40, 62, 26, 34, 54, 56]
    ];
    return (<HeatMapComponent
        titleSettings={{
            text: 'Product wise Monthly sales revenue for a e-commerce
website',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        }}
        xAxis={{
            labels: [
                'Month of Feburary 2023',
                'Month of March 2023',
                'Month of April 2023',
                'Month of May 2023',
                'Month of June 2023',
                'Month of July 2023',
                'Month of August 2023',
                'Month of September 2023',
                'Month of October 2023',
                'Month of November 2023',
                'Month of December 2023'
            ],
            textStyle: {
                color: 'red',
                size: '15px',
                fontWeight: '650',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI',
                textAlign: 'Center',
                textOverflow: 'Wrap'
            },
            opposedPosition: true,
        }}
        yAxis={{
            labels: [
                'Ace Apparels',
                'Alpha Apparels',
                'RL Garments',
                'RRD Garments',
                'RRD Apparels',
                'RR Garments',
                'SR Garments'
            ],
            textStyle: {
                color: 'red',
                size: '15px',
                fontWeight: '650',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI',
                textAlign: 'Center',
                textOverflow: 'Wrap',

```

```

        },
        maxLabelLength: 70
    }}
    paletteSettings={{
        palette: [
            { color: '#F0C27B' },
            { color: '#4B1248' }
        ],
    }}
    legendSettings={{
        visible: false
    }}
    dataSource={heatmapData}>
    <Inject services={[Tooltip]} />
</HeatMapComponent>;
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% enddraw %}

```

Providing line breaks

Axis labels with line breaks improve the readability of the HeatMap by splitting the text on an axis into multiple lines. The “`\
`” character is used to add line breaks to the axis labels.

INDEX.JSX

```

{% raw %}
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import {
    HeatMapComponent,
    Inject,
    Legend,
    Tooltip,
} from '@syncfusion/ej2-react-heatmap';
export function App() {
    var heatmapData = [
        [1, 76],
        [19, 3]
    ];
    return (
        <HeatMapComponent
            xAxis={{
                labels: ['Actual<br>Accept', 'Actual<br>Reject'],
                opposedPosition: true,
            }}
            yAxis={{
                labels: ['Actual<br>Accept', 'Actual<br>Reject'],
                maxLabelLength: 50,
            }}
            dataSource={heatmapData}
        >
            <Inject services={[Tooltip, Legend]} />
        </HeatMapComponent>
    );
}

```

```
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}
```

INDEX.TSX

```
{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Tooltip, Legend } from '@syncfusion/ej2-react-heatmap';
export function App() {
  let heatmapData: any[] = [
    [1, 76],
    [19, 3]
  ];
  return (<HeatMapComponent
    xAxis={{
      labels: ['Actual<br>Accept', 'Actual<br>Reject'],
      opposedPosition: true,
    }}
    yAxis={{
      labels: ['Actual<br>Accept', 'Actual<br>Reject'],
      maxLabelLength: 50,
    }}
    dataSource={heatmapData}
  >
    <Inject services={[Tooltip, Legend]} />
  </HeatMapComponent>);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}
```

Customizing labels when intersecting with other labels

When the axis labels intersect, [labelIntersectAction](#) property is used to handle the intersection. The `labelIntersectAction` property can take the following values.

- **None** - It specifies that no action is taken when the axis labels intersect.
- **Trim** - It specifies to trim the axis labels when they intersect.
- **Rotate45** - When the axis labels intersect, they are rotated to 45 degrees.
- **MultipleRows** - It specifies to show all the axis labels as multiple rows when they intersect.

The below example demonstrates to trim the axis labels by using the `labelIntersectAction` property.

INDEX.JSX

```
{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
  var heatmapData = [
```

```

[52, 65, 67, 45, 37, 52, 32],
[68, 52, 63, 51, 30, 51, 51],
[60, 50, 42, 53, 66, 70, 41],
[66, 64, 46, 40, 47, 41, 45],
[65, 42, 58, 32, 36, 44, 49],
[54, 46, 61, 46, 40, 39, 41],
[48, 46, 61, 47, 49, 41, 41],
[69, 52, 41, 44, 41, 52, 46],
[50, 59, 44, 43, 27, 42, 26],
[47, 49, 66, 53, 50, 34, 31],
[61, 40, 62, 26, 34, 54, 56]
];
return (<HeatMapComponent
  titleSettings={{
    text: 'Product wise Monthly sales revenue for a e-commerce
website',
    textStyle: {
      size: '15px',
      fontWeight: '500',
      fontStyle: 'Normal',
      fontFamily: 'Segoe UI'
    }
  }}
  xAxis={{
    labels: [
      'Month of Feburary 2023',
      'Month of March 2023',
      'Month of April 2023',
      'Month of May 2023',
      'Month of June 2023',
      'Month of July 2023',
      'Month of August 2023',
      'Month of September 2023',
      'Month of October 2023',
      'Month of November 2023',
      'Month of December 2023'
    ],
    enableTrim: true,
    labelIntersectAction: 'Trim',
    opposedPosition: true,
  }}
  yAxis={{
    labels: [
      'Ace Apparels',
      'Alpha Apparels',
      'RL Garments',
      'RRD Garments',
      'RRD Apparels',
      'RR Garments',
      'SR Garments'
    ],
    enableTrim: true,
    labelIntersectAction: 'Trim'
  }}
  paletteSettings={{
    palette: [
      { color: '#F0C27B' },

```



```

        { color: '#4B1248' }
      ],
    }}
    legendSettings={{
      visible: false
    }}
    dataSource={heatmapData}>
    <Inject services={[Tooltip]} />
  </HeatMapComponent>;
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from "react-dom";
import { HeatMapComponent, Inject, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
  let heatmapData: any[] = [
    [52, 65, 67, 45, 37, 52, 32],
    [68, 52, 63, 51, 30, 51, 51],
    [60, 50, 42, 53, 66, 70, 41],
    [66, 64, 46, 40, 47, 41, 45],
    [65, 42, 58, 32, 36, 44, 49],
    [54, 46, 61, 46, 40, 39, 41],
    [48, 46, 61, 47, 49, 41, 41],
    [69, 52, 41, 44, 41, 52, 46],
    [50, 59, 44, 43, 27, 42, 26],
    [47, 49, 66, 53, 50, 34, 31],
    [61, 40, 62, 26, 34, 54, 56]
  ];
  return (
    <HeatMapComponent
      titleSettings={{
        text: 'Product wise Monthly sales revenue for a e-commerce website',
        textStyle: {
          size: '15px',
          fontWeight: '500',
          fontStyle: 'Normal',
          fontFamily: 'Segoe UI'
        }
      }}
      xAxis={{
        labels: [
          'Month of Feburary 2023',
          'Month of March 2023',
          'Month of April 2023',
          'Month of May 2023',
          'Month of June 2023',
          'Month of July 2023',
          'Month of August 2023',
          'Month of September 2023',

```

```

        'Month of October 2023',
        'Month of November 2023',
        'Month of December 2023'
    ],
    enableTrim: true,
    labelIntersectAction: 'Trim',
    opposedPosition: true
  })
  yAxis={{
    labels: [
      'Ace Apparels',
      'Alpha Apparels',
      'RL Garments',
      'RRD Garments',
      'RRD Apparels',
      'RR Garments',
      'SR Garments'
    ],
    enableTrim: true,
    labelIntersectAction: 'Trim'
  }}
  paletteSettings={{
    palette: [
      { color: '#F0C27B' },
      { color: '#4B1248' }
    ],
  }}
  legendSettings={{
    visible: false
  }}
  dataSource={heatmapData}>
  <Inject services={[Tooltip]} />
</HeatMapComponent>;
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Rotating labels

The axis labels can be rotated to the desired angles by using the [labelRotation](#) property.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from "react-dom";
import { HeatMapComponent, Inject, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
  var heatmapData = [
    [52, 65, 67, 45, 37, 52, 32],
    [68, 52, 63, 51, 30, 51, 51],
    [60, 50, 42, 53, 66, 70, 41],
    [66, 64, 46, 40, 47, 41, 45],
    [65, 42, 58, 32, 36, 44, 49],
    [54, 46, 61, 46, 40, 39, 41],
  ];

```

```

        [48, 46, 61, 47, 49, 41, 41],
        [69, 52, 41, 44, 41, 52, 46],
        [50, 59, 44, 43, 27, 42, 26],
        [47, 49, 66, 53, 50, 34, 31],
        [61, 40, 62, 26, 34, 54, 56]
    ];
    return (<HeatMapComponent
        titleSettings={{
            text: 'Product wise Monthly sales revenue for a e-commerce
website',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        }}
        xAxis={{
            labels: [
                'Month of Feburary 2023',
                'Month of March 2023',
                'Month of April 2023',
                'Month of May 2023',
                'Month of June 2023',
                'Month of July 2023',
                'Month of August 2023',
                'Month of September 2023',
                'Month of October 2023',
                'Month of November 2023',
                'Month of December 2023'
            ],
            labelRotation: 90,
            opposedPosition: true
        }}
        yAxis={{
            labels: [
                'Ace Apparels',
                'Alpha Apparels',
                'RL Garments',
                'RRD Garments',
                'RRD Apparels',
                'RR Garments',
                'SR Garments'
            ],
            labelRotation: 45
        }}
        paletteSettings={{
            palette: [
                { color: '#F0C27B' },
                { color: '#4B1248' }
            ],
        }}
        legendSettings={{
            visible: false
        }}
        dataSource={heatmapData}>
        <Inject services={[Tooltip]} />

```

```

    </HeatMapComponent>);
  }
  const root = ReactDOM.createRoot(document.getElementById('container'));
  root.render(<App />);
  {% enddraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from "react-dom";
import { HeatMapComponent, Inject, Tooltip } from "@syncfusion/ej2-react-heatmap";
export function App() {
  let heatmapData: any[] = [
    [52, 65, 67, 45, 37, 52, 32],
    [68, 52, 63, 51, 30, 51, 51],
    [60, 50, 42, 53, 66, 70, 41],
    [66, 64, 46, 40, 47, 41, 45],
    [65, 42, 58, 32, 36, 44, 49],
    [54, 46, 61, 46, 40, 39, 41],
    [48, 46, 61, 47, 49, 41, 41],
    [69, 52, 41, 44, 41, 52, 46],
    [50, 59, 44, 43, 27, 42, 26],
    [47, 49, 66, 53, 50, 34, 31],
    [61, 40, 62, 26, 34, 54, 56]
  ];
  return (
    <HeatMapComponent
      titleSettings={{
        text: "Product wise Monthly sales revenue for a e-commerce website",
        textStyle: {
          size: "15px",
          fontWeight: "500",
          fontStyle: "Normal",
          fontFamily: "Segoe UI"
        }
      }}
      xAxis={{
        labels: [
          "Month of Feburary 2023",
          "Month of March 2023",
          "Month of April 2023",
          "Month of May 2023",
          "Month of June 2023",
          "Month of July 2023",
          "Month of August 2023",
          "Month of September 2023",
          "Month of October 2023",
          "Month of November 2023",
          "Month of December 2023"
        ],
        labelRotation: 90,
        opposedPosition: true
      }}
      yAxis={{

```

```

        labels: [
            'Ace Apparels',
            'Alpha Apparels',
            'RL Garments',
            'RRD Garments',
            'RRD Apparels',
            'RR Garments',
            'SR Garments'
        ],
        labelRotation: 45
    }}
    paletteSettings={{
        palette: [
            { color: '#F0C27B' },
            { color: '#4B1248' }
        ],
    }}
    legendSettings={{
        visible: false
    }}
    dataSource={heatmapData}>
    <Inject services={[Tooltip]} />
</HeatMapComponent>;
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Label formatting

HeatMap supports formatting the axis labels by using the [labelFormat](#) property. Using this property, you can customize the axis label by global string format ('P', 'C', etc) or customized format like '{value}°C'.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
    var heatmapData = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return ( <HeatMapComponent
        xAxis = { {

```

```

        valueType:"DateTime",
        minimum: new Date(2007,0,1),
        intervalType:"Years",
        labelFormat:"YYYY",
    } }
    yAxis = { {
        valueType:"Numeric",
        labelFormat:"${value}"
    } }
    legendSettings = { {
        visible:false,
    } }
    dataSource={heatmapData}>
    <Inject services={[Adaptor, Tooltip]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
    let heatmapData : any[] = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return ( <HeatMapComponent
        xAxis = { {
            valueType:"DateTime",
            minimum: new Date(2007,0,1),
            intervalType:"Years",
            labelFormat:"YYYY",
        } }
        yAxis = { {
            valueType:"Numeric",
            labelFormat:"${value}"
        } }
        legendSettings = { {
            visible:false,
        } }
    
```

```

        dataSource={heatmapData}>
        <Inject services={[Adaptor, Tooltip]} />
        </HeatMapComponent> );
    }
    const root = ReactDOM.createRoot(document.getElementById('container'));
    root.render(<App />);
    {% endraw %}

```

Axis intervals

In HeatMap, you can define an interval between the axis labels using the [interval](#) property. In date-time axis, you can change the interval mode by using the [intervalType](#) property. The date-time axis supports the following interval types:

- Years
- Months
- Days
- Hours
- Minutes

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
    var heatmapData = [
        [36371, 25675, 28292, 33399, 35980, 38585, 39351, 39964, 36543,
30529, 33298, 36985],
        [34702, 27618, 31063, 34525, 36772, 35410, 38750, 39467, 35390,
34196, 35302, 35703],
        [34522, 31324, 32128, 34231, 36817, 34381, 37180, 38255, 32776,
32645, 31539, 32981],
        [32213, 28755, 29517, 31214, 33747, 33507, 35763, 36837, 32910,
33437, 30659, 31965],
        [31282, 28663, 32952, 33941, 34506, 36875, 38836, 35497, 34285,
34094, 32256, 33699],
        [31714, 29405, 33745, 32838, 33461, 35034, 36122, 37943, 34128,
30624, 32398, 33522],
        [32064, 28387, 33751, 32537, 34034, 35977, 37196, 38301, 33627,
34115, 31072, 33939],
        [32417, 27868, 30807, 33386, 35284, 36126, 39753, 40978, 35777,
35277, 31281, 35411],
        [32494, 29848, 34385, 35804, 37943, 38722, 41315, 41335, 37177,
37443, 32457, 37304],
        [34378, 29576, 30547, 35664, 36622, 38145, 40347, 41868, 38252,
36505, 29576, 36450],
        [35219, 31670, 32589, 34927, 36998, 39825, 41126, 42002, 37021,
36583, 32408, 37108]
    ];
    return ( <HeatMapComponent
        titleSettings = { {
            text: 'Monthly Flight Traffic at JFK Airport',

```

```

        textStyle: {
            size: '15px',
            fontWeight: '500',
            fontStyle: 'Normal',
            fontFamily: 'Segoe UI'
        }
    } }
    xAxis = { {
        valueType: "DateTime",
        minimum: new Date(2007, 0, 1),
        maximum: new Date(2017, 0, 1),
        intervalType: "Years",
        interval: 2,
        labelFormat: "yyyy"
    } }
    yAxis = { {
        labels: ['Jan', 'Feb', 'Mar', 'Apr', 'May',
            'Jun', 'July', 'Aug', 'Sept', 'Oct', 'Nov', 'Dec'],
    } }
    legendSettings = { {
        visible: false,
    } }
    cellSettings = { {
        showLabel: false,
        border: {
            width: 0,
        },
        format: '{value} flights'
    } }
    dataSource={heatmapData}>
    <Inject services={[Adaptor, Tooltip]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
    let heatmapData : any[] = [
        [36371, 25675, 28292, 33399, 35980, 38585, 39351, 39964, 36543,
30529, 33298, 36985],
        [34702, 27618, 31063, 34525, 36772, 35410, 38750, 39467, 35390,
34196, 35302, 35703],
        [34522, 31324, 32128, 34231, 36817, 34381, 37180, 38255, 32776,
32645, 31539, 32981],
        [32213, 28755, 29517, 31214, 33747, 33507, 35763, 36837, 32910,
33437, 30659, 31965],
        [31282, 28663, 32952, 33941, 34506, 36875, 38836, 35497, 34285,
34094, 32256, 33699],
    ]
}

```



```

        [31714, 29405, 33745, 32838, 33461, 35034, 36122, 37943, 34128,
        30624, 32398, 33522],
        [32064, 28387, 33751, 32537, 34034, 35977, 37196, 38301, 33627,
        34115, 31072, 33939],
        [32417, 27868, 30807, 33386, 35284, 36126, 39753, 40978, 35777,
        35277, 31281, 35411],
        [32494, 29848, 34385, 35804, 37943, 38722, 41315, 41335, 37177,
        37443, 32457, 37304],
        [34378, 29576, 30547, 35664, 36622, 38145, 40347, 41868, 38252,
        36505, 29576, 36450],
        [35219, 31670, 32589, 34927, 36998, 39825, 41126, 42002, 37021,
        36583, 32408, 37108]
    ];
    return ( <HeatMapComponent
        titleSettings = { {
            text: 'Monthly Flight Traffic at JFK Airport',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        } }
        xAxis = { {
            valueType:"DateTime",
            minimum: new Date(2007,0,1),
            maximum: new Date(2017,0,1),
            intervalType:"Years",
            interval:2,
            labelFormat:"yyyy"
        } }
        yAxis = { {
            labels: ['Jan', 'Feb', 'Mar', 'Apr', 'May',
                'Jun', 'July', 'Aug', 'Sept', 'Oct', 'Nov', 'Dec'],
        } }
        legendSettings = { {
            visible:false,
        } }
        cellSettings = { {
            showLabel: false,
            border: {
                width: 0,
            },
            format: '{value} flights'
        } }
        dataSource={heatmapData}>
        <Inject services={[Adaptor, Tooltip]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Axis label increment

Axis label increment in the HeatMap is used to display the axis labels with regular interval values in numeric and date-time axes. The labels will be displayed with tick gaps when you set the label interval. But, to achieve the same behavior without tick gaps, use the label increment. You can set the axis label increment using the [increment](#) property and the default value of this property is **1**.

INDEX.JSX

```
{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend } from '@syncfusion/ej2-react-heatmap';
export function App() {
    var heatmapData = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return ( <HeatMapComponent
        xAxis = { {
            valueType:"Numeric",
            minimum: 0,
            increment:2
        } }
        yAxis = { {
            valueType:"Numeric",
            minimum: 0,
            increment:3
        } }
        dataSource={heatmapData}>
        <Inject services={[Legend]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}
```

INDEX.TSX

```
{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend } from '@syncfusion/ej2-react-heatmap';
export function App() {
    let heatmapData : any[] = [
```

```

        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return ( <HeatMapComponent
        xAxis = { {
            valueType:"Numeric",
            minimum: 0,
            increment:2
        } }
        yAxis = { {
            valueType:"Numeric",
            minimum: 0,
            increment:3
        } }
        dataSource={heatmapData}>
        <Inject services={[Legend]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Limiting labels in date-time axis

You can display the axis labels at specific time intervals along with the date-time axis using the [showLabelOn](#) property. This property supports the following types:

- None: Displays the axis labels based on the `intervalType` and `interval` property of the axis. This type is default value of the `showLabelOn` property.
- Years: Displays the axis labels on every year between given date-time range.
- Months: Displays the axis labels on every month between given date-time range.
- Days: Displays the axis labels on every day between given date-time range.
- Minutes: Displays the axis labels on every minute between given date-time range.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip } from '@syncfusion/ej2-react-heatmap';
import { Internationalization } from '@syncfusion/ej2-base';
export function App() {
    var heatmapData = [
        [null, null, null, null, 16, 48, 0],

```

```
[0, 15, 0, 24, 0, 39, 0],
[0, 18, 37, 0, 0, 50, 0],
[0, 10, 0, 0, 44, 5, 0],
[0, 36, 0, 45, 20, 18, 0],
[0, 28, 1, 42, 0, 10, 0],
[0, 16, 32, 0, 1, 25, 0],
[0, 31, 2, 9, 24, 0, 0],
[0, 8, 47, 0, 0, 35, 0],
[0, 31, 0, 0, 0, 40, 0],
[0, 8, 0, 27, 0, 35, 0],
[0, 12, 9, 45, 0, 8, 0],
[0, 0, 13, 0, 22, 10, 0],
[0, 16, 32, 0, 1, 25, 0],
[0, 31, 2, 9, 24, 0, 0],
[0, 8, 47, 27, 0, 35, 0],
[0, 28, 14, 10, 0, 0, 0],
[0, 36, 0, 45, 20, 18, 0],
[0, 28, 1, 42, 0, 10, 0],
[0, 31, 0, 24, 0, 40, 0],
[0, 8, 47, 27, 0, 35, 0],
[0, 36, 0, 45, 20, 18, 0],
[0, 28, 1, 42, 0, 10, 0],
[0, 31, 0, 24, 0, 40, 0],
[0, 16, 32, 0, 1, 25, 0],
[0, 31, 2, 9, 24, 0, 0],
[0, 8, 47, 27, 0, 35, 0],
[0, 10, 0, 36, 23, 19, 0],
[0, 18, 37, 23, 0, 50, 0],
[0, 28, 14, 10, 0, 0, 0],
[0, 18, 37, 23, 0, 50, 0],
[0, 18, 37, 23, 0, 50, 0],
[0, 28, 14, 10, 0, 0, 0],
[0, 31, 2, 9, 24, 0, 0],
[0, 8, 47, 27, 0, 35, 0],
[0, 10, 2, 0, 44, 5, 0],
[0, 36, 0, 45, 20, 18, 0],
[0, 28, 1, 42, 0, 10, 0],
[0, 31, 0, 24, 0, 40, 1],
[0, 16, 32, 0, 1, 25, 0],
[0, 31, 2, 9, 24, 0, 0],
[0, 8, 47, 27, 0, 35, 0],
[0, 10, 2, 0, 44, 5, 0],
[0, 12, 9, 45, 0, 8, 0],
[0, 0, 13, 35, 22, 10, 0],
[0, 28, 14, 10, 0, 0, 0],
[0, 36, 0, 45, 20, 18, 2],
[0, 28, 1, 42, 0, 10, 0],
[0, 31, 0, 24, 0, 40, 1],
[0, 8, 47, 27, 0, 35, 0],
[0, 10, 2, 0, 44, 5, 0],
[0, 31, 2, 9, 24, 0, 1],
[0, 8, 47, 27, 0, 35, 40],
[0, 10, 2, 0, 44, 5, null]
];
function tooltipTemplate(args) {
  var intl = new Internationalization();
  var format = intl.getDateFormat({ format: 'EEE MMM dd, yyyy' });
```

```

var newDate = new Date(args.xValue);
var date = new Date(newDate.getTime());
var axisLabel= args.heatmap.axisCollections[1].axisLabels;
var index = axisLabel.indexOf(args.yLabel);
date.setDate(date.getDate() + index);
var value = format(date);
args.content = [
    (args.value === 0 ? 'No' : args.value) + ' ' + 'contributions' + '<br>'
+ value
];
}
return (
    <HeatMapComponent
        titleSettings={{
            text: 'Annual Summary of User Activities in GitLab',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        }}
        height={'280px'}
        xAxis={{
            opposedPosition: true,
            valueType: 'DateTime',
            minimum: new Date(2017, 6, 23),
            maximum: new Date(2018, 6, 30),
            intervalType: 'Days',
            showLabelOn: 'Months',
            labelFormat: 'MMM',
            increment: 7
        }}
        yAxis={{
            labels: ['Sun', 'Mon', 'Tue', 'Wed', 'Thu', 'Fri', 'Sat'],
            isInversed: true
        }}
        dataSource={heatmapData}
        cellSettings={{
            showLabel: false,
            border: { color: 'white' }
        }}
        tooltipRender={tooltipTemplate}
        paletteSettings={{
            palette: [
                { value: 0, color: 'rgb(238,238,238)', label: 'no contributions'
contributions' },
                { value: 1, color: 'rgb(172, 213, 242)', label: '1-15
contributions' },
                { value: 16, color: 'rgb(127, 168, 201)', label: '16-31
contributions' },
                { value: 32, color: 'rgb(82, 123, 160)', label: '31-49
contributions' },
                { value: 50, color: 'rgb(37, 78, 119)', label: '50+
contributions' }
            ],
            type: 'Fixed',

```

```

        emptyPointColor: 'white'
      }}
      legendSettings={{
        position: 'Bottom',
        width: '20%',
        alignment: 'Near',
        showLabel: true,
        labelDisplayType: 'None',
        enableSmartLegend: true
      }}
    >
    <Inject services={[Legend, Tooltip]} />
  </HeatMapComponent>
);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% enddraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip } from '@syncfusion/ej2-react-heatmap';
import { Internationalization } from '@syncfusion/ej2-base';
export function App() {
  let heatmapData: any[] = [
    [null, null, null, null, 16, 48, 0],
    [0, 15, 0, 24, 0, 39, 0],
    [0, 18, 37, 0, 0, 50, 0],
    [0, 10, 0, 0, 44, 5, 0],
    [0, 36, 0, 45, 20, 18, 0],
    [0, 28, 1, 42, 0, 10, 0],
    [0, 16, 32, 0, 1, 25, 0],
    [0, 31, 2, 9, 24, 0, 0],
    [0, 8, 47, 0, 0, 35, 0],
    [0, 31, 0, 0, 0, 40, 0],
    [0, 8, 0, 27, 0, 35, 0],
    [0, 12, 9, 45, 0, 8, 0],
    [0, 0, 13, 0, 22, 10, 0],
    [0, 16, 32, 0, 1, 25, 0],
    [0, 31, 2, 9, 24, 0, 0],
    [0, 8, 47, 27, 0, 35, 0],
    [0, 28, 14, 10, 0, 0, 0],
    [0, 36, 0, 45, 20, 18, 0],
    [0, 28, 1, 42, 0, 10, 0],
    [0, 31, 0, 24, 0, 40, 0],
    [0, 8, 47, 27, 0, 35, 0],
    [0, 36, 0, 45, 20, 18, 0],
    [0, 28, 1, 42, 0, 10, 0],
    [0, 31, 0, 24, 0, 40, 0],
    [0, 16, 32, 0, 1, 25, 0],
    [0, 31, 2, 9, 24, 0, 0],
    [0, 8, 47, 27, 0, 35, 0],
  ];
}

```

```

[0, 10, 0, 36, 23, 19, 0],
[0, 18, 37, 23, 0, 50, 0],
[0, 28, 14, 10, 0, 0, 0],
[0, 18, 37, 23, 0, 50, 0],
[0, 18, 37, 23, 0, 50, 0],
[0, 28, 14, 10, 0, 0, 0],
[0, 31, 2, 9, 24, 0, 0],
[0, 8, 47, 27, 0, 35, 0],
[0, 10, 2, 0, 44, 5, 0],
[0, 36, 0, 45, 20, 18, 0],
[0, 28, 1, 42, 0, 10, 0],
[0, 31, 0, 24, 0, 40, 1],
[0, 16, 32, 0, 1, 25, 0],
[0, 31, 2, 9, 24, 0, 0],
[0, 8, 47, 27, 0, 35, 0],
[0, 10, 2, 0, 44, 5, 0],
[0, 12, 9, 45, 0, 8, 0],
[0, 0, 13, 35, 22, 10, 0],
[0, 28, 14, 10, 0, 0, 0],
[0, 36, 0, 45, 20, 18, 2],
[0, 28, 1, 42, 0, 10, 0],
[0, 31, 0, 24, 0, 40, 1],
[0, 8, 47, 27, 0, 35, 0],
[0, 10, 2, 0, 44, 5, 0],
[0, 31, 2, 9, 24, 0, 1],
[0, 8, 47, 27, 0, 35, 40],
[0, 10, 2, 0, 44, 5, null]
];
function tooltipTemplate(args: ITooltipEventArgs): void {
    let intl: Internationalization = new Internationalization();
    let format: Function = intl.getDateFormat({ format: 'EEE MMM dd, yyyy'
});
    let newDate: Date = new Date(args.xValue as Date);
    let date: Date = new Date(newDate.getTime());
    let axisLabel: string[] = args.heatmap.axisCollections[1].axisLabels;
    let index: number = axisLabel.indexOf(args.yLabel);
    date.setDate(date.getDate() + index);
    let value: Date = format(date);
    args.content = [
        (args.value === 0 ? 'No' : args.value) + ' ' + 'contributions' + '<br>'
+ value
    ];
}
return (
    <HeatMapComponent
        titleSettings={{
            text: 'Annual Summary of User Activities in GitLab',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        }}
        height={'280px'}
        xAxis={{
            opposedPosition: true,

```

```

        valueType: 'DateTime',
        minimum: new Date(2017, 6, 23),
        maximum: new Date(2018, 6, 30),
        intervalType: 'Days',
        showLabelOn: 'Months',
        labelFormat: 'MMM',
        increment: 7
    })
    yAxis={
        labels: ['Sun', 'Mon', 'Tue', 'Wed', 'Thu', 'Fri', 'Sat'],
        isInversed: true
    }
    dataSource={heatmapData}
    cellSettings={
        {
            showLabel: false,
            border: { color: 'white' }
        }
    }
    tooltipRender={tooltipTemplate as any}
    paletteSettings={
        {
            palette: [
                { value: 0, color: 'rgb(238,238,238)', label: 'no contributions' },
                { value: 1, color: 'rgb(172, 213, 242)', label: '1-15 contributions' },
                { value: 16, color: 'rgb(127, 168, 201)', label: '16-31 contributions' },
                { value: 32, color: 'rgb(82, 123, 160)', label: '31-49 contributions' },
                { value: 50, color: 'rgb(37, 78, 119)', label: '50+ contributions' }
            ],
            type: 'Fixed',
            emptyPointColor: 'white'
        }
    }
    legendSettings={
        {
            position: 'Bottom',
            width: '20%',
            alignment: 'Near',
            showLabel: true,
            labelDisplayType: 'None',
            enableSmartLegend: true
        }
    }
    >
    <Inject services={[Legend, Tooltip]} />
    </HeatMapComponent>
    );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Multilevel Labels

Multilevel labels are used to classify a group of axis labels as a single category, which is then displayed with a label. By using [multiLevelLabels](#), you can add multiple levels on top of the axis labels.

To divide and group the axis labels, you can use `multiLevelLabels` property. The starting and ending indexes of the axis labels can be set using the `start` and `end` properties in the `categories`. The `text` property can be used to specify a name for the grouped axis labels.

The multilevel labels can be customized by using the following properties.

- [overflow](#) - It is used to trim or wrap the multilevel labels when the label overflows the intended space. NOTE: This property is only for x-axis.
- [alignment](#) - It is used to place and align the multilevel labels.
- [maximumTextWidth](#) - It is used to set the maximum width of the text. When the text length exceeds the maximum text width, the overflow action will be performed.
- [textStyle](#) - It is used to customize the font style of the multilevel labels.
- [border](#) - It is used to customize the border of the multilevel labels displayed in the x-axis and y-axis.

INDEX.JSX

```
{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
  var heatmapData = [
    [52, 65, 67, 45, 37, 52, 32, 76, 60, 64, 82, 91],
    [68, 52, 63, 51, 30, 51, 51, 81, 70, 60, 88, 80],
    [60, 50, 42, 53, 66, 70, 41, 69, 76, 74, 86, 97],
    [66, 64, 46, 40, 47, 41, 45, 76, 83, 69, 92, 84],
    [65, 42, 58, 32, 36, 44, 49, 79, 83, 69, 83, 93],
    [54, 46, 61, 46, 40, 39, 41, 69, 61, 84, 84, 87],
    [48, 46, 61, 47, 49, 41, 41, 67, 78, 83, 98, 87],
    [69, 52, 41, 44, 41, 52, 46, 71, 63, 84, 83, 91],
    [50, 59, 44, 43, 27, 42, 26, 64, 76, 65, 81, 86],
    [47, 49, 66, 53, 50, 34, 31, 79, 78, 79, 89, 95],
    [61, 40, 62, 26, 34, 54, 56, 74, 83, 78, 95, 98]
  ];
  return (<HeatMapComponent
    titleSettings={{
      text: 'Product wise Monthly sales revenue for a e-commerce
website',
      textStyle: {
        size: '15px',
        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'Segoe UI'
      }
    }}
    xAxis={{
      labels: ['Laptop', 'Mobile', 'Gaming', 'Cosmetics', 'Fragrance',
'Watches', 'Handbags', 'Apparels',
'Kitchenware', 'Furniture', 'Home Decor'],
      border: { type: 'Rectangle', width:1, color: '#a19d9d' },
      multiLevelLabels: [
        {
          overflow: 'Trim',
```

```

        alignment: 'Near',
        textStyle: {
            color: 'black',
            fontWeight: 'Bold'
        },
        border: { type: 'Rectangle', color: '#a19d9d' },
        categories: [
            { start: 0, end: 2, text: 'Electronics', },
            { start: 3, end: 4, text: 'Beauty and personal care',
maximumTextWidth: 50 },
            { start: 5, end: 7, text: 'Fashion', },
            { start: 8, end: 10, text: 'Household' }
        ]
    },
    ]
    })
    yAxis={({
        labels: ['Jan', 'Feb', 'Mar', 'Apr', 'May', 'Jun', 'Jul', 'Aug',
'Sep', 'Oct', 'Nov', 'Dec'],
        multiLevelLabels: [
            {
                border: { type: 'Brace', color: '#a19d9d' },
                categories: [
                    { start: 0, end: 2, text: 'Q1' },
                    { start: 3, end: 5, text: 'Q2' },
                    { start: 6, end: 8, text: 'Q3' },
                    { start: 9, end: 11, text: 'Q4' }
                ]
            },
            {
                border: { type: 'Brace', color: '#a19d9d' },
                categories: [
                    { start: 0, end: 5, text: 'First Half Yearly' },
                    {
                        start: 6,
                        end: 11,
                        text: 'Second Half Yearly'
                    }
                ]
            },
            {
                border: { type: 'Brace', color: '#a19d9d' },
                categories: [
                    { start: 0, end: 11, text: 'Yearly' }
                ]
            }
        ]
    })
    paletteSettings=({
        palette: [
            { color: '#F0C27B' },
            { color: '#4B1248' }
        ]
    })
    dataSource={heatmapData}>
    <Inject services={[Tooltip]} />
</HeatMapComponent>;

```

```

}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from "react-dom";
import { HeatMapComponent, Inject, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
  let heatmapData: any[] = [
    [52, 65, 67, 45, 37, 52, 32, 76, 60, 64, 82, 91],
    [68, 52, 63, 51, 30, 51, 51, 81, 70, 60, 88, 80],
    [60, 50, 42, 53, 66, 70, 41, 69, 76, 74, 86, 97],
    [66, 64, 46, 40, 47, 41, 45, 76, 83, 69, 92, 84],
    [65, 42, 58, 32, 36, 44, 49, 79, 83, 69, 83, 93],
    [54, 46, 61, 46, 40, 39, 41, 69, 61, 84, 84, 87],
    [48, 46, 61, 47, 49, 41, 41, 67, 78, 83, 98, 87],
    [69, 52, 41, 44, 41, 52, 46, 71, 63, 84, 83, 91],
    [50, 59, 44, 43, 27, 42, 26, 64, 76, 65, 81, 86],
    [47, 49, 66, 53, 50, 34, 31, 79, 78, 79, 89, 95],
    [61, 40, 62, 26, 34, 54, 56, 74, 83, 78, 95, 98]
  ];
  return (<HeatMapComponent
    titleSettings={{
      text: 'Product wise Monthly sales revenue for a e-commerce
website',
      textStyle: {
        size: '15px',
        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'Segoe UI'
      }
    }}
    xAxis={{
      labels: ['Laptop', 'Mobile', 'Gaming', 'Cosmetics', 'Fragrance',
'Watches', 'Handbags', 'Apparels',
'Kitchenware', 'Furniture', 'Home Decor'],
      border: { type: 'Rectangle', width:1, color: '#a19d9d' },
      multiLevelLabels: [
        {
          overflow: 'Trim',
          alignment: 'Near',
          textStyle: {
            color: 'black',
            fontWeight: 'Bold'
          },
        },
        border: { type: 'Rectangle', color: '#a19d9d' },
        categories: [
          { start: 0, end: 2, text: 'Electronics', },
          { start: 3, end: 4, text: 'Beauty and personal care',
maximumTextWidth: 50 },
          { start: 5, end: 7, text: 'Fashion', },

```

```

        { start: 8, end: 10, text: 'Household' }
      ],
    },
  ],
  },
  yAxis={
    labels: ['Jan', 'Feb', 'Mar', 'Apr', 'May', 'Jun', 'Jul', 'Aug', 'Sep', 'Oct', 'Nov', 'Dec'],
    multiLevelLabels: [
      {
        border: { type: 'Brace', color: '#a19d9d' },
        categories: [
          { start: 0, end: 2, text: 'Q1' },
          { start: 3, end: 5, text: 'Q2' },
          { start: 6, end: 8, text: 'Q3' },
          { start: 9, end: 11, text: 'Q4' }
        ]
      },
      {
        border: { type: 'Brace', color: '#a19d9d' },
        categories: [
          { start: 0, end: 5, text: 'First Half Yearly' },
          {
            start: 6,
            end: 11,
            text: 'Second Half Yearly'
          }
        ]
      },
    ],
  },
  {
    border: { type: 'Brace', color: '#a19d9d' },
    categories: [
      { start: 0, end: 11, text: 'Yearly' }
    ]
  }
],
  },
  paletteSettings={
    palette: [
      { color: '#F0C27B' },
      { color: '#4B1248' }
    ],
  },
  dataSource={heatmapData}>
  <Inject services={[Tooltip]} />
</HeatMapComponent>;
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% enddraw %}

```

Palette in React Heatmap chart component

In heat map, each data point is displayed as a cell with applied color based on the data value. The palette in the heat map is used to define the color range for cells and gradient type for colors. You can

define the colors either in RGB or hex codes using the [color](#) property in the `palette`. The defined colors are applied to the cell background based on the palette type and cell value.

Palette types

You can display the heat map cells either in gradient colors or fixed colors.

Gradient

The smooth transition between the given palette colors can be applied for the heat map cells based on value. The heat map calculates all the gradient colors between the start and end colors for all distinct data values. Default start color and end color will be considered for gradient calculation, if the colors are not defined. The palette type must be defined as **Gradient** for the [type](#) property in the `paletteSettings` property.

INDEX.JSX

```
{% raw %}
import * as React from "react";
import * as ReactDOM from "react-dom";
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
"@syncfusion/ej2-react-heatmap";
export function App() {
  var heatmapData = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
    [56, 69, 21, 86, 3, 33],
    [45, 7, 53, 81, 95, 79],
    [60, 77, 74, 68, 88, 51],
    [25, 25, 10, 12, 78, 14],
    [25, 56, 55, 58, 12, 82],
    [74, 33, 88, 23, 86, 59]
  ];
  return ( <HeatMapComponent
    titleSettings = { {
      text: 'Sales Revenue per Employee (in 1000 US$)',
      textStyle: {
        size: '15px',
        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'Segoe UI'
      }
    } }
    xAxis = { {
      labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    } }
    yAxis = { {
      labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    } }
    paletteSettings = { {
      palette: [
        { color: '#C06C84'},

```

```

        { color: '#6C5B7B'},
        { color: '#355C7D'}
    ],
    type: "Gradient"
  } }
  legendSettings = { {
    visible: true
  } }
  dataSource={heatmapData}>
<Inject services={[Legend, Tooltip]} />
</HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
  let heatmapData : any[] = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
    [56, 69, 21, 86, 3, 33],
    [45, 7, 53, 81, 95, 79],
    [60, 77, 74, 68, 88, 51],
    [25, 25, 10, 12, 78, 14],
    [25, 56, 55, 58, 12, 82],
    [74, 33, 88, 23, 86, 59]
  ];
  return ( <HeatMapComponent
    titleSettings = { {
      text: 'Sales Revenue per Employee (in 1000 US$)',
      textStyle: {
        size: '15px',
        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'Segoe UI'
      }
    } }
    xAxis = { {
      labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    } }
    yAxis = { {
      labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    } }

```

```

        paletteSettings = { {
            palette: [
                { color: '#C06C84'},
                { color: '#6C5B7B'},
                { color: '#355C7D'}
            ],
            type: "Gradient"
        } }
        legendSettings = { {
            visible: true
        } }
        dataSource={heatmapData}>
        <Inject services={[Legend, Tooltip]} />
        </HeatMapComponent> );
    }
    const root = ReactDOM.createRoot(document.getElementById('container'));
    root.render(<App />);
    {% enddraw %}

```

Fixed

In fixed palette type, solid colors are applied to the heat map cells. The data values can be grouped based on the number of colors defined for the heat map. The palette type should be defined as **Fixed** for the [type](#) property in the `paletteSettings` property.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
    var heatmapData = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return ( <HeatMapComponent
        titleSettings = { {
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        } }
    >

```

```

        xAxis = { {
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
        } }
        yAxis = { {
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
        } }
        paletteSettings = { {
            palette: [
                { color: '#C06C84'},
                { color: '#6C5B7B'},
                { color: '#355C7D'}
            ],
            type: "Fixed"
        } }
        legendSettings = { {
            visible: true,
        } }
        dataSource={heatmapData}>
        <Inject services={[Legend, Tooltip]} />
        </HeatMapComponent> );
    }
    const root = ReactDOM.createRoot(document.getElementById('container'));
    root.render(<App />);
    {% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
    let heatmapData : any[] = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return ( <HeatMapComponent
        titleSettings = { {
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',

```



```

        fontFamily: 'Segoe UI'
      }
    } }
    xAxis = { {
      labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    } }
    yAxis = { {
      labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    } }
    paletteSettings = { {
      palette: [
        { color: '#C06C84'},
        { color: '#6C5B7B'},
        { color: '#355C7D'}
      ],
      type: "Fixed"
    } }
    legendSettings = { {
      visible: true,
    } }
    dataSource={heatmapData}>
    <Inject services={[Legend, Tooltip]} />
    </HeatMapComponent> );
  }
  const root = ReactDOM.createRoot(document.getElementById('container'));
  root.render(<App />);
  {% endraw %}

```

Defining color stops

You can define the colors ranges or color stops for data values in both gradient and fixed palette types. You need to define the data value in the [value](#) property for `palette` property to calculate the color stops. The heat map automatically calculates the color stops if the [value](#) property is not defined. The [label](#) property is used to provide the additional information about the color that is to be displayed in the legend. If the label is not provided, the value is displayed in the legend. The labels can be automatically calculated based on data values, if both the values and labels are not defined.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
  var heatmapData = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
    [56, 69, 21, 86, 3, 33],
    [45, 7, 53, 81, 95, 79],
  ]

```

```

        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return ( <HeatMapComponent
        titleSettings = { {
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        } }
        xAxis = { {
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
        } }
        yAxis = { {
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
        } }
        paletteSettings = { {
            palette: [
                { color: '#C06C84', label: 'Low', value: 50 },
                { color: '#6C5B7B', label: 'Moderate', value: 80 },
                { color: '#355C7D', label: 'High', value: 100 }
            ],
            type: "Gradient"
        } }
        legendSettings = { {
            visible: true,
        } }
        dataSource={heatmapData}>
        <Inject services={[Legend, Tooltip]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
    let heatmapData : any[] = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
    ];

```

```

        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return ( <HeatMapComponent
        titleSettings = { {
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        } }
        xAxis = { {
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
        } }
        yAxis = { {
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
        } }
        paletteSettings = { {
            palette: [
                { color: '#C06C84', label: 'Low', value: 50 },
                { color: '#6C5B7B', label: 'Moderate', value: 80 },
                { color: '#355C7D', label: 'High', value: 100 }
            ],
            type: "Gradient"
        } }
        legendSettings = { {
            visible: true,
        } }
        dataSource={heatmapData}>
        <Inject services={[Legend, Tooltip]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% enddraw %}

```

Color range

The color range support is used to provide a specific color for specific range in heat map. The `startValue` and `endValue` properties are used to define the range start and end value. The `minColor` and `maxColor` properties represent the colors of given range. It's possible to set the cell color for the value not in the given range using the `fillColor` property.

In Fixed type, the `minColor` value is used for cell color.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from "react-dom";
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
"@syncfusion/ej2-react-heatmap";
export function App() {
    var heatmapData = [
        [73, 39, 26, 39, 94, 1],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return ( <HeatMapComponent
        titleSettings = { {
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        } }
        xAxis = { {
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
        } }
        yAxis = { {
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
        } }
        paletteSettings = { {
            palette: [
                { startValue:1, endValue:30, minColor: '#C2E7EC', maxColor:
'#AEDFE6' },
                { startValue:30, endValue:60, minColor: '#9AD7E0', maxColor:
'#72C7D4' },
                { startValue:60, endValue:90, minColor: '#5EBFCE', maxColor:
'#4AB7C8' }
            ],
            type: "Gradient"
        } }
        legendSettings = { {
            visible: true,
        } }
        dataSource={heatmapData}>
        <Inject services={[Legend, Tooltip]} />
        </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));

```

```
root.render(<App />);
{% endraw %}
```

INDEX.TSX

```
{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
  let heatmapData : any[] = [
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    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
    [56, 69, 21, 86, 3, 33],
    [45, 7, 53, 81, 95, 79],
    [60, 77, 74, 68, 88, 51],
    [25, 25, 10, 12, 78, 14],
    [25, 56, 55, 58, 12, 82],
    [74, 33, 88, 23, 86, 59]
  ];
  return ( <HeatMapComponent
    titleSettings = { {
      text: 'Sales Revenue per Employee (in 1000 US$)',
      textStyle: {
        size: '15px',
        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'Segoe UI'
      }
    } }
    xAxis = { {
      labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    } }
    yAxis = { {
      labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    } }
    paletteSettings = { {
      palette: [
        { startValue:1, endValue:30, minColor: '#C2E7EC', maxColor:
'#AEDFE6' },
        { startValue:30, endValue:60, minColor: '#9AD7E0', maxColor:
'#72C7D4' },
        { startValue:60, endValue:90, minColor: '#5EBFCE', maxColor:
'#4AB7C8' }
      ],
      type: "Gradient"
    } }
    legendSettings = { {
      visible: true,
```

```

    } }
    dataSource={heatmapData}>
    <Inject services={[Legend, Tooltip]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

See Also

- [How to enable smart legend](#)

Legend in React Heatmap chart component

The legend is used to provide the information about the heat map cell. You can enable the legend by setting the [visible](#) property to **true** and injecting the **Legend** module into the **services**.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
    var heatmapData = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return ( <HeatMapComponent
        titleSettings = { {
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        } }
        xAxis = { {
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
        } }
        yAxis = { {

```

```

        labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    } }
    paletteSettings = { {
        palette: [
            { value: 0, color: '#C2E7EC' },
            { value: 10, color: '#AEDFE6' },
            { value: 20, color: '#9AD7E0' },
            { value: 30, color: '#72C7D4' },
            { value: 40, color: '#5EBFCE' },
            { value: 50, color: '#4AB7C8' },
            { value: 60, color: '#309DAE' },
            { value: 70, color: '#2B8C9B' },
            { value: 80, color: '#206974' },
            { value: 90, color: '#15464D' },
            { value: 100, color: '#000000' },
        ]
    } }
    cellSettings = { {
        showLabel: false
    } }
    dataSource={heatmapData}
    legendSettings = { {
        position: 'Right',
    } }>
    <Inject services={[Legend, Tooltip, Adaptor]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
    let heatmapData : any[] = [
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        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
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        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return ( <HeatMapComponent
        titleSettings = { {
            text: 'Sales Revenue per Employee (in 1000 US$)',

```

```

        textStyle: {
            size: '15px',
            fontWeight: '500',
            fontStyle: 'Normal',
            fontFamily: 'Segoe UI'
        }
    } }
    xAxis = { {
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'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    } }
    yAxis = { {
        labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    } }
    paletteSettings = { {
        palette: [
            { value: 0, color: '#C2E7EC' },
            { value: 10, color: '#AEDFE6' },
            { value: 20, color: '#9AD7E0' },
            { value: 30, color: '#72C7D4' },
            { value: 40, color: '#5EBFCE' },
            { value: 50, color: '#4AB7C8' },
            { value: 60, color: '#309DAE' },
            { value: 70, color: '#2B8C9B' },
            { value: 80, color: '#206974' },
            { value: 90, color: '#15464D' },
            { value: 100, color: '#000000' },
        ]
    } }
    cellSettings = { {
        showLabel: false
    } }
    dataSource={heatmapData}
    legendSettings = { {
        position: 'Right',
    } }>
    <Inject services={[Legend, Tooltip, Adaptor]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% enddraw %}

```

Legend types

Heat map supports two legend types: Gradient and list type.

- Gradient - This is a continuous color legend with smooth color transition between palette color values.
- List - List is a fixed color legend. Each palette color information is shown separately in the list item.

You can change the legend type by using the [type](#) property in the `paletteSettings` property.

INDEX.JSX

```
{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
  var heatmapData = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
    [56, 69, 21, 86, 3, 33],
    [45, 7, 53, 81, 95, 79],
    [60, 77, 74, 68, 88, 51],
    [25, 25, 10, 12, 78, 14],
    [25, 56, 55, 58, 12, 82],
    [74, 33, 88, 23, 86, 59]
  ];
  return ( <HeatMapComponent
    titleSettings = { {
      text: 'Sales Revenue per Employee (in 1000 US$)',
      textStyle: {
        size: '15px',
        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'Segoe UI'
      }
    } }
    xAxis = { {
      labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    } }
    yAxis = { {
      labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    } }
    cellSettings = { {
      showLabel: false,
    } }
    paletteSettings = { {
      type: 'Fixed'
    } }
    legendSettings = { {
      position: 'Right',
    } }
    dataSource={heatmapData}>
    <Inject services={[Legend, Tooltip, Adaptor]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}
```

INDEX.TSX

```
{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
  let heatmapData : any[] = [
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    [14, 26, 97, 69, 69, 3],
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    [74, 33, 88, 23, 86, 59]
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      textStyle: {
        size: '15px',
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        fontStyle: 'Normal',
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      }
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    xAxis = { {
      labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    } }
    yAxis = { {
      labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    } }
    cellSettings = { {
      showLabel: false,
    } }
    paletteSettings = { {
      type: 'Fixed'
    } }
    legendSettings = { {
      position: 'Right',
    } }
    dataSource={heatmapData}>
    <Inject services={[Legend, Tooltip, Adaptor]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}
```

Placement

You can place the legend at left, right, top, or bottom to the heat map layout by using the [position](#) property. The legend is positioned at the right to the heat map by default.

INDEX.JSX

```
{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
    var heatmapData = [
        [73, 39, 26, 39, 94, 0],
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        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return ( <HeatMapComponent
        titleSettings = { {
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        } }
        xAxis = { {
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
        } }
        yAxis = { {
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
        } }
        legendSettings = { {
            position: 'Top',
        } }
        dataSource={heatmapData}>
        <Inject services={[Legend, Tooltip]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}
```

INDEX.TSX

```
{% raw %}
import * as React from "react";
import * as ReactDOM from "react-dom";
import { HeatMapComponent, Inject, Legend, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
  let heatmapData : any[] = [
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  return ( <HeatMapComponent
    titleSettings = { {
      text: 'Sales Revenue per Employee (in 1000 US$)',
      textStyle: {
        size: '15px',
        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'Segoe UI'
      }
    } }
    xAxis = { {
      labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
        'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    } }
    yAxis = { {
      labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    } }
    legendSettings = { {
      position: 'Top',
    } }
    dataSource={heatmapData}>
    <Inject services={[Legend, Tooltip]} />
  </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}
```

Alignment

You can align the legend as center, far, or near to the heat map using the [alignment](#) property.

INDEX.JSX

```
{% raw %}
import * as React from "react";
```

```

import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
 '@syncfusion/ej2-react-heatmap';
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    var heatmapData = [
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            }
        } }
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            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
                'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
                'Mario'],
        } }
        yAxis = { {
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
        } }
        legendSettings = { {
            position: 'Right',
            alignment: 'Near',
            height: '150px'
        } }
        dataSource={heatmapData}>
        <Inject services={[Legend, Tooltip, Adaptor]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
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'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    } }
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      labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    } }
    legendSettings = { {
      position: 'Right',
      alignment: 'Near',
      height: '150px'
    } }
    dataSource={heatmapData}>
    <Inject services={[Legend, Tooltip, Adaptor]} />
  </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Legend dimensions

You can change the legend dimensions with values in pixels or percentage by using the [width](#) and [height](#) properties.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';

```

```

import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
  var heatmapData = [
    [73, 39, 26, 39, 94, 0],
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    [74, 33, 88, 23, 86, 59]
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  return ( <HeatMapComponent
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      text: 'Sales Revenue per Employee (in 1000 US$)',
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        fontWeight: '500',
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        fontFamily: 'Segoe UI'
      }
    } }
    xAxis = { {
      labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    } }
    yAxis = { {
      labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    } }
    legendSettings = { {
      position: 'Right',
      height: '150px',
    } }
    dataSource={heatmapData}>
    <Inject services={[Legend, Tooltip, Adaptor]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
  let heatmapData : any[] = [

```

```

        [73, 39, 26, 39, 94, 0],
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    return ( <HeatMapComponent
        titleSettings = { {
            text: 'Sales Revenue per Employee (in 1000 US$)',
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            }
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        xAxis = { {
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
        } }
        yAxis = { {
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
        } }
        legendSettings = { {
            position: 'Right',
            height: '150px',
        } }
        dataSource={heatmapData}>
        <Inject services={[Legend, Tooltip, Adaptor]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Paging for legend

Paging is available only for the list type legend in the heat map, and it can be enabled by default, when the legend items exceed the legend bounds. You can view each legend items by navigating between the pages using navigation buttons.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {

```



```

var heatmapData = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
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    titleSettings = { {
        text: 'Sales Revenue per Employee (in 1000 US$)',
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    xAxis = { {
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'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    } }
    yAxis = { {
        labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    } }
    paletteSettings = { {
        palette: [
            { value: 0, color: '#C2E7EC' },
            { value: 10, color: '#AEDFE6' },
            { value: 20, color: '#9AD7E0' },
            { value: 25, color: '#86CFDA' },
            { value: 30, color: '#72C7D4' },
            { value: 40, color: '#5EBFCE' },
            { value: 50, color: '#4AB7C8' },
            { value: 55, color: '#36AFC2' },
            { value: 60, color: '#309DAE' },
            { value: 70, color: '#2B8C9B' },
            { value: 75, color: '#257A87' },
            { value: 80, color: '#206974' },
            { value: 85, color: '#1B5761' },
            { value: 90, color: '#15464D' },
            { value: 100, color: '#000000' },
        ],
        type: 'Fixed'
    } }
    legendSettings = { {
        position: 'Right',
        height: "150px"
    } }
    dataSource={heatmapData}>

```

```

        <Inject services={[Legend, Tooltip, Adaptor]} />
      </HeatMapComponent> );
    }
    const root = ReactDOM.createRoot(document.getElementById('container'));
    root.render(<App />);
    {% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
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import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
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    titleSettings = { {
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      }
    } }
    xAxis = { {
      labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
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    } }
    yAxis = { {
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        { value: 20, color: '#9AD7E0' },
        { value: 25, color: '#86CFDA' },
        { value: 30, color: '#72C7D4' },
        { value: 40, color: '#5EBFCE' },
        { value: 50, color: '#4AB7C8' },

```

```

    { value: 55, color: '#36AFC2' },
    { value: 60, color: '#309DAE' },
    { value: 70, color: '#2B8C9B' },
    { value: 75, color: '#257A87' },
    { value: 80, color: '#206974' },
    { value: 85, color: '#1B5761' },
    { value: 90, color: '#15464D' },
    { value: 100, color: '#000000' },
  ],
  type: 'Fixed'
} }
legendSettings = { {
  position: 'Right',
  height: "150px"
} }
dataSource={heatmapData}>
<Inject services={[Legend, Tooltip, Adaptor]} />
</HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% enddraw %}

```

Smart Legend

Smart legend is another way of showing list type legend with responsiveness and readability, when the palette has more number of items. You can enable this smart legend by using the [enableSmartLegend](#) property when the palette type is set to **Fixed**.

In smart legend, you can change the display type of legend labels by using the [labelDisplayType](#) property.

The following are the legend label display types:

- All: Displays all labels in the legend.
- Edge: Displays the legend labels only at extreme ends.
- None: None of the labels are displayed. The tooltip will appear for this type of label display when hovering over the legend item.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend } from '@syncfusion/ej2-react-heatmap';
export function App() {
  var heatmapData = [
    [73, 39, 26, 39, 94, 0],
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    [41, 55, 73, 23, 3, 79],
    [56, 69, 21, 86, 3, 33],
  ];

```

```

        [45, 7, 53, 81, 95, 79],
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    ];
    return ( <HeatMapComponent
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                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        } }
        xAxis = { {
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
                'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
        } }
        yAxis = { {
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
        } }
        cellSettings = { {
            showLabel: false
        } }
        paletteSettings = { {
            palette: [
                { value: 0, color: '#C2E7EC' },
                { value: 10, color: '#AEDFE6' },
                { value: 20, color: '#9AD7E0' },
                { value: 30, color: '#72C7D4' },
                { value: 40, color: '#5EBFCE' },
                { value: 50, color: '#4AB7C8' },
                { value: 60, color: '#309DAE' },
                { value: 70, color: '#2B8C9B' },
                { value: 80, color: '#206974' },
                { value: 90, color: '#15464D' },
                { value: 100, color: '#000000' },
            ],
            type: 'Fixed'
        } }
        legendSettings = { {
            position: 'Bottom',
            width: '75%',
            enableSmartLegend: true
        } }
        dataSource={heatmapData}>
        <Inject services={[Legend]} />
        </HeatMapComponent> );
    }
    const root = ReactDOM.createRoot(document.getElementById('container'));
    root.render(<App />);
    {% endraw %}

```

INDEX.TSX

```
{% raw %}
import * as React from "react";
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    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
    [56, 69, 21, 86, 3, 33],
    [45, 7, 53, 81, 95, 79],
    [60, 77, 74, 68, 88, 51],
    [25, 25, 10, 12, 78, 14],
    [25, 56, 55, 58, 12, 82],
    [74, 33, 88, 23, 86, 59]
  ];
  return ( <HeatMapComponent
    titleSettings = { {
      text: 'Sales Revenue per Employee (in 1000 US$)',
      textStyle: {
        size: '15px',
        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'Segoe UI'
      }
    } }
    xAxis = { {
      labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
        'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    } }
    yAxis = { {
      labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    } }
    cellSettings = { {
      showLabel: false
    } }
    paletteSettings = { {
      palette: [
        { value: 0, color: '#C2E7EC' },
        { value: 10, color: '#AEDFE6' },
        { value: 20, color: '#9AD7E0' },
        { value: 30, color: '#72C7D4' },
        { value: 40, color: '#5EBFCE' },
        { value: 50, color: '#4AB7C8' },
        { value: 60, color: '#309DAE' },
        { value: 70, color: '#2B8C9B' },
        { value: 80, color: '#206974' },
        { value: 90, color: '#15464D' },
        { value: 100, color: '#000000' },
      ],
    } },
  ],
```

```

        type: 'Fixed'
      } }
      legendSettings = { {
        position: 'Bottom',
        width: '75%',
        enableSmartLegend: true
      } }
      dataSource={heatmapData}>
      <Inject services={[Legend]} />
    </HeatMapComponent> );
  }
  const root = ReactDOM.createRoot(document.getElementById('container'));
  root.render(<App />);
  {% endraw %}

```

Legend Selection

In the HeatMap, the legend selection is used to toggle the visibility of cell for viewing the specific range value. You can enable the legend selection using the [toggleVisibility](#) property.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from "react-dom";
import { HeatMapComponent, Inject, Legend } from '@syncfusion/ej2-react-heatmap';
export function App() {
  var heatmapData = [
    [73, 39, 26, 39, 94, 0],
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  ];
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      textStyle: {
        size: '15px',
        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'Segoe UI'
      }
    } }
    xAxis = { {
      labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
        'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
        'Mario'],
    } }

```

```

    yAxis = { {
      labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    } }
    cellSettings = { {
      showLabel: false
    } }
    paletteSettings = { {
      palette: [
        { value: 0, color: '#C2E7EC' },
        { value: 10, color: '#AEDFE6' },
        { value: 20, color: '#9AD7E0' },
        { value: 30, color: '#72C7D4' },
        { value: 40, color: '#5EBFCE' },
        { value: 50, color: '#4AB7C8' },
        { value: 60, color: '#309DAE' },
        { value: 70, color: '#2B8C9B' },
        { value: 80, color: '#206974' },
        { value: 90, color: '#15464D' },
        { value: 100, color: '#000000' },
      ],
      type: 'Fixed'
    } }
    legendSettings = { {
      position: 'Bottom',
      width: '75%',
      enableSmartLegend: true,
      toggleVisibility: true
    } }
    dataSource={heatmapData}>
    <Inject services={[Legend]} />
    </HeatMapComponent> );
  }
  const root = ReactDOM.createRoot(document.getElementById('container'));
  root.render(<App />);
  {% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend } from '@syncfusion/ej2-react-heatmap';
export function App() {
  let heatmapData : any[] = [
    [73, 39, 26, 39, 94, 0],
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    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
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    [45, 7, 53, 81, 95, 79],
    [60, 77, 74, 68, 88, 51],
    [25, 25, 10, 12, 78, 14],
    [25, 56, 55, 58, 12, 82],
  ]

```

```

    [74, 33, 88, 23, 86, 59]
  ];
  return ( <HeatMapComponent
    titleSettings = { {
      text: 'Sales Revenue per Employee (in 1000 US$)',
      textStyle: {
        size: '15px',
        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'Segoe UI'
      }
    } }
    xAxis = { {
      labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
        'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    } }
    yAxis = { {
      labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    } }
    cellSettings = { {
      showLabel: false
    } }
    paletteSettings = { {
      palette: [
        { value: 0, color: '#C2E7EC' },
        { value: 10, color: '#AEDFE6' },
        { value: 20, color: '#9AD7E0' },
        { value: 30, color: '#72C7D4' },
        { value: 40, color: '#5EBFCE' },
        { value: 50, color: '#4AB7C8' },
        { value: 60, color: '#309DAE' },
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        { value: 80, color: '#206974' },
        { value: 90, color: '#15464D' },
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      ],
      type: 'Fixed'
    } }
    legendSettings = { {
      position: 'Bottom',
      width: '75%',
      enableSmartLegend: true,
      toggleVisibility: true
    } }
    dataSource={heatmapData}>
    <Inject services={[Legend]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```


Legend Title

The legend title displays a specific information about the legend. You can enable the legend title by setting the [title](#) property by providing the text and customizing the legend title text style using the [textStyle](#) property.

INDEX.JSX

```
{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
  var heatmapData = [
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    [25, 56, 55, 58, 12, 82],
    [74, 33, 88, 23, 86, 59]
  ];
  return ( <HeatMapComponent
    titleSettings = { {
      text: 'Sales Revenue per Employee'
    } }
    xAxis = { {
      labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    } }
    yAxis = { {
      labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    } }
    paletteSettings = { {
      palette: [
        { value: 0, color: '#6EB5D0' },
        { value: 50, color: '#7EDCA2' },
        { value: 100, color: '#DCD57E' },
      ]
    } }
    cellSettings = { {
      showLabel: false
    } }
    dataSource={heatmapData}
    legendSettings = { {
      position: 'Right',
      title: {
        text: "1000 US$"
      }
    } } >
    <Inject services={[Legend, Tooltip, Adaptor]} />
```

```

        </HeatMapComponent> );
    }
    const root = ReactDOM.createRoot(document.getElementById('container'));
    root.render(<App />);
    {% enddraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from "react-dom";
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
"@syncfusion/ej2-react-heatmap";
export function App() {
    let heatmapData : any[] = [
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        [74, 33, 88, 23, 86, 59]
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    return ( <HeatMapComponent
        titleSettings = { {
            text: 'Sales Revenue per Employee'
        } }
        xAxis = { {
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
        } }
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            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
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            palette: [
                { value: 0, color: '#6EB5D0' },
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                { value: 100, color: '#DCD57E' },
            ]
        } }
        cellSettings = { {
            showLabel: false
        } }
        dataSource={heatmapData}
        legendSettings = { {
            position: 'Right',
            title: {
                text: "1000 US$"
            }
        } }
    >);
}

```

```

    } }>
    <Inject services={[Legend, Tooltip, Adaptor]} />
  </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Appearance in React Heatmap chart component

Cell customization

You can customize the cell by using the [cellSettings](#) property.

Border

Change the width, color, and radius of the heat map cells by using the [border](#) property.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from "react-dom";
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
"@syncfusion/ej2-react-heatmap";
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        fontStyle: 'Normal',
        fontFamily: 'Segoe UI'
      }
    } }
    xAxis = { {
      labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    } }
    yAxis = { {
      labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    } }
    cellSettings = { {

```

```

        border: {
            width: 1,
            radius: 4,
            color: 'white'
        }
    } }
    dataSource={heatmapData}>
    <Inject services={[Tooltip]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
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        [74, 33, 88, 23, 86, 59]
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                fontFamily: 'Segoe UI'
            }
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'Mario'],
        } }
        yAxis = { {
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
        } }
        cellSettings = { {
            border: {

```

```

        width: 1,
        radius: 4,
        color: 'white'
      }
    } }
    dataSource={heatmapData}>
    <Inject services={[Tooltip]} />
  </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Cell highlighting

Enable or disable the cell highlighting while hovering over the heat map cells by using the [enableCellHighlighting](#) property.

Note: The cell highlighting only works in a SVG rendering mode.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
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        fontFamily: 'Segoe UI'
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    } }
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      labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    } }
  
```

```

        yAxis = { {
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
        } }
        cellSettings = { {
            enableCellHighlighting: true
        } }
        dataSource={heatmapData}>
        <Inject services={[Tooltip]} />
        </HeatMapComponent> );
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INDEX.TSX

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'Mario'],
        } }
        yAxis = { {
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
        } }
        cellSettings = { {
            enableCellHighlighting: true

```

```

    } }
    dataSource={heatmapData}>
    <Inject services={[Tooltip]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Color gradient mode

The [colorGradientMode](#) property can be used to set the minimum and maximum values for colors based on row and column. Three types of color gradient modes are available.

- **Table:** The minimum and maximum value colors calculated for overall data.
- **Row:** The minimum and maximum value colors calculated for each row of data.
- **Column:** The minimum and maximum value colors calculated for each column of data.

Note: The default value of `colorGradientMode` is **Table**.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
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    return ( <HeatMapComponent
        titleSettings = { {
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                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        } }
        xAxis = { {
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],

```

```

    } }
    yAxis = { {
      labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    } }
    paletteSettings = {{
      colorGradientMode: 'Column'
    }}
    cellSettings = { {
      enableCellHighlighting: true
    } }
    dataSource={heatmapData}>
    <Inject services={[Tooltip]} />
    </HeatMapComponent> );
  }
  const root = ReactDOM.createRoot(document.getElementById('container'));
  root.render(<App />);
  {% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
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'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    } }
    yAxis = { {

```



```

        labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
      } }
      paletteSettings = {{
        colorGradientMode: 'Column'
      }}
      cellSettings = { {
        enableCellHighlighting: true
      } }
      dataSource={heatmapData}>
      <Inject services={[Tooltip]} />
    </HeatMapComponent> );
  }
  const root = ReactDOM.createRoot(document.getElementById('container'));
  root.render(<App />);
  {% endraw %}

```

Background color

The background color of the HeatMap can be customized using the [backgroundColor](#) property.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent } from '@syncfusion/ej2-react-heatmap';
export function App() {
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    [25, 25, 10, 12, 78, 14],
    [25, 56, 55, 58, 12, 82],
    [74, 33, 88, 23, 86, 59]
  ];
  return (
    <HeatMapComponent
      backgroundColor= "#c7afcf"
      titleSettings={{
        text: 'Sales Revenue per Employee (in 1000 US$)',
        textStyle: {
          size: '15px',
          fontWeight: '500',
          fontStyle: 'Normal',
          fontFamily: 'Segoe UI'
        }
      }}
      xAxis={{
        labels: [
          'Nancy',
          'Andrew',

```

```

        'Janet',
        'Margaret',
        'Steven',
        'Michael',
        'Robert',
        'Laura',
        'Anne',
        'Paul',
        'Karin',
        'Mario'
    ]
    }}
    yAxis={{
        labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat']
    }}
    dataSource={heatmapData}
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</HeatMapComponent>
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const root = ReactDOM.createRoot(document.getElementById('container'));
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{% enddraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from "react-dom";
import { HeatMapComponent } from '@syncfusion/ej2-react-heatmap';
export function App() {
    let heatmapData: any[] = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return (
        <HeatMapComponent
            backgroundColor= "#c7afcf"
            titleSettings={{
                text: 'Sales Revenue per Employee (in 1000 US$)',
                textStyle: {
                    size: '15px',
                    fontWeight: '500',
                    fontStyle: 'Normal',
                    fontFamily: 'Segoe UI'
                }
            }}
        />
    );
}

```

```

    }}
    xAxis={{
      labels: [
        'Nancy',
        'Andrew',
        'Janet',
        'Margaret',
        'Steven',
        'Michael',
        'Robert',
        'Laura',
        'Anne',
        'Paul',
        'Karin',
        'Mario'
      ]
    }}
    yAxis={{
      labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat']
    }}
    dataSource={heatmapData}
  >
</HeatMapComponent>
);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Margin

Set the margin for the heatmap from its container by using the [margin](#) property.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from "react-dom";
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
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    [93, 58, 53, 38, 26, 68],
    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
    [56, 69, 21, 86, 3, 33],
    [45, 7, 53, 81, 95, 79],
    [60, 77, 74, 68, 88, 51],
    [25, 25, 10, 12, 78, 14],
    [25, 56, 55, 58, 12, 82],
    [74, 33, 88, 23, 86, 59]
  ];
  return ( <HeatMapComponent
    margin = { {

```

```

        left: 15,
        right: 15,
        top: 15,
        bottom: 15
    } }
    titleSettings = { {
        text: 'Sales Revenue per Employee (in 1000 US$)',
        textStyle: {
            size: '15px',
            fontWeight: '500',
            fontStyle: 'Normal',
            fontFamily: 'Segoe UI'
        }
    } }
    xAxis = { {
        labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    } }
    yAxis = { {
        labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    } }
    dataSource={heatmapData}>
<Inject services={[Tooltip]} />
</HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
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        [14, 26, 97, 69, 69, 3],
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        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return ( <HeatMapComponent
        margin = { {
            left: 15,
            right: 15,

```

```

        top: 15,
        bottom: 15
    } }
    titleSettings = { {
        text: 'Sales Revenue per Employee (in 1000 US$)',
        textStyle: {
            size: '15px',
            fontWeight: '500',
            fontStyle: 'Normal',
            fontFamily: 'Segoe UI'
        }
    } }
    xAxis = { {
        labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    } }
    yAxis = { {
        labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    } }
    dataSource={heatmapData}>
    <Inject services={[Tooltip]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Title

The title is used to provide a quick information about the data plotted in heatmap. The [text](#) property is used to set the title for the heatmap. The text style of the title can be customized by using the [textStyle](#) property.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
    let heatmapData = [
        [73, 39, 26, 39, 94, 0],
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        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
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        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return ( <HeatMapComponent

```

```

        titleSettings = { {
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Italic',
                fontFamily: 'Segoe UI'
            }
        } }
        xAxis = { {
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
        } }
        yAxis = { {
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
        } }
        dataSource={heatmapData}>
        <Inject services={[Tooltip, Legend]} />
        </HeatMapComponent> );
    }
    const root = ReactDOM.createRoot(document.getElementById('container'));
    root.render(<App />);
    {% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from "react-dom";
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
"@syncfusion/ej2-react-heatmap";
export function App() {
    let heatmapData : any[] = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
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        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return ( <HeatMapComponent
        titleSettings = { {
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Italic',
                fontFamily: 'Segoe UI'
            }
        } }
    >

```

```

    } }
    xAxis = { {
      labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    } }
    yAxis = { {
      labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    } }
    dataSource={heatmapData}>
    <Inject services={[Tooltip, Legend]} />
  </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Data label

The visibility of data labels can be toggled using the [showLabel](#) property. By default, the data labels will be visible.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
  var heatmapData = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
    [56, 69, 21, 86, 3, 33],
    [45, 7, 53, 81, 95, 79],
    [60, 77, 74, 68, 88, 51],
    [25, 25, 10, 12, 78, 14],
    [25, 56, 55, 58, 12, 82],
    [74, 33, 88, 23, 86, 59]
  ];
  return ( <HeatMapComponent
    titleSettings = { {
      text: 'Sales Revenue per Employee (in 1000 US$)',
      textStyle: {
        size: '15px',
        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'Segoe UI'
      }
    } }
    xAxis = { {
      labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',

```

```

    'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    } }
    yAxis = { {
        labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    } }
    cellSettings = { {
        showLabel: false
    } }
    dataSource={heatmapData}>
    <Inject services={[Tooltip]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
    let heatmapData : any[] = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return ( <HeatMapComponent
        titleSettings = { {
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        } }
        xAxis = { {
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
        } }
        yAxis = { {
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],

```



```

    } }
    cellSettings = { {
      showLabel: false
    } }
    dataSource={heatmapData}>
    <Inject services={[Tooltip]} />
  </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Customize the data label

The label displayed in the HeatMap cell can be changed using the [cellRender](#) event.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
  function cellRender(args) {
    args.displayText = args.value + '$ ';
  }
  var heatmapData = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
    [56, 69, 21, 86, 3, 33],
    [45, 7, 53, 81, 95, 79],
    [60, 77, 74, 68, 88, 51],
    [25, 25, 10, 12, 78, 14],
    [25, 56, 55, 58, 12, 82],
    [74, 33, 88, 23, 86, 59]
  ];
  return (
    <HeatMapComponent
      titleSettings={{
        text: 'Sales Revenue per Employee (in 1000 US$)',
        textStyle: {
          size: '15px',
          fontWeight: '500',
          fontStyle: 'Normal',
          fontFamily: 'Segoe UI'
        }
      }}
      xAxis={{
        labels: [
          'Nancy',
          'Andrew',
          'Janet',

```

```

        'Margaret',
        'Steven',
        'Michael',
        'Robert',
        'Laura',
        'Anne',
        'Paul',
        'Karin',
        'Mario'
    ]
  })
  yAxis={({
    labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat']
  })}
  cellRender={cellRender}
  dataSource={heatmapData}
>
  <Inject services={[Tooltip]} />
</HeatMapComponent>
);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from "react-dom";
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
"@syncfusion/ej2-react-heatmap";
export function App() {
  function cellRender(args: ICellEventArgs): void {
    args.displayText = args.value + '$ ';
  }
  let heatmapData: any[] = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
    [56, 69, 21, 86, 3, 33],
    [45, 7, 53, 81, 95, 79],
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    [25, 25, 10, 12, 78, 14],
    [25, 56, 55, 58, 12, 82],
    [74, 33, 88, 23, 86, 59]
  ];
  return (
    <HeatMapComponent
      titleSettings={{
        text: 'Sales Revenue per Employee (in 1000 US$)',
        textStyle: {
          size: '15px',

```

```

        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'Segoe UI'
    }
  })
  xAxis={{
    labels: [
      'Nancy',
      'Andrew',
      'Janet',
      'Margaret',
      'Steven',
      'Michael',
      'Robert',
      'Laura',
      'Anne',
      'Paul',
      'Karin',
      'Mario'
    ]
  }}
  yAxis={{
    labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat']
  }}
  cellRender={cellRender as any}
  dataSource={heatmapData}
>
  <Inject services={[Tooltip]} />
</HeatMapComponent>
);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Text style

The text attributes of the data label such as font-family, font-size, and color can be customized using the [textStyle](#) in the [cellSettings](#) property.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
  let heatmapData = [
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    [45, 7, 53, 81, 95, 79],

```

```

        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return ( <HeatMapComponent
        titleSettings = { {
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        } }
        xAxis = { {
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
        } }
        yAxis = { {
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
        } }
        cellSettings = { {
            textStyle: {
                fontStyle: 'Italic',
                fontFamily: 'Segoe UI'
            }
        } }
        dataSource={heatmapData}>
        <Inject services={ [Tooltip] } />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% enddraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
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        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
    ];

```

```

        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
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        titleSettings = { {
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
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                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        } }
        xAxis = { {
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
        } }
        yAxis = { {
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
        } }
        cellSettings = { {
            textStyle: {
                fontStyle: 'Italic',
                fontFamily: 'Segoe UI'
            }
        } }
        dataSource={heatmapData}>
        <Inject services={[Tooltip]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Format

The format of the data label, such as currency, decimal, percent etc. can be changed using [format](#) property.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
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        [73, 39, 26, 39, 94, 0],
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        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
    ];

```

```

        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return ( <HeatMapComponent
        titleSettings = { {
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        } }
        xAxis = { {
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
        } }
        yAxis = { {
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
        } }
        cellSettings = { {
            format: '{value} K'
        } }
        dataSource={heatmapData}>
        <Inject services={[Tooltip]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
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        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];

```

```

return ( <HeatMapComponent
  titleSettings = { {
    text: 'Sales Revenue per Employee (in 1000 US$)',
    textStyle: {
      size: '15px',
      fontWeight: '500',
      fontStyle: 'Normal',
      fontFamily: 'Segoe UI'
    }
  } }
  xAxis = { {
    labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
  } }
  yAxis = { {
    labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
  } }
  cellSettings = { {
    format: '{value} K'
  } }
  dataSource={heatmapData}>
  <Inject services={[Tooltip]} />
</HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Template

Any HTML elements can be added as a template in the data labels by using the [labelTemplate](#) property of [cellSettings](#) in the HeatMap.

The following examples show various data binding methods in the HeatMap using the [labelTemplate](#) property.

Array binding

By including `{value}` in the template content, the value from the data source for the corresponding cell can be displayed in the HeatMap cell as data label template content. Additionally, the x-axis and y-axis label values can be displayed by including `{xLabel}` and `{yLabel}` in the template content.

Table

The following example demonstrates how to add a data label template for array table binding.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
  var heatmapData = [
    [[4, 39], [3, 8], [1, 3], [1, 10], [4, 4], [2, 15]],
    [[4, 28], [5, 92], [5, 73], [3, 1], [3, 4], [4, 126]],

```

```

    [[4, 45], [5, 152], [0, 44], [4, 54], [5, 243], [2, 45]]
  ];
  return (<HeatMapComponent
    titleSettings={{
      text: 'Commercial Aviation Accidents and Fatalities by year 2015
- 2017',
      textStyle: {
        size: '15px',
        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'inherit'
      }
    }}
    xAxis={{
      labels: ['2015', '2016', '2017']
    }}
    yAxis={{
      labels: ['Jan-Feb', 'Mar-Apr', 'May-Jun', 'Jul-Aug', 'Sep-Oct',
'Nov-Dec']
    }}
    cellSettings={{
      labelTemplate:
        '<div style="width:25px;height:20px;text-align:center;padding-top:2px;background-color:#5BBB9C; border: 1px solid
#000000; border-radius:50%;font-weight:bold;">${value}</div>'
    }}
    dataSource={heatmapData}>
    <Inject services={[Tooltip, Adaptor, Legend]} />
  </HeatMapComponent>);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
  let heatmapData: any[] = [
    [[4, 39], [3, 8], [1, 3], [1, 10], [4, 4], [2, 15]],
    [[4, 28], [5, 92], [5, 73], [3, 1], [3, 4], [4, 126]],
    [[4, 45], [5, 152], [0, 44], [4, 54], [5, 243], [2, 45]]
  ];
  return (<HeatMapComponent
    titleSettings={{
      text: 'Commercial Aviation Accidents and Fatalities by year 2015
- 2017',
      textStyle: {
        size: '15px',
        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'inherit'
      }
    }}
    dataSource={heatmapData}>
    <Inject services={[Tooltip, Adaptor, Legend]} />
  </HeatMapComponent>);
}

```



```

    }
  }}
  xAxis={{
    labels: ['2015', '2016', '2017']
  }}
  yAxis={{
    labels: ['Jan-Feb', 'Mar-Apr', 'May-Jun', 'Jul-Aug', 'Sep-Oct',
'Nov-Dec']
  }}
  cellSettings={{
    labelTemplate:
      '<div style="width:25px;height:20px;text-align:center;padding-top:2px;background-color:#5BBB9C; border: 1px solid #000000; border-radius:50%;font-weight:bold;">${value}</div>'
  }}
  dataSource={heatmapData}>
  <Inject services={[Tooltip, Adaptor, Legend]} />
</HeatMapComponent>;
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% enddraw %}

```

Cell

The following example demonstrates how to add a data label template for array cell binding.

INDEX.JSX

```

{% raw %}
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import {
  HeatMapComponent,
  Inject,
  Legend,
  Tooltip,
  Adaptor,
} from '@syncfusion/ej2-react-heatmap';
export function App() {
  var heatmapData = [
    [0, 0, [4, 39]],
    [0, 1, [3, 8]],
    [0, 2, [1, 3]],
    [0, 3, [1, 10]],
    [0, 4, [4, 4]],
    [0, 5, [2, 15]],
    [1, 0, [4, 28]],
    [1, 1, [5, 92]],
    [1, 2, [5, 73]],
    [1, 3, [3, 1]],
    [1, 4, [3, 4]],
    [1, 5, [4, 126]],
    [2, 0, [4, 45]],
    [2, 1, [5, 152]],
    [2, 2, [0, 44]],
    [2, 3, [4, 54]],

```

```

        [2, 4, [5, 243]],
        [2, 5, [2, 45]]
    ];
    return (
        <HeatMapComponent
            titleSettings={{
                text: 'Commercial Aviation Accidents and Fatalities by year
2015 - 2017',
                textStyle: {
                    size: '15px',
                    fontWeight: '500',
                    fontStyle: 'Normal',
                    fontFamily: 'inherit'
                },
            }}
            xAxis={{
                labels: ['2015', '2016', '2017']
            }}
            yAxis={{
                labels: [
                    'Jan-Feb',
                    'Mar-Apr',
                    'May-Jun',
                    'Jul-Aug',
                    'Sep-Oct',
                    'Nov-Dec',
                ],
            }}
            cellSettings={{
                labelTemplate:
                    '<div style="width:25px;height:20px;text-align:center;padding-top:2px;background-color:#5BBB9C; border: 1px solid #000000; border-radius:50%;font-weight:bold;">${value}</div>'
            }}
            dataSourceSettings={{
                isJsonData: false,
                adaptorType: 'Cell'
            }}
            dataSource={heatmapData}
        >
            <Inject services={[Tooltip, Adaptor, Legend]} />
        </HeatMapComponent>
    );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {

```

```

let heatmapData: any[] = [
  [0, 0, [4, 39]],
  [0, 1, [3, 8]],
  [0, 2, [1, 3]],
  [0, 3, [1, 10]],
  [0, 4, [4, 4]],
  [0, 5, [2, 15]],
  [1, 0, [4, 28]],
  [1, 1, [5, 92]],
  [1, 2, [5, 73]],
  [1, 3, [3, 1]],
  [1, 4, [3, 4]],
  [1, 5, [4, 126]],
  [2, 0, [4, 45]],
  [2, 1, [5, 152]],
  [2, 2, [0, 44]],
  [2, 3, [4, 54]],
  [2, 4, [5, 243]],
  [2, 5, [2, 45]]
];

return (<HeatMapComponent
  titleSettings={{
    text: 'Commercial Aviation Accidents and Fatalities by year 2015
- 2017',
    textStyle: {
      size: '15px',
      fontWeight: '500',
      fontStyle: 'Normal',
      fontFamily: 'inherit'
    },
  }}
  xAxis={{
    labels: ['2015', '2016', '2017']
  }}
  yAxis={{
    labels: [
      'Jan-Feb',
      'Mar-Apr',
      'May-Jun',
      'Jul-Aug',
      'Sep-Oct',
      'Nov-Dec'
    ],
  }}
  cellSettings={{
    labelTemplate:
      '<div style="width:25px;height:20px;text-align:center;padding-top:2px;background-color:#5BBB9C; border: 1px solid #000000; border-radius:50%;font-weight:bold;">${value}</div>'
  }}
  dataSourceSettings={{
    isJsonData: false,
    adaptorType: 'Cell'
  }}
  dataSource={heatmapData}
>
  <Inject services={[Tooltip, Adaptor, Legend]} />

```

```

    </HeatMapComponent>);
  }
  const root = ReactDOM.createRoot(document.getElementById('container'));
  root.render(<App />);
  {% endraw %}

```

JSON binding

By including the desired field name in the template content, such as **`${value}`**, the value from the data source for the corresponding cell can be displayed in the HeatMap cell as data label template content.

Table

The following example demonstrates how to add a data label template for JSON table binding.

INDEX.JSX

```

{% raw %}
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import {
  HeatMapComponent,
  Inject,
  Legend,
  Tooltip,
  Adaptor,
} from '@syncfusion/ej2-react-heatmap';
export function App() {
  var heatmapData = [
    {
      Year: '2017',
      image:
        'https://ej2.syncfusion.com/react/demos/src/circular-
        gauge/images/golf-ball.png',
      'Jan-Feb': [4, 39],
      'Mar-Apr': [3, 8],
      'May-Jun': [1, 3],
      'Jul-Aug': [1, 10],
      'Sep-Oct': [4, 4],
      'Nov-Dec': [2, 15]
    },
    {
      Year: '2016',
      image:
        'https://ej2.syncfusion.com/react/demos/src/circular-
        gauge/images/basket-ball.png',
      'Jan-Feb': [4, 28],
      'Mar-Apr': [5, 92],
      'May-Jun': [5, 73],
      'Jul-Aug': [3, 1],
      'Sep-Oct': [3, 4],
      'Nov-Dec': [4, 126]
    },
    {
      Year: '2015',
      image:
        'https://ej2.syncfusion.com/react/demos/src/circular-
        gauge/images/foot-ball.png',

```

```

        'Jan-Feb': [4, 45],
        'Mar-Apr': [5, 152],
        'May-Jun': [0, 44],
        'Jul-Aug': [4, 54],
        'Sep-Oct': [5, 243],
        'Nov-Dec': [2, 45]
    }
];
return (
    <HeatMapComponent
        titleSettings={{
            text: 'Commercial Aviation Accidents and Fatalities by year
2015 - 2017',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'inherit'
            },
        }}
        xAxis={{
            labels: ['2015', '2016', '2017']
        }}
        yAxis={{
            labels: [
                'Jan-Feb',
                'Mar-Apr',
                'May-Jun',
                'Jul-Aug',
                'Sep-Oct',
                'Nov-Dec'
            ],
        }}
        cellSettings={{
            labelTemplate:
                "<div><img style='width:20px;height:20px;'
src='${image}' /> </div>"
        }}
        dataSourceSettings={{
            isJsonData: true,
            adaptorType: 'Table',
            xDataMapping: 'Year'
        }}
        paletteSettings={{
            palette: [
                { color: '#C06C84' },
                { color: '#6C5B7B' },
                { color: '#355C7D' }
            ],
            type: 'Gradient',
        }}
        dataSource={heatmapData}
    >
        <Inject services={[Tooltip, Adaptor, Legend]} />
    </HeatMapComponent>
);
}

```

```
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}
```

INDEX.TSX

```
{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
  let heatmapData: any[] = [
    {
      Year: '2017',
      image:
        'https://ej2.syncfusion.com/react/demos/src/circular-
        gauge/images/golf-ball.png',
      'Jan-Feb': [4, 39],
      'Mar-Apr': [3, 8],
      'May-Jun': [1, 3],
      'Jul-Aug': [1, 10],
      'Sep-Oct': [4, 4],
      'Nov-Dec': [2, 15]
    },
    {
      Year: '2016',
      image:
        'https://ej2.syncfusion.com/react/demos/src/circular-
        gauge/images/basket-ball.png',
      'Jan-Feb': [4, 28],
      'Mar-Apr': [5, 92],
      'May-Jun': [5, 73],
      'Jul-Aug': [3, 1],
      'Sep-Oct': [3, 4],
      'Nov-Dec': [4, 126]
    },
    {
      Year: '2015',
      image:
        'https://ej2.syncfusion.com/react/demos/src/circular-
        gauge/images/foot-ball.png',
      'Jan-Feb': [4, 45],
      'Mar-Apr': [5, 152],
      'May-Jun': [0, 44],
      'Jul-Aug': [4, 54],
      'Sep-Oct': [5, 243],
      'Nov-Dec': [2, 45]
    }
  ];
  return (<HeatMapComponent
    titleSettings={{
      text: 'Commercial Aviation Accidents and Fatalities by year 2015
- 2017',
      textStyle: {
        size: '15px',
```

```

        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'inherit'
      },
    })
    xAxis={{
      labels: ['2015', '2016', '2017']
    }}
    yAxis={{
      labels: [
        'Jan-Feb',
        'Mar-Apr',
        'May-Jun',
        'Jul-Aug',
        'Sep-Oct',
        'Nov-Dec'
      ],
    }}
    cellSettings={{
      labelTemplate:
        "<div><img style='width:20px;height:20px;' src='${image}'/>
</div>"
    }}
    dataSourceSettings={{
      isJsonData: true,
      adaptorType: 'Table',
      xDataMapping: 'Year'
    }}
    paletteSettings={{
      palette: [
        { color: '#C06C84' },
        { color: '#6C5B7B' },
        { color: '#355C7D' }
      ],
      type: 'Gradient'
    }}
    dataSource={heatmapData}
  >
    <Inject services={[Tooltip, Adaptor, Legend]} />
  </HeatMapComponent>;
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Cell

The following example demonstrates how to add a data label template for JSON cell binding.

INDEX.JSX

```

{% raw %}
import * as React from 'react';
import * as ReactDOM from 'react-dom';
import {
  HeatMapComponent,
  Inject,

```

```

    Legend,
    Tooltip,
    Adaptor,
  } from '@syncfusion/ej2-react-heatmap';
  export function App() {
    var heatmapData = [
      { Year: '2017', Months: 'Jan-Feb', Accidents: 4, Fatalities: 39 },
      { Year: '2017', Months: 'Mar-Apr', Accidents: 3, Fatalities: 8 },
      { Year: '2017', Months: 'May-Jun', Accidents: 1, Fatalities: 3 },
      { Year: '2017', Months: 'Jul-Aug', Accidents: 1, Fatalities: 10 },
      { Year: '2017', Months: 'Sep-Oct', Accidents: 4, Fatalities: 4 },
      { Year: '2017', Months: 'Nov-Dec', Accidents: 2, Fatalities: 15 },
      { Year: '2016', Months: 'Jan-Feb', Accidents: 4, Fatalities: 28 },
      { Year: '2016', Months: 'Mar-Apr', Accidents: 5, Fatalities: 92 },
      { Year: '2016', Months: 'May-Jun', Accidents: 5, Fatalities: 73 },
      { Year: '2016', Months: 'Jul-Aug', Accidents: 3, Fatalities: 1 },
      { Year: '2016', Months: 'Sep-Oct', Accidents: 3, Fatalities: 4 },
      { Year: '2016', Months: 'Nov-Dec', Accidents: 4, Fatalities: 126 },
      { Year: '2015', Months: 'Jan-Feb', Accidents: 4, Fatalities: 45 },
      { Year: '2015', Months: 'Mar-Apr', Accidents: 5, Fatalities: 152 },
      { Year: '2015', Months: 'May-Jun', Accidents: 0, Fatalities: 0 },
      { Year: '2015', Months: 'Jul-Aug', Accidents: 4, Fatalities: 54 },
      { Year: '2015', Months: 'Sep-Oct', Accidents: 5, Fatalities: 243 },
      { Year: '2015', Months: 'Nov-Dec', Accidents: 2, Fatalities: 45 }
    ];
    return (
      <HeatMapComponent
        titleSettings={{
          text: 'Commercial Aviation Accidents and Fatalities by year
2015 - 2017',
          textStyle: {
            size: '15px',
            fontWeight: '500',
            fontStyle: 'Normal',
            fontFamily: 'inherit'
          },
        }}
        xAxis={{
          labels: ['2015', '2016', '2017']
        }}
        yAxis={{
          labels: [
            'Jan-Feb',
            'Mar-Apr',
            'May-Jun',
            'Jul-Aug',
            'Sep-Oct',
            'Nov-Dec'
          ],
        }}
        cellSettings={{
          labelTemplate: '<div> Accidents - ${Accidents}</div>'
        }}
        dataSourceSettings={{
          isJsonData: true,
          adaptorType: 'Cell',
          xDataMapping: 'Year',

```



```

        yDataMapping: 'Months',
        valueMapping: 'Fatalities'
    }}
    dataSource={heatmapData}
  >
    <Inject services={[Tooltip, Adaptor, Legend]} />
  </HeatMapComponent>
);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
    let heatmapData: any[] = [
        { Year: '2017', Months: 'Jan-Feb', Accidents: 4, Fatalities: 39 },
        { Year: '2017', Months: 'Mar-Apr', Accidents: 3, Fatalities: 8 },
        { Year: '2017', Months: 'May-Jun', Accidents: 1, Fatalities: 3 },
        { Year: '2017', Months: 'Jul-Aug', Accidents: 1, Fatalities: 10 },
        { Year: '2017', Months: 'Sep-Oct', Accidents: 4, Fatalities: 4 },
        { Year: '2017', Months: 'Nov-Dec', Accidents: 2, Fatalities: 15 },
        { Year: '2016', Months: 'Jan-Feb', Accidents: 4, Fatalities: 28 },
        { Year: '2016', Months: 'Mar-Apr', Accidents: 5, Fatalities: 92 },
        { Year: '2016', Months: 'May-Jun', Accidents: 5, Fatalities: 73 },
        { Year: '2016', Months: 'Jul-Aug', Accidents: 3, Fatalities: 1 },
        { Year: '2016', Months: 'Sep-Oct', Accidents: 3, Fatalities: 4 },
        { Year: '2016', Months: 'Nov-Dec', Accidents: 4, Fatalities: 126 },
        { Year: '2015', Months: 'Jan-Feb', Accidents: 4, Fatalities: 45 },
        { Year: '2015', Months: 'Mar-Apr', Accidents: 5, Fatalities: 152 },
        { Year: '2015', Months: 'May-Jun', Accidents: 0, Fatalities: 0 },
        { Year: '2015', Months: 'Jul-Aug', Accidents: 4, Fatalities: 54 },
        { Year: '2015', Months: 'Sep-Oct', Accidents: 5, Fatalities: 243 },
        { Year: '2015', Months: 'Nov-Dec', Accidents: 2, Fatalities: 45 }
    ];
    return (<HeatMapComponent
        titleSettings={{
            text: 'Commercial Aviation Accidents and Fatalities by year 2015
- 2017',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'inherit'
            },
        }}
        xAxis={{
            labels: ['2015', '2016', '2017']
        }}
        yAxis={{

```

```

        labels: [
            'Jan-Feb',
            'Mar-Apr',
            'May-Jun',
            'Jul-Aug',
            'Sep-Oct',
            'Nov-Dec'
        ],
    },
    cellSettings: {
        labelTemplate: '<div> Accidents - ${Accidents}</div>'
    },
    dataSourceSettings: {
        isJsonData: true,
        adaptorType: 'Cell',
        xDataMapping: 'Year',
        yDataMapping: 'Months',
        valueMapping: 'Fatalities'
    },
    dataSource={heatmapData}
>
    <Inject services={[Tooltip, Adaptor, Legend]} />
</HeatMapComponent>;
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

See Also

- [To customize the appearance of tool tip](#)

Dimensions in React Heatmap chart component

Size for container

Heat map can be rendered to its container size. You can set the size through inline or CSS.

```
`javascript
```

```

<div id='container'>
<div id='element' style="width:650px; height:350px;"></div>
</div>
`

```

Size for heat map

You can set the size of heat map directly by using the [width](#) and [height](#) properties.

In pixel

You can set the size for heat map in a pixel.

INDEX.JSX

```

{% raw %}
import * as React from "react";

```

```

import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
 '@syncfusion/ej2-react-heatmap';
export function App() {
    var heatmapData = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return ( <HeatMapComponent
        width = { '650px' }
        height = { '350px' }
        titleSettings = { {
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        } }
        xAxis = { {
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
                'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
                'Mario'],
        } }
        yAxis = { {
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
        } }
        dataSource={heatmapData}>
        </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
 '@syncfusion/ej2-react-heatmap';
export function App() {
    let heatmapData : any[] = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],

```

```

        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return ( <HeatMapComponent
        width = { '650px' }
        height = { '350px' }
        titleSettings = { {
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        } }
        xAxis = { {
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
        } }
        yAxis = { {
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
        } }
        dataSource={heatmapData}>
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

In percentage

By setting value in percentage, heat map gets its dimension with respect to its container. For example, when the height is '50%', heat map rendered to half of the container height.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
var heatmapData = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],

```

```

        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    export function App() {
    return ( <HeatMapComponent
        width = {'80%'}
        height = {'90%'}
        titleSettings = { {
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        } }
        xAxis = { {
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin', 'Mario'],
        } }
        yAxis = { {
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
        } }
        cellSettings = { {
            showLabel: true,
        } }
        dataSource={heatmapData}>
    </HeatMapComponent> );
    }
    const root = ReactDOM.createRoot(document.getElementById('container'));
    root.render(<App />);
    {% enddraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
let heatmapData : any[] = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
    [56, 69, 21, 86, 3, 33],
    [45, 7, 53, 81, 95, 79],
    [60, 77, 74, 68, 88, 51],
    [25, 25, 10, 12, 78, 14],
    [25, 56, 55, 58, 12, 82],

```

```

[74, 33, 88, 23, 86, 59]
];
export function App() {
return ( <HeatMapComponent
  width = {'80%'}
  height = {'90%'}
  titleSettings = { {
    text: 'Sales Revenue per Employee (in 1000 US$)',
    textStyle: {
      size: '15px',
      fontWeight: '500',
      fontStyle: 'Normal',
      fontFamily: 'Segoe UI'
    }
  } }
  xAxis = { {
    labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin', 'Mario'],
  } }
  yAxis = { {
    labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
  } }
  cellSettings = { {
    showLabel: true,
  } }
  dataSource={heatmapData}>
</HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Tooltip in React Heatmap chart component

Tooltip is used to provide the details of the heatmap cell, and this can be displayed, while hovering the cursor over the cell or performing tap action in touch devices.

Default tooltip

You can enable the tooltip by setting the [showTooltip](#) property to **true** and injecting the **Tooltip** module into the **services**.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
  var heatmapData = [
    [0.72, 0.71, 0.71, 0.67, 0.72, 0.53, 0.53, 0.56, 0.58, 0.56],
    [2.28, 2.29, 2.09, 1.84, 1.64, 1.49, 1.49, 1.39, 1.32, 1.23],
    [2.02, 2.17, 2.30, 2.39, 2.36, 2.52, 2.62, 2.57, 2.57, 2.74],
    [3.21, 3.26, 3.45, 3.47, 3.42, 3.34, 3.14, 2.83, 2.64, 2.61],
    [3.22, 3.13, 3.04, 2.95, 2.69, 2.49, 2.27, 2.18, 2.06, 1.87],
    [3.30, 3.39, 3.40, 3.48, 3.60, 3.67, 3.73, 3.79, 3.79, 4.07],
  ];

```

```

        [5.80, 5.74, 5.64, 5.44, 5.18, 5.08, 5.07, 5.00, 5.35, 5.47],
        [6.91, 7.40, 8.13, 8.80, 9.04, 9.24, 9.43, 9.35, 9.49, 9.69]
    ];
    return ( <HeatMapComponent
        titleSettings = { {
            text: 'Crude Oil Production of Non-OPEC Countries (in Million
barrels per day)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        } }
        xAxis = { {
            labels: ['Canada', 'China', 'Egypt', 'Mexico', 'Norway',
'Russia', 'UK', 'USA']
        } }
        yAxis = { {
            labels: ['2000', '2001', '2002', '2003', '2004', '2005',
'2006', '2007', '2008', '2009', '2010'],
        } }
        cellSettings = { {
            showLabel: false,
        } }
        showTooltip = { true }
        dataSource={heatmapData}>
<Inject services={[Legend, Tooltip]} />
</HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from "react-dom";
import { HeatMapComponent, Inject, Legend, Tooltip } from "@syncfusion/ej2-react-heatmap";
export function App() {
    let heatmapData : any[] = [
        [0.72, 0.71, 0.71, 0.67, 0.72, 0.53, 0.53, 0.56, 0.58, 0.56],
        [2.28, 2.29, 2.09, 1.84, 1.64, 1.49, 1.49, 1.39, 1.32, 1.23],
        [2.02, 2.17, 2.30, 2.39, 2.36, 2.52, 2.62, 2.57, 2.57, 2.74],
        [3.21, 3.26, 3.45, 3.47, 3.42, 3.34, 3.14, 2.83, 2.64, 2.61],
        [3.22, 3.13, 3.04, 2.95, 2.69, 2.49, 2.27, 2.18, 2.06, 1.87],
        [3.30, 3.39, 3.40, 3.48, 3.60, 3.67, 3.73, 3.79, 3.79, 4.07],
        [5.80, 5.74, 5.64, 5.44, 5.18, 5.08, 5.07, 5.00, 5.35, 5.47],
        [6.91, 7.40, 8.13, 8.80, 9.04, 9.24, 9.43, 9.35, 9.49, 9.69]
    ];
    return ( <HeatMapComponent
        titleSettings = { {
            text: 'Crude Oil Production of Non-OPEC Countries (in Million
barrels per day)',

```

```

        textStyle: {
            size: '15px',
            fontWeight: '500',
            fontStyle: 'Normal',
            fontFamily: 'Segoe UI'
        }
    } }
    xAxis = { {
        labels: ['Canada', 'China', 'Egypt', 'Mexico', 'Norway',
'Russia', 'UK', 'USA']
    } }
    yAxis = { {
        labels: ['2000', '2001', '2002', '2003', '2004', '2005',
'2006', '2007', '2008', '2009', '2010'],
    } }
    cellSettings = { {
        showLabel: false,
    } }
    showTooltip = { true }
    dataSource={heatmapData}>
    <Inject services={[Legend, Tooltip]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Tooltip template

In heatmap, you can customize the tooltip using the [tooltipRender](#) client side event.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
var heatmapData = [
    [0.72, 0.71, 0.71, 0.67, 0.72, 0.53, 0.53, 0.56, 0.58, 0.56],
    [2.28, 2.29, 2.09, 1.84, 1.64, 1.49, 1.49, 1.39, 1.32, 1.23],
    [2.02, 2.17, 2.3, 2.39, 2.36, 2.52, 2.62, 2.57, 2.57, 2.74],
    [3.21, 3.26, 3.45, 3.47, 3.42, 3.34, 3.14, 2.83, 2.64, 2.61],
    [3.22, 3.13, 3.04, 2.95, 2.69, 2.49, 2.27, 2.18, 2.06, 1.87],
    [3.3, 3.39, 3.4, 3.48, 3.6, 3.67, 3.73, 3.79, 3.79, 4.07],
    [5.8, 5.74, 5.64, 5.44, 5.18, 5.08, 5.07, 5.0, 5.35, 5.47],
    [6.91, 7.4, 8.13, 8.8, 9.04, 9.24, 9.43, 9.35, 9.49, 9.69]
];
function tooltipTemplate(args) {
    args.content = [
        'In ' +
        args.yLabel +
        ', the ' +
        args.xLabel +
        ' produced ' +
        args.value +
    ]
}

```



```

        ' million barrels per day'
    ];
}
return (
    <HeatMapComponent
        titleSettings={{
            text: 'Crude Oil Production of Non-OPEC Countries (in Million
barrels per day)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        }}
        xAxis={{
            labels: ['Canada', 'China', 'Egypt', 'Mexico', 'Norway', 'Russia',
'UK', 'USA']
        }}
        yAxis={{
            labels: [
                '2000',
                '2001',
                '2002',
                '2003',
                '2004',
                '2005',
                '2006',
                '2007',
                '2008',
                '2009',
                '2010'
            ]
        }}
        cellSettings={{
            showLabel: false
        }}
        showTooltip={true}
        tooltipRender={tooltipTemplate}
        dataSource={heatmapData}
    >
        <Inject services={[Legend, Tooltip]} />
    </HeatMapComponent>
);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, ITooltipEventArgs } from
'@syncfusion/ej2-react-heatmap';

```

```

export function App() {
  let heatmapData : any[] = [
    [0.72, 0.71, 0.71, 0.67, 0.72, 0.53, 0.53, 0.56, 0.58, 0.56],
    [2.28, 2.29, 2.09, 1.84, 1.64, 1.49, 1.49, 1.39, 1.32, 1.23],
    [2.02, 2.17, 2.3, 2.39, 2.36, 2.52, 2.62, 2.57, 2.57, 2.74],
    [3.21, 3.26, 3.45, 3.47, 3.42, 3.34, 3.14, 2.83, 2.64, 2.61],
    [3.22, 3.13, 3.04, 2.95, 2.69, 2.49, 2.27, 2.18, 2.06, 1.87],
    [3.3, 3.39, 3.4, 3.48, 3.6, 3.67, 3.73, 3.79, 3.79, 4.07],
    [5.8, 5.74, 5.64, 5.44, 5.18, 5.08, 5.07, 5.0, 5.35, 5.47],
    [6.91, 7.4, 8.13, 8.8, 9.04, 9.24, 9.43, 9.35, 9.49, 9.69]
  ];
  function tooltipTemplate(args: ITooltipEventArgs): void {
    args.content = [
      'In ' +
        args.yLabel +
        ', the ' +
        args.xLabel +
        ' produced ' +
        args.value +
        ' million barrels per day'
    ];
  }
  return (
    <HeatMapComponent
      titleSettings={{
        text: 'Crude Oil Production of Non-OPEC Countries (in Million
barrels per day)',
        textStyle: {
          size: '15px',
          fontWeight: '500',
          fontStyle: 'Normal',
          fontFamily: 'Segoe UI'
        }
      }}
      xAxis={{
        labels: ['Canada', 'China', 'Egypt', 'Mexico', 'Norway', 'Russia',
'UK', 'USA']
      }}
      yAxis={{
        labels: [
          '2000',
          '2001',
          '2002',
          '2003',
          '2004',
          '2005',
          '2006',
          '2007',
          '2008',
          '2009',
          '2010'
        ]
      }}
      cellSettings={{
        showLabel: false
      }}
      showTooltip={true}
    >

```

```

        tooltipRender={tooltipTemplate as any}
        dataSource={heatmapData}
      >
        <Inject services={[Legend, Tooltip]} />
      </HeatMapComponent>
    );
  }
  const root = ReactDOM.createRoot(document.getElementById('container'));
  root.render(<App />);
  {% endraw %}

```

Customize the appearance of Tooltip

The [fill](#) and [border](#) properties are used to customize the background color and border of the Tooltip respectively. The [textStyle](#) property in the Tooltip is used to customize the font of the tooltip text.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
  var heatmapData = [
    [0.72, 0.71, 0.71, 0.67, 0.72, 0.53, 0.53, 0.56, 0.58, 0.56],
    [2.28, 2.29, 2.09, 1.84, 1.64, 1.49, 1.49, 1.39, 1.32, 1.23],
    [2.02, 2.17, 2.3, 2.39, 2.36, 2.52, 2.62, 2.57, 2.57, 2.74],
    [3.21, 3.26, 3.45, 3.47, 3.42, 3.34, 3.14, 2.83, 2.64, 2.61],
    [3.22, 3.13, 3.04, 2.95, 2.69, 2.49, 2.27, 2.18, 2.06, 1.87],
    [3.3, 3.39, 3.4, 3.48, 3.6, 3.67, 3.73, 3.79, 3.79, 4.07],
    [5.8, 5.74, 5.64, 5.44, 5.18, 5.08, 5.07, 5.0, 5.35, 5.47],
    [6.91, 7.4, 8.13, 8.8, 9.04, 9.24, 9.43, 9.35, 9.49, 9.69]
  ];
  function tooltipTemplate(args) {
    args.content = [
      'In ' +
        args.yLabel +
        ', the ' +
        args.xLabel +
        ' produced ' +
        args.value +
        ' million barrels per day'
    ];
  }
  return (
    <HeatMapComponent
      titleSettings={{
        text: 'Crude Oil Production of Non-OPEC Countries (in Million
barrels per day)',
        textStyle: {
          size: '15px',
          fontWeight: '500',
          fontStyle: 'Normal',
          fontFamily: 'Segoe UI'
        }
      }}
    />
  );
}
{% endraw %}

```

```

        xAxis={{
          labels: ['Canada', 'China', 'Egypt', 'Mexico', 'Norway', 'Russia',
'UK', 'USA']
        }}
        yAxis={{
          labels: [
            '2000',
            '2001',
            '2002',
            '2003',
            '2004',
            '2005',
            '2006',
            '2007',
            '2008',
            '2009',
            '2010'
          ]
        }}
        paletteSettings={{
          palette: [{ color: '#F0ADCE' }, { color: '#19307B' }]
        }}
        cellSettings={{
          showLabel: false
        }}
        tooltipSettings={{
          fill: '#696295',
          textStyle: {
            color: 'FFFFFF',
            size: '12px'
          },
          border: {
            width: 2,
            color: '#F0C27B'
          }
        }}
        showTooltip={true}
        tooltipRender={tooltipTemplate}
        dataSource={heatmapData}
      >
      <Inject services={[Legend, Tooltip]} />
    </HeatMapComponent>
  );
}

const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% enddraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, ITooltipEventArgs } from
'@syncfusion/ej2-react-heatmap';
export function App() {

```

```

let heatmapData : any[] = [
  [0.72, 0.71, 0.71, 0.67, 0.72, 0.53, 0.53, 0.56, 0.58, 0.56],
  [2.28, 2.29, 2.09, 1.84, 1.64, 1.49, 1.49, 1.39, 1.32, 1.23],
  [2.02, 2.17, 2.3, 2.39, 2.36, 2.52, 2.62, 2.57, 2.57, 2.74],
  [3.21, 3.26, 3.45, 3.47, 3.42, 3.34, 3.14, 2.83, 2.64, 2.61],
  [3.22, 3.13, 3.04, 2.95, 2.69, 2.49, 2.27, 2.18, 2.06, 1.87],
  [3.3, 3.39, 3.4, 3.48, 3.6, 3.67, 3.73, 3.79, 3.79, 4.07],
  [5.8, 5.74, 5.64, 5.44, 5.18, 5.08, 5.07, 5.0, 5.35, 5.47],
  [6.91, 7.4, 8.13, 8.8, 9.04, 9.24, 9.43, 9.35, 9.49, 9.69]
];
function tooltipTemplate(args: ITooltipEventArgs): void {
  args.content = [
    'In ' +
      args.yLabel +
      ', the ' +
      args.xLabel +
      ' produced ' +
      args.value +
      ' million barrels per day'
  ];
}
return (
  <HeatMapComponent
    titleSettings={{
      text: 'Crude Oil Production of Non-OPEC Countries (in Million
barrels per day)',
      textStyle: {
        size: '15px',
        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'Segoe UI'
      }
    }}
    xAxis={{
      labels: ['Canada', 'China', 'Egypt', 'Mexico', 'Norway', 'Russia',
'UK', 'USA']
    }}
    yAxis={{
      labels: [
        '2000',
        '2001',
        '2002',
        '2003',
        '2004',
        '2005',
        '2006',
        '2007',
        '2008',
        '2009',
        '2010'
      ]
    }}
    paletteSettings={{
      palette: [{ color: '#F0ADCE' }, { color: '#19307B' }]
    }}
    cellSettings={{
      showLabel: false
    }}
  >

```

```
    }}
    tooltipSettings={{
      fill: '#696295',
      textStyle: {
        color: '#FFFFFF',
        size: '12px'
      },
      border: {
        width: 2,
        color: '#F0C27B'
      }
    }}
    showTooltip={true}
    tooltipRender={tooltipTemplate as any}
    dataSource={heatmapData}
  >
  <Inject services={[Legend, Tooltip]} />
</HeatMapComponent>
);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}
```

Note: To use tooltip feature, we need to inject `Tooltip` module into the `services`.

Selection in React HeatMap chart component

In the HeatMap, the cell selection is used to select single or multiple HeatMap cells at runtime and get the selected cell details using the `cellSelected` event. You can enable the cell selection using the `allowSelection` property.

The HeatMap cells can be selected using the following interactions, as shown in the table below.

Modes of Interactions	Description
Mouse	HeatMap cells can be selected by clicking or dragging and dropping over them.
Touch	HeatMap cells can be selected by tapping or dragging and dropping over them.
Keyboard	The Ctrl key on the keyboard can be used to enable multiple cell selection with mouse and touch interaction. The Ctrl key can only be used if the <code>enableMultiSelect</code> property is set to true in order to enable multiple cell selection.

INDEX.JSX

```
{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
```

```

export function App() {
  var heatmapData = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
    [56, 69, 21, 86, 3, 33],
    [45, 7, 53, 81, 95, 79],
    [60, 77, 74, 68, 88, 51],
    [25, 25, 10, 12, 78, 14],
    [25, 56, 55, 58, 12, 82],
    [74, 33, 88, 23, 86, 59]
  ];
  return ( <HeatMapComponent
    titleSettings = { {
      text: 'Sales Revenue per Employee (in 1000 US$)',
      textStyle: {
        size: '15px',
        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'Segoe UI'
      }
    } }
    xAxis = { {
      labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    } }
    yAxis = { {
      labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    } }
    allowSelection={ true }
    dataSource={heatmapData}>
    <Inject services={[Legend,Tooltip]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, Adaptor } from
'@syncfusion/ej2-react-heatmap';
export function App() {
  let heatmapData : any[] = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],

```

```

        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return ( <HeatMapComponent
        titleSettings = { {
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        } }
        xAxis = { {
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
        } }
        yAxis = { {
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
        } }
        allowSelection={ true }
        dataSource={heatmapData}>
        <Inject services={[Legend,Tooltip]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Enable single cell selection

In the HeatMap, the [enableMultiSelect](#) property is used to allow single cell selection. When you set the `enableMultiSelect` property to **false**, only one cell is selected. By default, `enableMultiSelect` property is set to **true**.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend,Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
    var heatmapData = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
    ];

```



```

        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return ( <HeatMapComponent
        titleSettings = { {
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        } }
        xAxis = { {
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
        } }
        yAxis = { {
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
        } }
        enableMultiSelect= { false }
        allowSelection={ true }
        dataSource={heatmapData}>
        <Inject services={[Legend,Tooltip]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend,Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
    let heatmapData : any[] = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
}

```

```

return ( <HeatMapComponent
  titleSettings = { {
    text: 'Sales Revenue per Employee (in 1000 US$)',
    textStyle: {
      size: '15px',
      fontWeight: '500',
      fontStyle: 'Normal',
      fontFamily: 'Segoe UI'
    }
  } }
  xAxis = { {
    labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
  } }
  yAxis = { {
    labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
  } }
  enableMultiSelect= { false }
  allowSelection={ true }
  dataSource={heatmapData}>
  <Inject services={[Legend,Tooltip]} />
</HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Clearing cell selection

The [clearSelection](#) method can be used to clear all the selected cells. The below example illustrates the same.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip } from '@syncfusion/ej2-react-heatmap';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
export function App() {
  let heatmapInstance;
  var heatmapData = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
    [56, 69, 21, 86, 3, 33],
    [45, 7, 53, 81, 95, 79],
    [60, 77, 74, 68, 88, 51],
    [25, 25, 10, 12, 78, 14],
    [25, 56, 55, 58, 12, 82],
    [74, 33, 88, 23, 86, 59]
  ];

```

```

function onClick(args) {
    heatmapInstance.clearSelection();
}
return (<div><HeatMapComponent ref={m => heatmapInstance = m}
    titleSettings={{
        text: 'Sales Revenue per Employee (in 1000 US$)',
        textStyle: {
            size: '15px',
            fontWeight: '500',
            fontStyle: 'Normal',
            fontFamily: 'Segoe UI'
        }
    }}
    xAxis={{
        labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
            'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    }}
    yAxis={{
        labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    }}
    allowSelection={true}
    dataSource={heatmapData}>
    <Inject services={[Legend, Tooltip]} />
    </HeatMapComponent>
    <ButtonComponent id="clearSelection" onClick={onClick.bind(this)}>Clear
Selection</ButtonComponent>
    </div>);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip } from '@syncfusion/ej2-react-heatmap';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
export function App() {
    let heatmapInstance: HeatMapComponent;
    let heatmapData: any[] = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ]
}

```

```

];
function onClick(args) {
  heatmapInstance.clearSelection();
}
return (<div><HeatMapComponent ref={m => heatmapInstance = m}
  titleSettings={{
    text: 'Sales Revenue per Employee (in 1000 US$)',
    textStyle: {
      size: '15px',
      fontWeight: '500',
      fontStyle: 'Normal',
      fontFamily: 'Segoe UI'
    }
  }}
  xAxis={{
    labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
      'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
  }}
  yAxis={{
    labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
  }}
  allowSelection={true}
  dataSource={heatmapData}>
    <Inject services={[Legend, Tooltip]} />
  </HeatMapComponent>
  <ButtonComponent id="clearSelection" onClick={onClick.bind(this)}>Clear
Selection</ButtonComponent>
</div>);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

Accessibility in React HeatMap component

The HeatMap component follows commonly used accessibility guidelines and standards, such as [ADA](#), [Section 508](#), [WCAG 2.2](#) standards, and [WCAG roles](#).

The accessibility compliance for the HeatMap component is outlined below.

| Accessibility Criteria | Compatibility |

| -- | -- |

| [WCAG 2.2 Support](#) | |

| [Section 508 Support](#) | |

| [Screen Reader Support](#) | |

| [Color Contrast](#) | |

| [Mobile Device Support](#) | |

| [Accessibility Checker Validation](#) | |

| [Axe-core Accessibility Validation](#) | |

<style>

```
.post .post-content img {  
display: inline-block;  
margin: 0.5em 0;  
}
```

</style>

<div> - All features of the component meet the requirement.</div>

<div> - Some features of the component do not meet the requirement.</div>

<div> - The component does not meet the requirement.</div>

WAI-ARIA attributes

HeatMap component followed the [WAI-ARIA](#) patterns to meet the accessibility. The following ARIA attributes are used in the HeatMap component.

| Attributes | Purpose |

| --- | --- |

| **role=img** | It is specified in the legend and border of the HeatMap. This role is provided to specify the information in a visual manner. |

| **role=region** | It specifies the HeatMap areas that do not support interactive functions like cell selection. |

| **aria-label** | Provides an accessible name for the title, legend title, legend item labels, axis labels, cell labels and multilevel labels. |

Screen reading in HeatMap

HeatMap has built-in accessibility features like screen reading. Screen reading in the HeatMap component allows all users, regardless of ability or disability, to use the component. The following HeatMap elements will be read aloud with screen reading software like Narrator for Windows.

| Elements | Description |

| --- | --- |

| Title | Reads the contents of the HeatMap chart's title. |

| Axis labels | Reads the x and y axis labels of the HeatMap chart. |

- | Multilevel labels | Reads the multilevel labels in the x and y axis of the HeatMap chart. |
- | Cell labels | Reads the labels from the cells in the Heatmap chart. |
- | Legend title | Reads the contents of the legend's title as specified in HeatMap chart. |
- | Legend item label | Reads the label of a legend item in HeatMap chart. |

Ensuring accessibility

The HeatMap component's accessibility levels are ensured through an [accessibility-checker](#) and [axe-core](#) software tools during automated testing.

The accessibility compliance of the HeatMap component is shown in the following sample. Open the [sample](#) in a new window to evaluate the accessibility of the HeatMap component with accessibility tools.

See also

- [Accessibility in Syncfusion React components](#)

Events in React HeatMap chart component

This section describes the HeatMap chart event, which occurs when the required actions are performed.

cellClick

When you click on a HeatMap cell, the [cellClick](#) event is triggered. To know more about arguments of this event, refer [here](#).

INDEX.JSX

```
{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
  function cellClick(args) {
    console.log("The cell click event has been triggered!!!");
  }
  var heatmapData = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
    [56, 69, 21, 86, 3, 33],
    [45, 7, 53, 81, 95, 79],
    [60, 77, 74, 68, 88, 51],
    [25, 25, 10, 12, 78, 14],
    [25, 56, 55, 58, 12, 82],
    [74, 33, 88, 23, 86, 59]
  ];
  return (<HeatMapComponent cellClick={cellClick.bind(this)}
    titleSettings={{
      text: 'Sales Revenue per Employee (in 1000 US$)',
      textStyle: {
        size: '15px',
```

```

        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'Segoe UI'
    }
  })
  xAxis={{
    labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
      'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
  }}
  yAxis={{
    labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
  }}
  dataSource={heatmapData}>
  <Inject services={[Legend, Tooltip]} />
</HeatMapComponent>;
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, ICellClickEventArgs }
from '@syncfusion/ej2-react-heatmap';
export function App() {
  function cellClick(args: ICellClickEventArgs) {
    console.log("The cell click event has been triggered!!!");
  }
  let heatmapData: any[] = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
    [56, 69, 21, 86, 3, 33],
    [45, 7, 53, 81, 95, 79],
    [60, 77, 74, 68, 88, 51],
    [25, 25, 10, 12, 78, 14],
    [25, 56, 55, 58, 12, 82],
    [74, 33, 88, 23, 86, 59]
  ];
  return (<HeatMapComponent cellClick={cellClick.bind(this)}
    titleSettings={{
      text: 'Sales Revenue per Employee (in 1000 US$)',
      textStyle: {
        size: '15px',
        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'Segoe UI'
      }
    }}
  >);
}

```

```

        xAxis={{
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
                'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
        }}
        yAxis={{
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
        }}
        dataSource={heatmapData}>
        <Inject services={[Legend, Tooltip]} />
    </HeatMapComponent>;
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

cellDoubleClick

When you double click on a HeatMap cell, the [cellDoubleClick](#) event is triggered. To know more about arguments of this event, refer [here](#).

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from "react-dom";
import { HeatMapComponent, Inject, Legend, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
    function cellDoubleClick(args) {
        console.log("The cell double click event has been triggered!!!");
    }
    var heatmapData = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return (<HeatMapComponent cellDoubleClick={cellDoubleClick.bind(this)}
        titleSettings={{
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        }}
        xAxis={{

```



```

        labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
            'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    }}
    yAxis={{
        labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    }}
    dataSource={heatmapData}>
    <Inject services={[Legend, Tooltip]} />
</HeatMapComponent>;
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, ICellClickEventArgs }
from '@syncfusion/ej2-react-heatmap';
export function App() {
    function cellDoubleClick(args: ICellClickEventArgs) {
        console.log("The cell double click event has been triggered!!!");
    }
    let heatmapData: any[] = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return (<HeatMapComponent cellDoubleClick={cellDoubleClick.bind(this)}
        titleSettings={{
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        }}
        xAxis={{
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
                'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
        }}
        yAxis={{

```

```

        labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    }}
    dataSource={heatmapData}>
    <Inject services={[Legend, Tooltip]} />
</HeatMapComponent>);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

cellRender

The [cellRender](#) event will be triggered before each HeatMap cell is rendered. To know more about arguments of this event, refer [here](#).

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
    function cellRender(args) {
        console.log("The cell render event has been triggered!!!");
    }
    var heatmapData = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return (<HeatMapComponent cellRender={cellRender.bind(this)}
        titleSettings={{
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        }}
        xAxis={{
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
                'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
                'Mario'],
        }}
        yAxis={{
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],

```

```

    }}
    dataSource={heatmapData}>
    <Inject services={[Legend, Tooltip]} />
  </HeatMapComponent>);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, ICellEventArgs } from
'@syncfusion/ej2-react-heatmap';
export function App() {
  function cellRender(args: ICellEventArgs) {
    console.log("The cell render event has been triggered!!!");
  }
  let heatmapData: any[] = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
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    [45, 7, 53, 81, 95, 79],
    [60, 77, 74, 68, 88, 51],
    [25, 25, 10, 12, 78, 14],
    [25, 56, 55, 58, 12, 82],
    [74, 33, 88, 23, 86, 59]
  ];
  return (<HeatMapComponent cellRender={cellRender.bind(this)}
    titleSettings={{
      text: 'Sales Revenue per Employee (in 1000 US$)',
      textStyle: {
        size: '15px',
        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'Segoe UI'
      }
    }}
    xAxis={{
      labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
        'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    }}
    yAxis={{
      labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    }}
    dataSource={heatmapData}>
    <Inject services={[Legend, Tooltip]} />
  </HeatMapComponent>);
}

```

```
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}
```

cellSelected

When single or multiple cells in the HeatMap are selected, the [cellSelected](#) event is triggered. To know more about arguments of this event, refer [here](#).

INDEX.JSX

```
{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
  function cellSelected(args) {
    console.log("The cell selected event has been triggered!!!");
  }
  var heatmapData = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
    [56, 69, 21, 86, 3, 33],
    [45, 7, 53, 81, 95, 79],
    [60, 77, 74, 68, 88, 51],
    [25, 25, 10, 12, 78, 14],
    [25, 56, 55, 58, 12, 82],
    [74, 33, 88, 23, 86, 59]
  ];
  return (<HeatMapComponent cellSelected={cellSelected.bind(this)}
    titleSettings={{
      text: 'Sales Revenue per Employee (in 1000 US$)',
      textStyle: {
        size: '15px',
        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'Segoe UI'
      }
    }}
    xAxis={{
      labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
        'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    }}
    yAxis={{
      labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    }}
    allowSelection={true}
    dataSource={heatmapData}>
    <Inject services={[Legend, Tooltip]} />
  </HeatMapComponent>);
}
```

```
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}
```

INDEX.TSX

```
{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, ISelectedEventArgs } from
'@syncfusion/ej2-react-heatmap';
export function App() {
  function cellSelected(args: ISelectedEventArgs) {
    console.log("The cell selected event has been triggered!!!");
  }
  let heatmapData: any[] = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
    [56, 69, 21, 86, 3, 33],
    [45, 7, 53, 81, 95, 79],
    [60, 77, 74, 68, 88, 51],
    [25, 25, 10, 12, 78, 14],
    [25, 56, 55, 58, 12, 82],
    [74, 33, 88, 23, 86, 59]
  ];
  return (<HeatMapComponent cellSelected={cellSelected.bind(this)}
    titleSettings={{
      text: 'Sales Revenue per Employee (in 1000 US$)',
      textStyle: {
        size: '15px',
        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'Segoe UI'
      }
    }}
    xAxis={{
      labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
        'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    }}
    yAxis={{
      labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    }}
    allowSelection={true}
    dataSource={heatmapData}>
    <Inject services={[Legend, Tooltip]} />
  </HeatMapComponent>);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}
```

created

Once HeatMap has been completely rendered, the [created](#) event is triggered.

INDEX.JSX

```
{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
  function created(args) {
    console.log("The created event has been triggered!!!");
  }
  var heatmapData = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
    [56, 69, 21, 86, 3, 33],
    [45, 7, 53, 81, 95, 79],
    [60, 77, 74, 68, 88, 51],
    [25, 25, 10, 12, 78, 14],
    [25, 56, 55, 58, 12, 82],
    [74, 33, 88, 23, 86, 59]
  ];
  return (<HeatMapComponent created={created.bind(this)}
    titleSettings={{
      text: 'Sales Revenue per Employee (in 1000 US$)',
      textStyle: {
        size: '15px',
        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'Segoe UI'
      }
    }}
    xAxis={{
      labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
        'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    }}
    yAxis={{
      labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    }}
    dataSource={heatmapData}>
    <Inject services={[Legend, Tooltip]} />
  </HeatMapComponent>);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}
```

INDEX.TSX

```
{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
  function created(args: Object) {
    console.log("The created event has been triggered!!!");
  }
  let heatmapData: any[] = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
    [56, 69, 21, 86, 3, 33],
    [45, 7, 53, 81, 95, 79],
    [60, 77, 74, 68, 88, 51],
    [25, 25, 10, 12, 78, 14],
    [25, 56, 55, 58, 12, 82],
    [74, 33, 88, 23, 86, 59]
  ];
  return (<HeatMapComponent created={created.bind(this)}
    titleSettings={{
      text: 'Sales Revenue per Employee (in 1000 US$)',
      textStyle: {
        size: '15px',
        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'Segoe UI'
      }
    }}
    xAxis={{
      labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
        'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    }}
    yAxis={{
      labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    }}
    dataSource={heatmapData}>
    <Inject services={[Legend, Tooltip]} />
  </HeatMapComponent>);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}
```

legendRender

The [legendRender](#) event is triggered before the legend is rendered. To know more about arguments of this event, refer [here](#).

INDEX.JSX

```
{% raw %}
```

```

import * as React from "react";
import * as ReactDOM from "react-dom";
import { HeatMapComponent, Inject, Legend, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
  function legendRender(args) {
    console.log("The legend render event has been triggered!!!");
  }
  var heatmapData = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
    [56, 69, 21, 86, 3, 33],
    [45, 7, 53, 81, 95, 79],
    [60, 77, 74, 68, 88, 51],
    [25, 25, 10, 12, 78, 14],
    [25, 56, 55, 58, 12, 82],
    [74, 33, 88, 23, 86, 59]
  ];
  return (
    <HeatMapComponent legendRender={legendRender.bind(this)}
      titleSettings={{
        text: 'Sales Revenue per Employee (in 1000 US$)',
        textStyle: {
          size: '15px',
          fontWeight: '500',
          fontStyle: 'Normal',
          fontFamily: 'Segoe UI'
        }
      }}
      xAxis={{
        labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
          'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
          'Mario'],
      }}
      yAxis={{
        labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
      }}
      dataSource={heatmapData}>
      <Inject services={[Legend, Tooltip]} />
    </HeatMapComponent>
  );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from "react-dom";
import { HeatMapComponent, Inject, Legend, Tooltip, ILegendRenderEventArgs }
from '@syncfusion/ej2-react-heatmap';
export function App() {

```



```

function legendRender(args: ILegendRenderEventArgs) {
    console.log("The legend render event has been triggered!!!");
}
let heatmapData: any[] = [
    [73, 39, 26, 39, 94, 0],
    [93, 58, 53, 38, 26, 68],
    [99, 28, 22, 4, 66, 90],
    [14, 26, 97, 69, 69, 3],
    [7, 46, 47, 47, 88, 6],
    [41, 55, 73, 23, 3, 79],
    [56, 69, 21, 86, 3, 33],
    [45, 7, 53, 81, 95, 79],
    [60, 77, 74, 68, 88, 51],
    [25, 25, 10, 12, 78, 14],
    [25, 56, 55, 58, 12, 82],
    [74, 33, 88, 23, 86, 59]
];
return (<HeatMapComponent legendRender={legendRender.bind(this)}
    titleSettings={{
        text: 'Sales Revenue per Employee (in 1000 US$)',
        textStyle: {
            size: '15px',
            fontWeight: '500',
            fontStyle: 'Normal',
            fontFamily: 'Segoe UI'
        }
    }}
    xAxis={{
        labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
            'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    }}
    yAxis={{
        labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    }}
    dataSource={heatmapData}>
    <Inject services={[Legend, Tooltip]} />
</HeatMapComponent>);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

load

The [load](#) event is triggered before the HeatMap is rendered. To know more about arguments of this event, refer [here](#).

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
    function load(args) {

```

```

        console.log("The load event has been triggered!!!");
    }
    var heatmapData = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return (<HeatMapComponent load={load.bind(this)}
        titleSettings={{
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        }}
        xAxis={{
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
                'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
        }}
        yAxis={{
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
        }}
        dataSource={heatmapData}>
        <Inject services={[Legend, Tooltip]} />
    </HeatMapComponent>);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from "react-dom";
import { HeatMapComponent, Inject, Legend, Tooltip, ILoadedEventArgs } from
'@syncfusion/ej2-react-heatmap';
export function App() {
    function load(args: ILoadedEventArgs) {
        console.log("The load event has been triggered!!!");
    }
    let heatmapData: any[] = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],

```

```

        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return (<HeatMapComponent load={load.bind(this)}
        titleSettings={{
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        }}
        xAxis={{
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
                'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
        }}
        yAxis={{
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
        }}
        dataSource={heatmapData}>
        <Inject services={[Legend, Tooltip]} />
    </HeatMapComponent>);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

loaded

Once HeatMap is loaded, the [loaded](#) event is triggered. To know more about arguments of this event, refer [here](#).

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
    function loaded(args) {
        console.log("The loaded event has been triggered!!!");
    }
    var heatmapData = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],

```

```

        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return (<HeatMapComponent loaded={loaded.bind(this)}
        titleSettings={{
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        }}
        xAxis={{
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
                'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
        }}
        yAxis={{
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
        }}
        dataSource={heatmapData}>
        <Inject services={[Legend, Tooltip]} />
    </HeatMapComponent>);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, ILoadedEventArgs } from
'@syncfusion/ej2-react-heatmap';
export function App() {
    function loaded(args: ILoadedEventArgs) {
        console.log("The loaded event has been triggered!!!");
    }
    let heatmapData: any[] = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],

```

```

        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return (<HeatMapComponent loaded={loaded.bind(this)}
        titleSettings={{
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        }}
        xAxis={{
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
                'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
                'Mario'],
        }}
        yAxis={{
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
        }}
        dataSource={heatmapData}>
        <Inject services={[Legend, Tooltip]} />
    </HeatMapComponent>);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

resized

When the window is resized, the [resized](#) event is triggered to notify the resize of the HeatMap. To know more about arguments of this event, refer [here](#).

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from "react-dom";
import { HeatMapComponent, Inject, Legend, Tooltip } from "@syncfusion/ej2-react-heatmap";
export function App() {
    function resized(args) {
        console.log("The resized event has been triggered!!!");
    }
    var heatmapData = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
    ];

```

```

        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return (<HeatMapComponent resized={resized.bind(this)}
        titleSettings={{
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        }}
        xAxis={{
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
                'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
        }}
        yAxis={{
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
        }}
        dataSource={heatmapData}>
        <Inject services={[Legend, Tooltip]} />
    </HeatMapComponent>);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip, IResizeEventArgs } from
'@syncfusion/ej2-react-heatmap';
export function App() {
    function resized(args: IResizeEventArgs) {
        console.log("The resized event has been triggered!!!");
    }
    let heatmapData: any[] = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return (<HeatMapComponent resized={resized.bind(this)}

```

```

        titleSettings={{
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',
                fontFamily: 'Segoe UI'
            }
        }}
        xAxis={{
            labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
                'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
        }}
        yAxis={{
            labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
        }}
        dataSource={heatmapData}>
        <Inject services={[Legend, Tooltip]} />
    </HeatMapComponent>;
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

tooltipRender

The [tooltipRender](#) event is triggered before the tooltip is rendered on the HeatMap cell. To know more about arguments of this event, refer [here](#).

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import { HeatMapComponent, Inject, Legend, Tooltip } from '@syncfusion/ej2-react-heatmap';
export function App() {
    function tooltipRender(args) {
        console.log("The tooltip render event has been triggered!!!");
    }
    var heatmapData = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return (<HeatMapComponent tooltipRender={tooltipRender.bind(this)}
        titleSettings={{

```

```

        text: 'Sales Revenue per Employee (in 1000 US$)',
        textStyle: {
            size: '15px',
            fontWeight: '500',
            fontStyle: 'Normal',
            fontFamily: 'Segoe UI'
        }
    })
    xAxis={{
        labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
            'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    }}
    yAxis={{
        labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    }}
    dataSource={heatmapData}>
    <Inject services={[Legend, Tooltip]} />
</HeatMapComponent>;
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from "react-dom";
import { HeatMapComponent, Inject, Legend, Tooltip, ITooltipEventArgs } from
'@syncfusion/ej2-react-heatmap';
export function App() {
    function tooltipRender(args: ITooltipEventArgs) {
        console.log("The tooltip render event has been triggered!!!");
    }
    let heatmapData: any[] = [
        [73, 39, 26, 39, 94, 0],
        [93, 58, 53, 38, 26, 68],
        [99, 28, 22, 4, 66, 90],
        [14, 26, 97, 69, 69, 3],
        [7, 46, 47, 47, 88, 6],
        [41, 55, 73, 23, 3, 79],
        [56, 69, 21, 86, 3, 33],
        [45, 7, 53, 81, 95, 79],
        [60, 77, 74, 68, 88, 51],
        [25, 25, 10, 12, 78, 14],
        [25, 56, 55, 58, 12, 82],
        [74, 33, 88, 23, 86, 59]
    ];
    return (<HeatMapComponent tooltipRender={tooltipRender.bind(this)}
        titleSettings={{
            text: 'Sales Revenue per Employee (in 1000 US$)',
            textStyle: {
                size: '15px',
                fontWeight: '500',
                fontStyle: 'Normal',

```



```
        fontFamily: 'Segoe UI'
      }
    }}
    xAxis={{
      labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
        'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    }}
    yAxis={{
      labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    }}
    dataSource={heatmapData}>
    <Inject services={[Legend, Tooltip]} />
  </HeatMapComponent>;
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}
```

How To

Tool tip table in React Heatmap chart component

You can show a tooltip as a table using the `template` property in `tooltipSettings`.

The following steps describe how to show the table tooltip.

Step 1:

Initialize the tooltip template div as shown in the following html page.

,

```
<script id="tooltipTemplate" type="text/x-template">
```

```
<div id='templateWrap'>
```

<code>\${xValue}</code> :	<code>\${yValue}</code>	<code>\${value}</code>
---------------------------	-------------------------	------------------------

```
</div>
```

```
</script>
```

,

Step 2:

Set the element id to the `template` property in `tooltipSettings` to show the tooltip template.

INDEX.JSX

```
{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import {
  HeatMapComponent,
  Inject,
  Legend,
  Tooltip,
```

```

} from '@syncfusion/ej2-react-heatmap';
export function App() {
  var heatmapData = [
    [0.72, 0.71, 0.71, 0.67, 0.72, 0.53, 0.53, 0.56, 0.58, 0.56],
    [2.28, 2.29, 2.09, 1.84, 1.64, 1.49, 1.49, 1.39, 1.32, 1.23],
    [2.02, 2.17, 2.30, 2.39, 2.36, 2.52, 2.62, 2.57, 2.57, 2.74],
    [3.21, 3.26, 3.45, 3.47, 3.42, 3.34, 3.14, 2.83, 2.64, 2.61],
    [3.22, 3.13, 3.04, 2.95, 2.69, 2.49, 2.27, 2.18, 2.06, 1.87],
    [3.30, 3.39, 3.40, 3.48, 3.60, 3.67, 3.73, 3.79, 3.79, 4.07],
    [5.80, 5.74, 5.64, 5.44, 5.18, 5.08, 5.07, 5.00, 5.35, 5.47],
    [6.91, 7.40, 8.13, 8.80, 9.04, 9.24, 9.43, 9.35, 9.49, 9.69]
  ];
  return (
    <HeatMapComponent
      titleSettings={{
        text: 'Crude Oil Production of Non-OPEC Countries (in Million barrels
per day)',
        textStyle: {
          size: '15px',
          fontWeight: '500',
          fontStyle: 'Normal',
          fontFamily: 'Segoe UI',
        },
      }}
      xAxis={{
        labels: [
          'Canada',
          'China',
          'Egypt',
          'Mexico',
          'Norway',
          'Russia',
          'UK',
          'USA',
        ],
      }},
      yAxis={{
        labels: [
          '2000',
          '2001',
          '2002',
          '2003',
          '2004',
          '2005',
          '2006',
          '2007',
          '2008',
          '2009',
          '2010',
        ],
      }},
      cellSettings={{
        showLabel: false,
      }},
      tooltipSettings={{
        template: '#tooltipTemplate',
      }}
    >

```

```

        showTooltip={true}
        dataSource={heatmapData}
    >
        <Inject services={[Legend, Tooltip]} />
    </HeatMapComponent>
);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';
import {
    HeatMapComponent,
    Inject,
    Legend,
    Tooltip,
} from '@syncfusion/ej2-react-heatmap';
export function App() {
    let heatmapData : any[] = [
        [0.72, 0.71, 0.71, 0.67, 0.72, 0.53, 0.53, 0.56, 0.58, 0.56],
        [2.28, 2.29, 2.09, 1.84, 1.64, 1.49, 1.49, 1.39, 1.32, 1.23],
        [2.02, 2.17, 2.30, 2.39, 2.36, 2.52, 2.62, 2.57, 2.57, 2.74],
        [3.21, 3.26, 3.45, 3.47, 3.42, 3.34, 3.14, 2.83, 2.64, 2.61],
        [3.22, 3.13, 3.04, 2.95, 2.69, 2.49, 2.27, 2.18, 2.06, 1.87],
        [3.30, 3.39, 3.40, 3.48, 3.60, 3.67, 3.73, 3.79, 3.79, 4.07],
        [5.80, 5.74, 5.64, 5.44, 5.18, 5.08, 5.07, 5.00, 5.35, 5.47],
        [6.91, 7.40, 8.13, 8.80, 9.04, 9.24, 9.43, 9.35, 9.49, 9.69]
    ];
    return (
        <HeatMapComponent
            titleSettings={{
                text: 'Crude Oil Production of Non-OPEC Countries (in Million barrels
per day)',
                textStyle: {
                    size: '15px',
                    fontWeight: '500',
                    fontStyle: 'Normal',
                    fontFamily: 'Segoe UI',
                },
            }}
            xAxis={{
                labels: [
                    'Canada',
                    'China',
                    'Egypt',
                    'Mexico',
                    'Norway',
                    'Russia',
                    'UK',
                    'USA',
                ],
            }}

```

```

    }}
    yAxis={{
      labels: [
        '2000',
        '2001',
        '2002',
        '2003',
        '2004',
        '2005',
        '2006',
        '2007',
        '2008',
        '2009',
        '2010',
      ],
    },
  }}
  cellSettings={{
    showLabel: false,
  }}
  tooltipSettings={{
    template: '#tooltipTemplate',
  }}
  showTooltip={true}
  dataSource={heatmapData}
>
  <Inject services={[Legend, Tooltip]} />
</HeatMapComponent>
);
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% enddraw %}

```

Legend customization in React Heatmap chart component

You can change the legend label using the `legendRender` client-side event. You can also hide the legend label using this client-side event.

INDEX.JSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from "react-dom";
import { HeatMapComponent, Inject, Legend, ILegendRenderEventArgs } from
"@syncfusion/ej2-react-heatmap";
export function App() {
  var heatmapData = [
    [73000, 39000, 26000, 39000, 94000, 0],
    [93000, 58000, 53000, 38000, 26000, 68000],
    [99000, 28000, 22000, 4000, 66000, 9000],
    [14000, 26000, 97000, 69000, 69000, 3000],
    [7000, 46000, 47000, 47000, 88000, 6000],
    [41000, 55000, 73000, 23000, 30000, 79000],
    [56000, 69000, 21000, 86000, 3000, 33000],
    [45000, 7000, 53000, 81000, 95000, 79000],
    [60000, 77000, 74000, 68000, 88000, 51000],
    [25000, 25000, 10000, 12000, 78000, 14000],
  ];

```

```

        [25000, 56000, 55000, 58000, 12000, 82000],
        [74000, 33000, 88000, 23000, 86000, 59000]];
function legendRender(args) {
    if(args.text=='25,000' || args.text=='50,000' || args.text=='99,000') {
        args.text = args.text.replace(/,//, "");
        args.text = `${parseInt(args.text/1000)}` + "k " + "$";
    } else {
        args.cancel=true;
    }
};
return ( <HeatMapComponent
    titleSettings = { {
    text: 'Sales Revenue per Employee (in 1000 US$)',
    textStyle: {
        size: '15px',
        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'Segoe UI'
    }
    } }
    xAxis = { {
        labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
            'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    } }
    yAxis = { {
        labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    } }
    cellSettings = { {
        showLabel: false
    } }
    paletteSettings = { {
        palette: [
            { value: 0, color: '#C2E7EC' },
            { value: 25000, color: '#AEDFE6' },
            { value: 50000, color: '#9AD7E0' },
            { value: 75000, color: '#72C7D4' },
            { value: 99000, color: '#5EBFCE' },
        ],
        type: 'Gradient'
    } }
    legendRender={legendRender}
    dataSource={heatmapData}>
    <Inject services={[Legend]} />
    </HeatMapComponent> );
}
const root = ReactDOM.createRoot(document.getElementById('container'));
root.render(<App />);
{% endraw %}

```

INDEX.TSX

```

{% raw %}
import * as React from "react";
import * as ReactDOM from 'react-dom';

```

```

import { HeatMapComponent, Inject, Legend, ILegendRenderEventArgs } from
'@syncfusion/ej2-react-heatmap';
export function App() {
  let heatmapData : any[] = [
    [73000, 39000, 26000, 39000, 94000, 0],
    [93000, 58000, 53000, 38000, 26000, 68000],
    [99000, 28000, 22000, 4000, 66000, 9000],
    [14000, 26000, 97000, 69000, 69000, 3000],
    [7000, 46000, 47000, 47000, 88000, 6000],
    [41000, 55000, 73000, 23000, 30000, 79000],
    [56000, 69000, 21000, 86000, 3000, 33000],
    [45000, 7000, 53000, 81000, 95000, 79000],
    [60000, 77000, 74000, 68000, 88000, 51000],
    [25000, 25000, 10000, 12000, 78000, 14000],
    [25000, 56000, 55000, 58000, 12000, 82000],
    [74000, 33000, 88000, 23000, 86000, 59000]];
  function legendRender(args) {
    if(args.text=='25,000' || args.text=='50,000' || args.text=='99,000') {
      args.text = args.text.replace(/,/ , "");
      args.text = ` ${parseInt(args.text/1000)} ` + "k "+"$";
    } else {
      args.cancel=true;
    }
  };
  return ( <HeatMapComponent
    titleSettings = { {
      text: 'Sales Revenue per Employee (in 1000 US$)',
      textStyle: {
        size: '15px',
        fontWeight: '500',
        fontStyle: 'Normal',
        fontFamily: 'Segoe UI'
      }
    } }
    xAxis = { {
      labels: ['Nancy', 'Andrew', 'Janet', 'Margaret', 'Steven',
        'Michael', 'Robert', 'Laura', 'Anne', 'Paul', 'Karin',
'Mario'],
    } }
    yAxis = { {
      labels: ['Mon', 'Tues', 'Wed', 'Thurs', 'Fri', 'Sat'],
    } }
    cellSettings = { {
      showLabel: false
    } }
    paletteSettings = { {
      palette: [
        { value: 0, color: '#C2E7EC' },
        { value: 25000, color: '#AEDFE6' },
        { value: 50000, color: '#9AD7E0' },
        { value: 75000, color: '#72C7D4' },
        { value: 99000, color: '#5EBFCE' },
      ],
      type: 'Gradient'
    } }
    legendRender={legendRender}
    dataSource={heatmapData}>

```

```

    <Inject services={[Legend]} />
    </HeatMapComponent> );
  }
  const root = ReactDOM.createRoot(document.getElementById('container'));
  root.render(<App />);
  {% endraw %}

```

Ej1 api migration in React Heatmap chart component

This article describes the API migration process of heat map component from Essential JS 1 to Essential JS 2.

Members

{% raw %}

<!-- markdownlint-disable MD033 -->

| Behavior | API in Essential JS 1 | API in Essential JS 2 |

| --- | --- | --- |

| Specifies the width of the heat map | **Property:** *width*
`<EJ.HeatMap id="HeatMap" width="810px"></EJ.HeatMap></code>` | **Property:** *width*
`<HeatMapComponent id='heatmap-container' width='{300px}'></HeatMapComponent></code>` |

| Specifies the height of the heat map | **Property:** *height*
`<EJ.HeatMap id="HeatMap" height="810px"></EJ.HeatMap></code>` | **Property:** *height*
`<HeatMapComponent id='heatmap-container' height='{300px}'></HeatMapComponent></code>` |

| Enables or disables tooltip of heat map | **Property:** *showtooltip*
`<EJ.HeatMap id="HeatMap" showTooltip="true"></EJ.HeatMap></code>` | **Property:** *showTooltip*
`<HeatMapComponent id='heatmap-container' showTooltip = { true }></HeatMapComponent></code>` |

| Defines the tooltip that should be shown when the mouse hovers over cells. | **Property:** *toolTipSettings.templateId*
`<EJ.HeatMap id="HeatMap" toolTipSettings={toolTipSettings}></EJ.HeatMap>

<code>toolTipSettings = {templateId:"mouseovertoolTipId"}</code>` | **Property:** *tooltipRender*
`<HeatMapComponent id='heatmap-container' tooltipRender={tooltipTemplate}></HeatMapComponent>

<code>private tooltipTemplate(args: ITooltipEventArgs): void { };</code>` |

| Specifies the source data of the heat map. | **Property:** *itemsSource*
`<EJ.HeatMap id="HeatMap" itemsSource={itemsSource}></EJ.HeatMap>

<code>itemsSource = []</code>` | **Property:** *dataSource*
`<HeatMapComponent id='heatmap-container' dataSource={dataSource}></HeatMapComponent>

<code>dataSource = []</code>` |

| Specifies whether the cell content can be visible or not. | **Property:** *heatmapCell.showContent*
`<EJ.HeatMap id="HeatMap" heatmapCell={heatmapCell}></EJ.HeatMap>

<code>heatmapCell = { showContent:`

"Hidden" }</code>| **Property:** *cellSettings.showLabel*

<code><HeatMapComponent
id='heatmap-container' cellSettings={cellSettings}>
</HeatMapComponent>

<code>cellSettings = {showLabel: false}</code>|

| Specifies the color of the heat map column data. | **Property:**
colorMappingCollection.color

<code><EJ.HeatMap id="HeatMap"
colorMappingCollection="colorMappingCollection">
</EJ.HeatMap>

<code>colorMappingCollection = [{ color: "#8ec8f8" }];</code>| **Property:**
paletteSettings.palette.color

<code><HeatMapComponent id='heatmap-container'
paletteSettings={paletteSettings}>
</HeatMapComponent>

<code>paletteSettings =
{palette: [{ color: '#C06C84'},]}</code>|

| Specifies the color values of the heat map column data. | **Property:**
colorMappingCollection.value

<code><EJ.HeatMap id="HeatMap"
colorMappingCollection="colorMappingCollection">
</EJ.HeatMap>

<code>colorMappingCollection = [{ value: 50 }];</code>| **Property:**
paletteSettings.palette.value

<code><HeatMapComponent id='heatmap-container'
paletteSettings={paletteSettings}>
</HeatMapComponent>

<code>paletteSettings =
{palette: [{ value: 50},]}</code>|

| Specifies the label text of the heat map color. | **Property:**
colorMappingCollection.label.text

<code><EJ.HeatMap id="HeatMap"
colorMappingCollection="colorMappingCollection">
</EJ.HeatMap>

<code>colorMappingCollection = [{ label:{ text: "Moderate" } }];</code>| **Property:**
paletteSettings.palette.label

<code><HeatMapComponent id='heatmap-container'
paletteSettings={paletteSettings}>
</HeatMapComponent>

<code>paletteSettings =
{palette: [{ label:'Low' }, { label:'Moderate' }]}</code>|

| Specifies the style of the heat map color label. | **Property:** *colorMappingCollection.label.bold* **Property:**
colorMappingCollection.label.italic

<code><EJ.HeatMap id="HeatMap"
colorMappingCollection="colorMappingCollection">
</EJ.HeatMap>

<code>colorMappingCollection = [{ label:{ bold: true } }];
colorMappingCollection = [{ label:{
italic: true } }];</code>| **Property:**
legendSettings.textStyle.fontStyle

<code><HeatMapComponent id='heatmap-container'
legendSettings={legendSettings}>
</HeatMapComponent>

<code>legendSettings =
{textStyle: { fontStyle:'bold' } }</code>|

| Specifies the font size of the heat map label. | **Property:**
colorMappingCollection.label.fontSize

<code><EJ.HeatMap id="HeatMap"
colorMappingCollection="colorMappingCollection">
</EJ.HeatMap>

<code>colorMappingCollection = [{ label:{ fontSize: 18 } }];</code>| **Property:**
legendSettings.textStyle.size

<code><HeatMapComponent id='heatmap-container'
legendSettings={legendSettings}>
</HeatMapComponent>

<code>legendSettings =
{textStyle: { size: 18 } }</code>|

| Specifies the font family of the heat map label. | **Property:**
colorMappingCollection.label.fontFamily

<code><EJ.HeatMap id="HeatMap"
colorMappingCollection="colorMappingCollection">
</EJ.HeatMap>

<code>colorMappingCollection = [{ label:{ fontFamily: "Arial" } }];</code>| **Property:**


```
legendSettings.textStyle.fontFamily<br/><br/><code><HeatMapComponent id='heatmap-container'
legendSettings={legendSettings}><br/></HeatMapComponent><br> <br><code>legendSettings =
{textStyle: { fontFamily: 'Arial' }}</code>|
```

| Specifies the font color of the heat map label. | **Property:**

```
colorMappingCollection.label.fontColor<br/><br/><code><EJ.HeatMap id="HeatMap"
colorMappingCollection="colorMappingCollection"><br/></EJ.HeatMap><br>
<br><code>colorMappingCollection = [ { label:{ fontColor: "red" } } ]</code>| Property:
```

```
legendSettings.textStyle.fontFamily<br/><br/><code><HeatMapComponent id='heatmap-container'
legendSettings={legendSettings}><br/></HeatMapComponent><br> <br><code>legendSettings =
{textStyle: { color: 'red' }}</code>|
```

| Specifies the mapping name of the column. | **Property:**

```
itemsMapping.column.propertyName<br/><br/><code><EJ.HeatMap
itemsMapping={itemsMapping}><br/></EJ.HeatMap><br> <br><code>itemsMapping = {column: {
"propertyName": "ProductName" }}</code>| Property:
```

```
dataSource.yDataMapping<br/><br/><code><HeatMapComponent id='heatmap-container'
dataSource={dataSource}><br/></HeatMapComponent><br> <br><code>dataSource = {data:
heatmapData,yDataMapping: 'columnid'}</code>|
```

| Specifies the mapping name of the row. | **Property:**

```
itemsMapping.row.propertyName<br/><br/><code><EJ.HeatMap
itemsMapping={itemsMapping}><br/></EJ.HeatMap><br> <br><code>itemsMapping = {row: {
"displayname": "Product Name" }}</code>| Property:
```

```
dataSource.xDataMapping<br/><br/><code><HeatMapComponent id='heatmap-container'
dataSource={dataSource}><br/></HeatMapComponent><br> <br><code>dataSource = {data:
heatmapData,xDataMapping: 'rowid'}</code>
```

| Specifies the mapping name of the row. | **Property:**

```
itemsMapping.value.displayName<br/><br/><code><EJ.HeatMap
itemsMapping={itemsMapping}><br/></EJ.HeatMap><br> <br><code>itemsMapping = {value: {
"displayname": "Product Name" }}</code>| Property:
dataSource.valueMapping<br/><br/><code><HeatMapComponent id='heatmap-container'
dataSource={dataSource}><br/></HeatMapComponent><br> <br><code>dataSource = {data:
heatmapData,valueMapping: 'value'}</code>|
```

Events

```
<!-- markdownlint-disable MD033 -->
```

| Behavior | API in Essential JS 1 | API in Essential JS 2 |

| --- | --- | --- |

| Triggered when the cell get clicked. | **Property:** *cellSelected*

<code><EJ.HeatMap
actionComplete="actionComplete">
</EJ.HeatMap>

<code>actionComplete =
function(args) {}</code>| **Property:** *cellClick*

<code><HeatMapComponent id='heatmap-
container' cellClick={this.cellClick.bind(this)}>
</HeatMapComponent>

<code>public
cellClick(args: ICellClickEventArgs): void {}</code>|

```
{% endraw %}
```

Image Editor

Getting Started

This section explains how to create and configure a simple [React Image Editor component](#)[Link to the Video](#).

To get start quickly with Image Editor Component using React, you can check on this video:

Dependencies

The list of dependencies required to use the Image Editor component in your application is given below:

```
`javascript
|-- @syncfusion/ej2-react-image-editor
|-- @syncfusion/ej2-react-base
|-- @syncfusion/ej2-base
|-- @syncfusion/ej2-image-editor
|-- @syncfusion/ej2-inputs
|-- @syncfusion/ej2-buttons
|-- @syncfusion/ej2-navigations
|-- @syncfusion/ej2-popups
|-- @syncfusion/ej2-splitbuttons
`,`
```

Installation and Configuration

You can use [Create-react-app](#) to setup the applications. To install `create-react-app` run the following command.

```
`bash
npm install -g create-react-app
`,`
```

To set-up a React application in TypeScript environment, run the following command.

```
`bash
npx create-react-app my-app --template typescript
cd my-app
npm start
`,`
```

To set-up a React application in JavaScript environment, run the following command.

```
`bash
npx create-react-app my-app
cd my-app
```

```
npm start
```

```
,
```

Adding Syncfusion packages

All the available Essential JS 2 packages are published in [npmjs.com](https://www.npmjs.com) public registry.

To install Image Editor component, use the following command.

```
`bash
```

```
npm install @syncfusion/ej2-react-image-editor --save
```

```
,
```

Adding CSS Reference

Import the Image Editor component's required CSS references as follows in `src/App.css`.

```
`css
```

```
@import "../node_modules/@syncfusion/ej2-base/styles/material.css";
```

```
@import "../node_modules/@syncfusion/ej2-buttons/styles/material.css";
```

```
@import "../node_modules/@syncfusion/ej2-popups/styles/material.css";
```

```
@import "../node_modules/@syncfusion/ej2-splitbuttons/styles/material.css";
```

```
@import "../node_modules/@syncfusion/ej2-inputs/styles/material.css";
```

```
@import "../node_modules/@syncfusion/ej2-navigations/styles/material.css";
```

```
@import "../node_modules/@syncfusion/ej2-image-editor/styles/material.css";
```

```
,
```

Adding Image Editor component to the Application

To include the Image Editor component in your application import the `ImageEditorComponent` from `ej2-react-image-editor` package in `App.tsx`.

Add the Image Editor component in application as shown in below code example.

```
`ts
```

```
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
```

```
import * as ReactDOM from 'react-dom';
```

```
import * as React from 'react';
```

```
import './App.css';
```

```
function App() {
```

```
  return (
```

```
    <div id="container" style={{
```

```
      width:"550px",
```

```
      height:"350px"
```

```
    }}>
```

```
<ImageEditorComponent />
</div>
);
}
```

```
export default App;
```

```
,
```

[Run the application](#)

Run the application in the browser using the following command:

```
,
```

```
npm start
```

```
,
```

The following example shows a basic Image Editor component.

APP.JSX

```
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import * as React from 'react';
import * as ReactDOM from "react-dom";
export default class App extends React.Component {
  render() {
    return (<div id="wrapperDiv">
      <ImageEditorComponent />
    </div>);
  }
}
ReactDOM.render(<App />, document.getElementById('image-editor'));
```

APP.TSX

```
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import * as React from 'react';
import * as ReactDOM from "react-dom";
function App() {
  return (
    <div id="wrapperDiv">
      <ImageEditorComponent/>
    </div>
  );
}
export default App;
ReactDOM.render(<App />, document.getElementById('image-editor'));
```

INDEX.HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Image Editor</title>
  <meta charset="utf-8" />
```

```
<meta name="viewport" content="width=device-width, initial-scale=1.0" />
<meta name="description" content="Essential JS 2 for React Components" />
<meta name="author" content="Syncfusion" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
base/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
buttons/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
splitbuttons/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
popups/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
inputs/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
navigations/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-
editor/styles/material.css" rel="stylesheet" />
<link href="index.css" rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></scr
ipt>
<script src="systemjs.config.js"></script>
</head>
<body>
    <div id='image-editor'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>
```

You can also explore our [React Image Editor example](#) that shows how to render the Image Editor in React.

End User Capabilities in the Image Editor component

The following operations are available for end-users and the same is explained briefly in these sections.

Open an image

To open an image in the image editor, do the following steps.

- Click the Open icon from the left side of the toolbar.
- The file explorer lists only JPEG, PNG, JPG format files.
- Select the image from the list of the images from the file explorer window.



Zooming

Image zooming can be performed in the following ways.

- Using toolbar
- Using pinch zoom in touch enabled devices
- Using mouse wheel
- Using keyboard

Using toolbar

To zoom in or out the image in the image editor, do the following steps.

- The Zoom In/ Out option only enabled after opening the image.

Using pinch

To zoom in or out the image in the image editor, do the following steps.

- Touch with two fingers to perform zooming.
- Zoom in and out controlled by touch gestures.

Using Mouse wheel

To zoom in or out the image in the image editor, do the following steps.

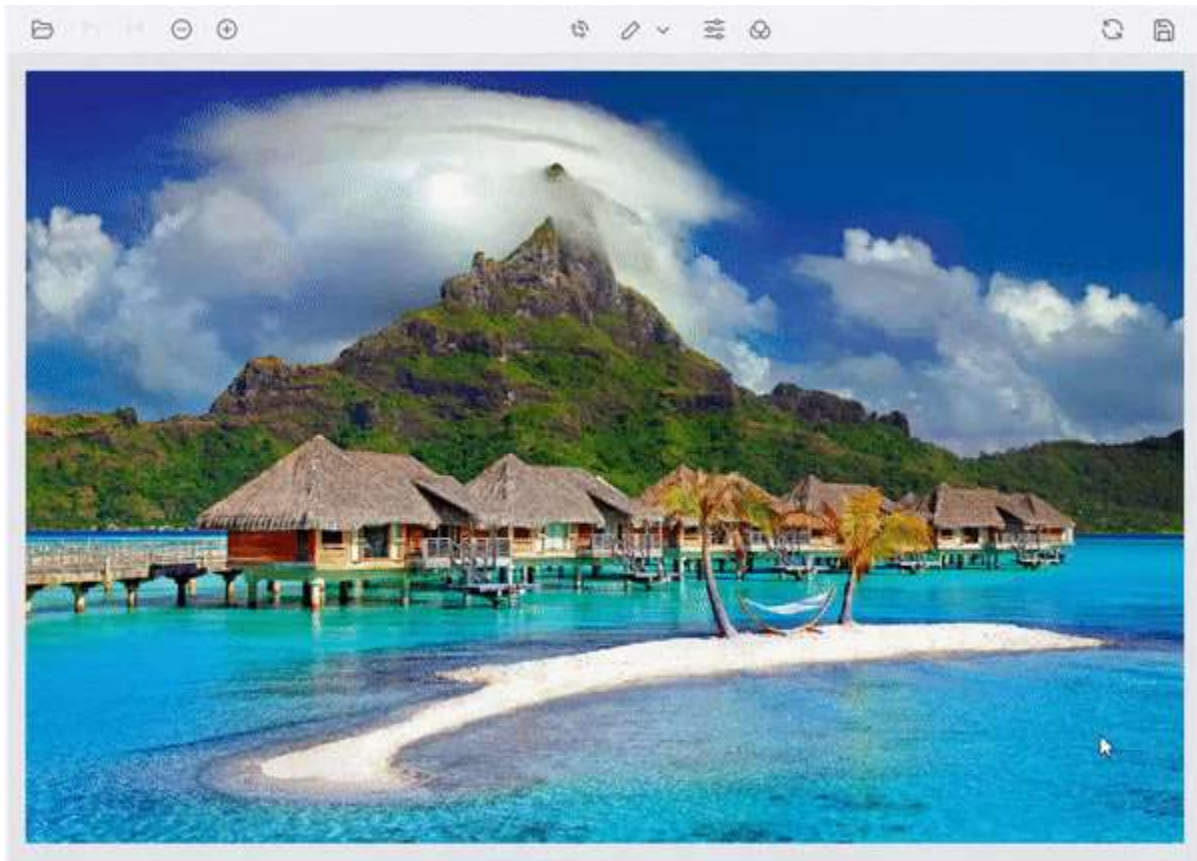
- Press the ctrl key and scroll the mouse wheel to perform zooming.

- The zoom in and out controlled by the mouse wheel.

Using keyboard

To zoom in or out the image in the image editor, do the following steps.

- Press the ctrl key with '+' button from the keyboard to zoom in an image.
- Press the ctrl key with '-' button from the keyboard to zoom out an image.



Panning

To pan an image in the image editor, do the following steps.

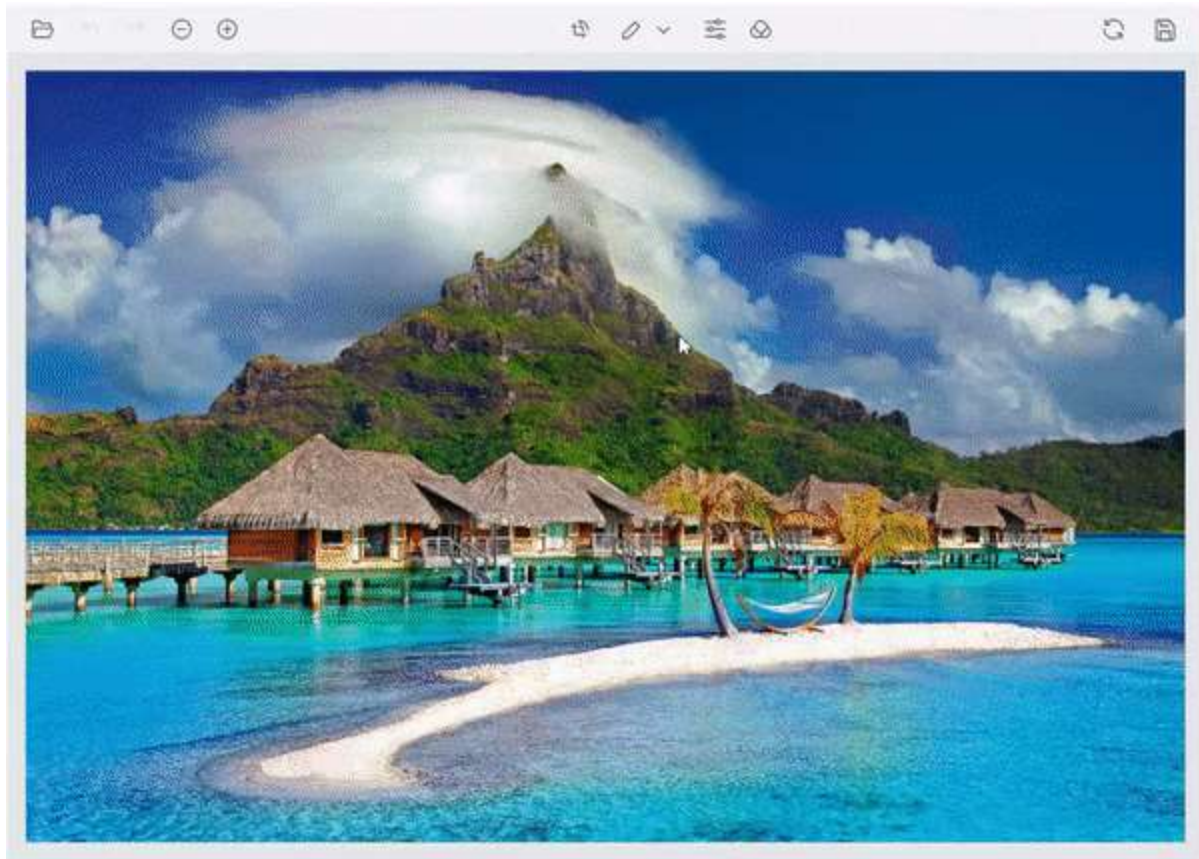
- Click on the image and do dragging to move or pan the image.
- Panning option will be enabled in the following two cases.
- If the selection is applied for cropping an image.
- If the image size exceeds the canvas size while zooming an image.



Cropping and image transformation

To crop an image in the image editor, do the following steps.

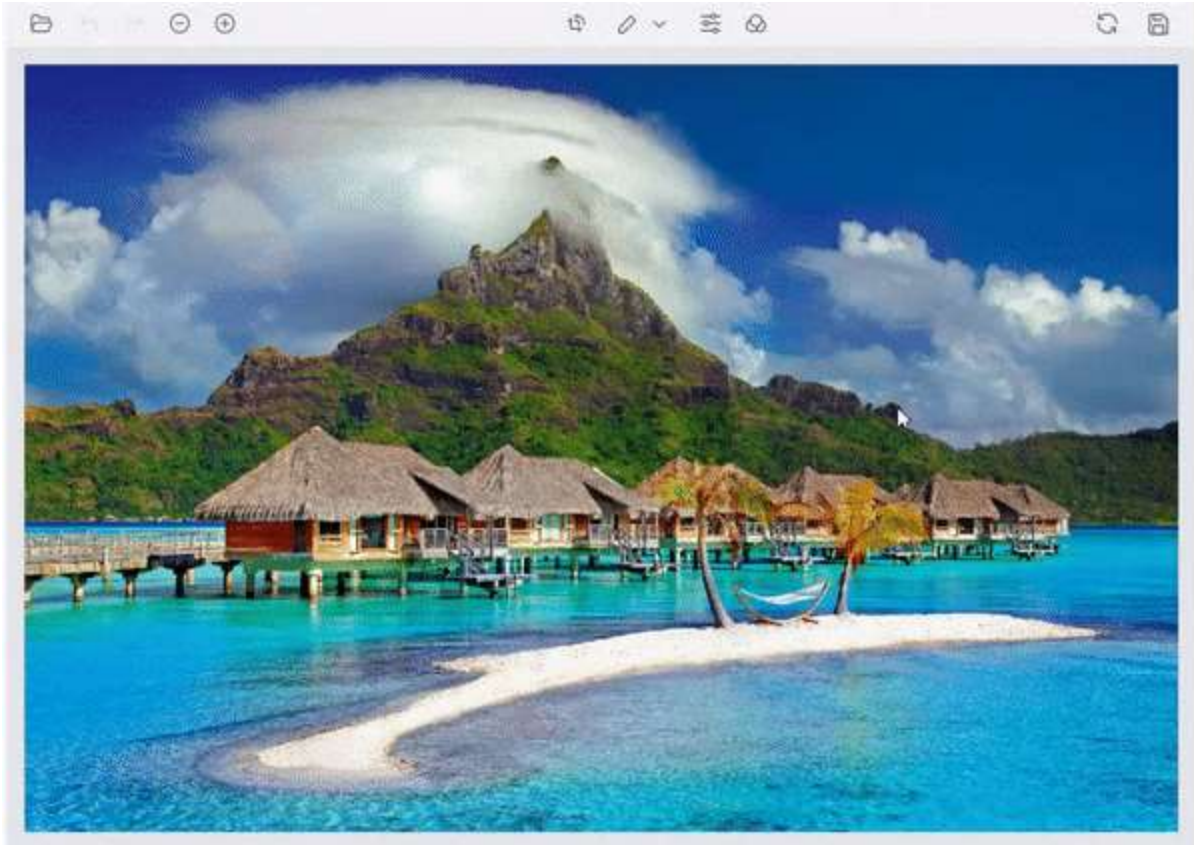
- Cropping can be performed based on the selection in an image editor.
- To perform selection, click the crop button in the toolbar which opens the contextual toolbar that shows crop selection options, rotate options, and flip options.
- Click the crop selection button and select the type of selection such as custom, circle, square, and ratio selection from the popup.
- Once selection is completed, do panning to move the image to get the cropped region.
- Utilize the rotate or flip buttons to execute the image transformation, including any inserted annotations.
- Once the cropping region is finalized in the image click the tick icon at the top right of the toolbar to crop the image.



Annotations

To add annotations to an image in the image editor, do the following steps.

- To add annotation, click the annotation button in the toolbar and select the type of annotations such as Line, Rectangle, Ellipse, Path, Arrow, Text, or Freehand drawing to be inserted to the image editor.
- Once the annotation is added to the image, that can be repositioned by clicking and dragging the annotations using mouse as well as resized by clicking and resizing the selection circle to be placed around the annotations.
- To rotate annotations, you can simply grab the circle located at the bottom of the annotation. The rotation can be applicable to all the annotations except text annotation.
- Customize the annotations by changing their color, stroke width, font family, and font size through the contextual toolbar. The contextual toolbar will be enabled whenever the annotations are selected.
- When annotations are selected in the Image Editor, the quick access toolbar becomes active, providing convenient access to various actions such as duplicating, deleting, or editing text associated with the selected annotation. This toolbar enables users to perform these common operations quickly and efficiently, streamlining their workflow and enhancing the overall editing experience.



Filtering and fine-tune

To perform fine-tuning on an image in the image editor, do the following steps.

- Click the fine-tune button which displays the list of fine-tuning available in the image editor.
- Click one of the fine-tune options from the list of options which shows a slider to adjust the corresponding filter.
- Click on the canvas or tick icon at the right corner of the toolbar in the image editor to apply the modifications.

To apply filters on an image in the image editor, do the following steps.

- Click the filter button which displays the list of filters available in the image editor.
- Click the filter from list of options to apply the corresponding filter to an image.
- Click on the canvas or tick icon at the right corner of the toolbar in the image editor to apply the modifications.

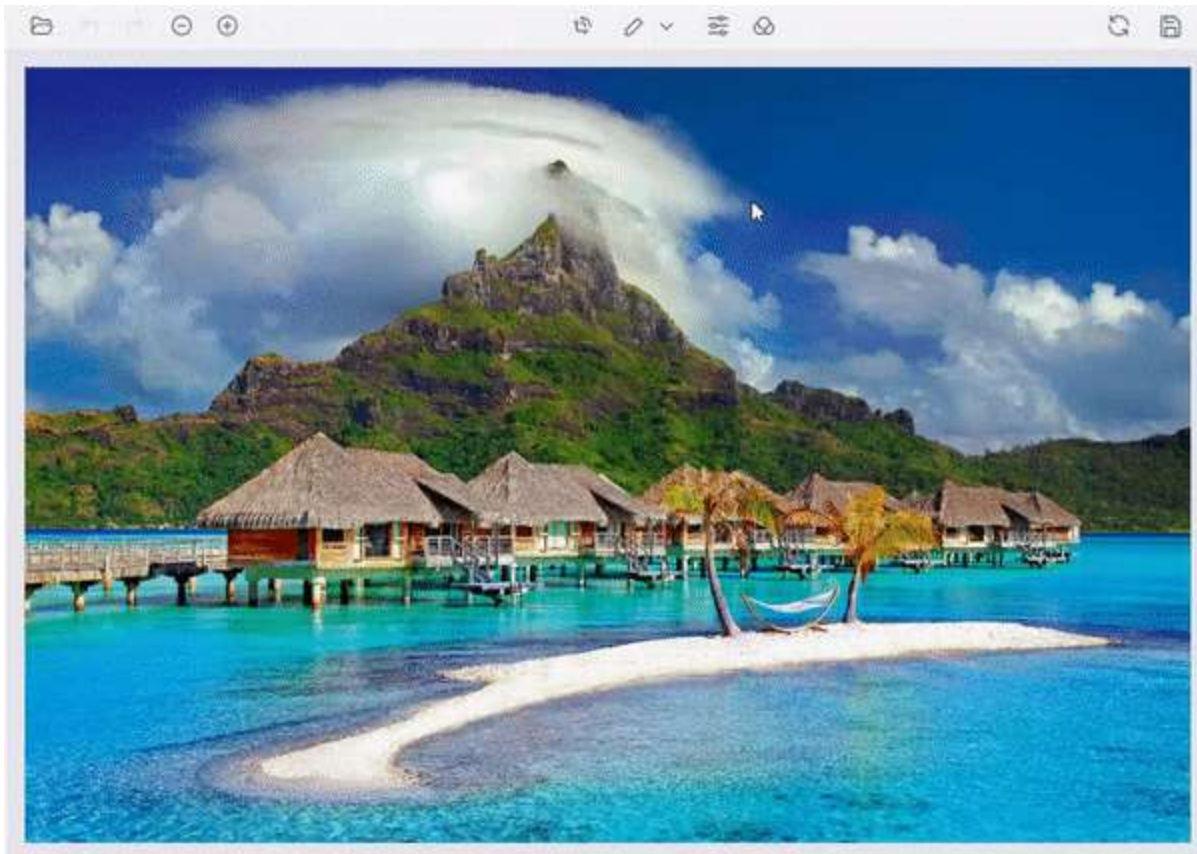
The Filters and Fine-tunes feature are not accessible within Safari due to compatibility limitations.



Undo and redo the operations

To undo and redo the actions performed in an image editor, do the following steps.

- The undo button will be enabled once the action is performed in an image editor.
- The redo button will be enabled once the undo action is performed in an image editor.
- Click the undo or redo button at the left side of the toolbar to perform undo and redo operation.
- Ctrl + Z and Ctrl + Y facilitates this process by allowing users to undo and redo actions, respectively.



Reset an image

To revert all the changes done in an image editor, do the following steps.

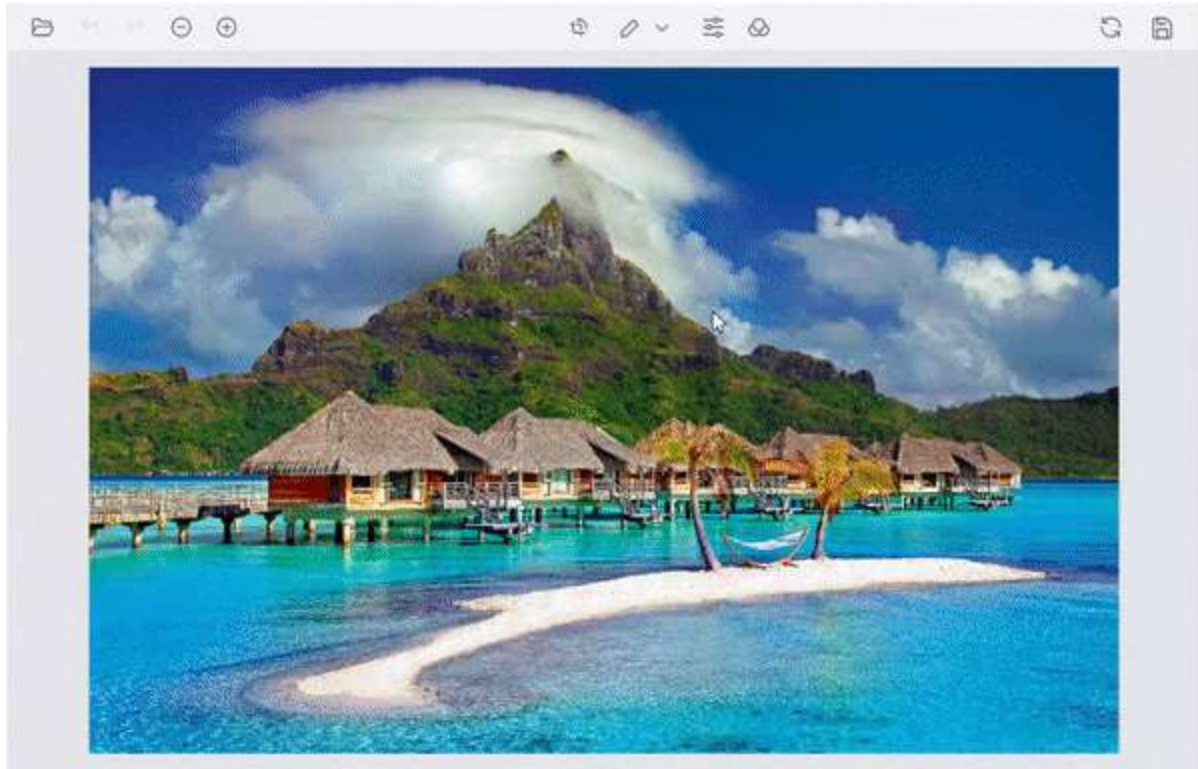
- Click the reset button which is located on the right side of the toolbar.
- This will revert all the changes performed in the image editor.



Export an image

To save the modified image in an image editor, do the following steps.

- Click the save button which is located on the right side of the toolbar.
- Ctrl + S facilitates this process by providing users with the ability to save the image.
- Select the type of file to be saved from the popup to save with current modification done in an image.



Open and save in the React Image Editor component

To import an image into the canvas, it must first be converted into a blob object. The Uploader component can be used to facilitate the process of uploading an image from the user interface. Once the image has been uploaded, it can then be converted into a blob and drawn onto the canvas.

To save an edited image in the Image Editor component, use the `toBlob` method to convert it to a blob object. This will save the image with any annotations or filters that have been applied during the editing process. The saved image can be stored as raw image data or as an image file.

Open

The `open` method in the Image Editor component offers the capability to open an image by providing it in different formats. This method accepts various types of arguments, such as a base64-encoded string, raw image data, or a hosted/online URL. You can pass either the file name or the actual image data as an argument to the `open` method, and it will load the specified image into the image editor component. This flexibility allows you to work with images from different sources and formats, making it easier to integrate and manipulate images within the Image Editor component.

APP.JSX

```
{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
export default class App extends React.Component {
  imgObj;
  imageEditorCreated() {
    if (Browser.isDevice) {
      this.imgObj.open('flower.png');
    }
  }
}
```

```

    }
    else {
      this.imgObj.open('bridge.png');
    }
  }
  render() {
    return (<div className='e-img-editor-sample'>
      <ImageEditorComponent ref={ (img) => { this.imgObj = img; }}
created={this.imageEditorCreated.bind(this)} toolbar = {[[]]}>
        </ImageEditorComponent>
      </div>);
  }
}
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

APP.TSX

```

{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
function App() {
  let imgObj: ImageEditorComponent;
  function imageEditorCreated(): void {
    if (Browser.isDevice) {
      imgObj.open('flower.png');
    } else {
      imgObj.open('bridge.png');
    }
  }
  return (
    <div className='e-img-editor-sample'>
      <ImageEditorComponent ref={ (img) => { imgObj = img }}
created={imageEditorCreated} toolbar = {[[]]}>
        </ImageEditorComponent>
      </div>
    );
}
export default App;
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Image Editor</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
base/styles/material.css" rel="stylesheet" />

```



```
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
buttons/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
splitbuttons/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
popups/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
inputs/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
navigations/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-
editor/styles/material.css" rel="stylesheet" />
<link href="index.css" rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></scr
ipt>
<script src="systemjs.config.js"></script>
</head>
<body>
  <div id='image-editor'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>
```

Supported image formats

The Image Editor component supports three common image formats: PNG, JPEG, and SVG. These formats allow you to work with a wide range of image files within the Image Editor.

When it comes to saving the edited image, the default file type is set as PNG. This means that when you save the edited image without specifying a different file type, it will be saved as a PNG file. However, it's important to note that the Image Editor typically provides options or methods to specify a different file type if desired. This allows you to save the edited image in formats other than the default PNG, such as JPEG or SVG, based on your specific requirements or preferences.

Save as image

The [export](#) method in the Image Editor component enables you to save the modified image as a file on the local device. This method accepts two parameters: the file name and the file type.

By providing a file name, you can specify the desired name for the saved image file. Additionally, you can also specify the file type to determine the format in which the image should be saved. This allows you to save the image according to your specific requirements or preferences, such as PNG, JPEG, or SVG.

By utilizing the [export](#) method with the appropriate file name and file type, you can conveniently save the modified image as a file on the local device, ensuring that it is easily accessible and shareable.

In the following example, the [export](#) method is used in the button click event.

APP.JSX

```
{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
```



```

export default class App extends React.Component {
  imgObj;
  imageEditorCreated() {
    if (Browser.isDevice) {
      this.imgObj.open('flower.png');
    }
    else {
      this.imgObj.open('bridge.png');
    }
  }
  btnClick() {
    this.imgObj.export("PNG", "Syncfusion"); // File type, file name
  }
  render() {
    return (<div className='e-img-editor-sample'>
      <ImageEditorComponent ref={ (img) => { this.imgObj = img; }}
created={this.imageEditorCreated.bind(this)} toolbar = {[[]]}>
        </ImageEditorComponent>
        <div>
          <ButtonComponent cssClass='e-primary' content='Click'
onClick={this.btnClick.bind(this)} />
        </div>
      </div>);
  }
}
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

APP.TSX

```

{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
function App() {
  let imgObj: ImageEditorComponent;
  function imageEditorCreated(): void {
    if (Browser.isDevice) {
      imgObj.open('flower.png');
    } else {
      imgObj.open('bridge.png');
    }
  }
  function btnClick(): void {
    imgObj.export("PNG", "Syncfusion"); // File type, file name
  }
  return (
    <div className='e-img-editor-sample'>
      <ImageEditorComponent ref={ (img) => { imgObj = img; }}
created={imageEditorCreated} toolbar = {[[]]}>
        </ImageEditorComponent>
        <div>
          <ButtonComponent cssClass='e-primary' content='Click'
onClick = {btnClick}/>

```

```

        </div>
    </div>
    );
}
export default App;
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% enddraw %}

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Image Editor</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components" />
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-base/styles/material.css" rel="stylesheet" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-buttons/styles/material.css" rel="stylesheet" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-splitbuttons/styles/material.css" rel="stylesheet" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-popups/styles/material.css" rel="stylesheet" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-inputs/styles/material.css" rel="stylesheet" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-navigations/styles/material.css" rel="stylesheet" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-editor/styles/material.css" rel="stylesheet" />
    <link href="index.css" rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></script>
    <script src="systemjs.config.js"></script>
</head>
<body>
    <div id='image-editor'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

File opened event

The [fileOpened](#) event is triggered in the Image Editor component after an image is successfully loaded. It provides the [OpenEventArgs](#) as the event argument, which contains two specific arguments:

- **FileName:** This argument is a string that contains the file name of the opened image. It represents the name of the file that was selected or provided when loading the image into the Image Editor.
- **FileType:** This argument is a string that contains the type of the opened image. It specifies the format or file type of the image that was loaded, such as PNG, JPEG, or SVG.

By accessing these arguments within the [fileOpened](#) event handler, you can retrieve information about the loaded image, such as its file name and file type. This can be useful for performing additional actions or implementing logic based on the specific image that was opened in the Image Editor component.

Saving event

The [saving](#) event is triggered in the Image Editor component when an image is being saved to the local disk. It provides the [SaveEventArgs](#) as the event argument, which includes the following specific arguments:

- **FileName:** This argument is a string that holds the file name of the saved image. It represents the name of the file that will be used when saving the image to the local disk.
- **FileType:** This argument is a string indicating the type or format of the saved image. It specifies the desired file type in which the image will be saved, such as PNG, JPEG, or SVG.
- **Cancel:** This argument is a boolean value that can be set to true in order to cancel the saving action. By default, it is set to false, allowing the saving process to proceed. However, if you want to prevent the saving action from occurring, you can set Cancel to true within the event handler.

By accessing these arguments within the Saving event handler, you can retrieve information about the file name and file type of the image being saved. Additionally, you have the option to cancel the saving action if necessary.

Created event

The [created](#) event is triggered once the Image Editor component is created. This event serves as a notification that the component has been fully initialized and is ready to be used. It provides a convenient opportunity to render the Image Editor with a predefined set of initial settings, including the image, annotations, and transformations.

Destroyed event

The [destroyed](#) event is triggered once the Image Editor component is destroyed or removed from the application. This event serves as a notification that the component and its associated resources have been successfully cleaned up and are no longer active.

Reset an image

The [reset](#) method in the Image Editor component provides the capability to undo all the changes made to an image and revert it back to its original state. This method is particularly useful when multiple adjustments, annotations, or transformations have been applied to an image and you want to start over with the original, unmodified version of the image.

By invoking the [reset](#) method, any modifications or edits made to the image will be undone, and the image will be restored to its initial state. This allows you to easily discard any changes and begin again with the fresh, unaltered image.

Selection cropping in the React Image Editor component

The cropping feature in the Image Editor allows you to select and crop specific regions of an image. It offers different selection options, including custom shapes, squares, circles, and various aspect ratios such as 2:3, 3:2, 3:4, 4:3, 4:5, 5:4, 5:7, 7:5, 9:16, and 16:9.

To perform a selection, you can use the [select](#) method, which allows you to define the desired selection area within the image. Once the selection is made, you can then use the [crop](#) method to crop the image based on the selected region. This enables you to extract and focus on specific parts of the image while discarding the rest.

Insert custom / square / circle region

The [select](#) method allows to perform selection based on the type of selection. Here, the [select](#) method is used to perform the selection as custom, circle, or square. The selection region can also be customized using the select method based on the parameters below.

- type - Specify the type of selection
- startX - Specify the x-coordinate of the selection region's starting point
- startY - Specify the y-coordinate of the selection region's starting point
- width - Specify the width of the selection region
- height - Specify the height of the selection region

Here is an example of square selection using the [select](#) method.

APP.JSX

```
{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
export default class App extends React.Component {
  imgObj;
  imageEditorCreated() {
    if (Browser.isDevice) {
      this.imgObj.open('flower.png');
    }
    else {
      this.imgObj.open('bridge.png');
    }
  }
  btnClick() {
    this.imgObj.select("Square");
  }
  render() {
    return (<div className='e-img-editor-sample'>
      <ImageEditorComponent ref={ (img) => { this.imgObj = img; }}
        created={this.imageEditorCreated.bind(this)} toolbar = {[[]]}>
        </ImageEditorComponent>
        <div>
          <ButtonComponent cssClass='e-primary' content='Click'
            onClick={this.btnClick.bind(this)} />
        </div>
      </div>);
  }
}
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}
```

APP.TSX

```
{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
```

```

import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
function App() {
    let imgObj: ImageEditorComponent;
    function imageEditorCreated(): void {
        if (Browser.isDevice) {
            imgObj.open('flower.png');
        } else {
            imgObj.open('bridge.png');
        }
    }
    function btnClick(): void {
        imgObj.select("Square");
    }
    return (
        <div className='e-img-editor-sample'>
            <ImageEditorComponent ref={img} => { imgObj = img } >
            created={imageEditorCreated} toolbar = {[[]]}>
            </ImageEditorComponent>
            <div>
                <ButtonComponent cssClass='e-primary' content='Click'
                onClick = {btnClick}/>
            </div>
        </div>
    );
}
export default App;
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% enddraw %}

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Image Editor</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components" />
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-base/styles/material.css" rel="stylesheet" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-buttons/styles/material.css" rel="stylesheet" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-splitbuttons/styles/material.css" rel="stylesheet" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-popups/styles/material.css" rel="stylesheet" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-inputs/styles/material.css" rel="stylesheet" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-navigations/styles/material.css" rel="stylesheet" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-editor/styles/material.css" rel="stylesheet" />
    <link href="index.css" rel="stylesheet" />

```

```

<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></scr
ipt>
<script src="systemjs.config.js"></script>
</head>
<body>
  <div id='image-editor'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Insert selection based on aspect ratio

The [select](#) method is used to perform the selection with the various aspect ratios such as 2:3, 3:2, 3:4, 4:3, 4:5, 5:4, 5:7, 7:5, 9:16, and 16:9. The selection region can also be customized using the [select](#) method based on the parameters below.

- type - Specify the type of selection
- startX - Specify the x-coordinate of the selection region's starting point
- startY - Specify the y-coordinate of the selection region's starting point

Here is an example of ratio selection using the [select](#) method.

APP.JSX

```

{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
export default class App extends React.Component {
  imgObj;
  imageEditorCreated() {
    if (Browser.isDevice) {
      this.imgObj.open('flower.png');
    }
    else {
      this.imgObj.open('bridge.png');
    }
  }
  btnClick() {
    this.imgObj.select("16:9");
  }
  render() {
    return (<div className='e-img-editor-sample'>
      <ImageEditorComponent ref={(img) => { this.imgObj = img; }}
created={this.imageEditorCreated.bind(this)} toolbar = {[[]]}>
        </ImageEditorComponent>
        <div>
          <ButtonComponent cssClass='e-primary' content='Click'
onClick={this.btnClick.bind(this)} />
        </div>
      </div>);
  }
}

```

```

}
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

APP.TSX

```

{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
function App() {
  let imgObj: ImageEditorComponent;
  function imageEditorCreated(): void {
    if (Browser.isDevice) {
      imgObj.open('flower.png');
    } else {
      imgObj.open('bridge.png');
    }
  }
  function btnClick(): void {
    imgObj.select("16:9");
  }
  return (
    <div className='e-img-editor-sample'>
      <ImageEditorComponent ref={img} => { imgObj = img } }
      created={imageEditorCreated} toolbar = {[[]]}>
      </ImageEditorComponent>
      <div>
        <ButtonComponent cssClass='e-primary' content='Click'
onClick = {btnClick}/>
      </div>
    </div>
  );
}
export default App;
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Image Editor</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
base/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
buttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
splitbuttons/styles/material.css" rel="stylesheet" />

```

```

<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
popups/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
inputs/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
navigations/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-
editor/styles/material.css" rel="stylesheet" />
<link href="index.css" rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></scr
ipt>
<script src="systemjs.config.js"></script>
</head>
<body>
  <div id='image-editor'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Crop an image

The [crop](#) method allows cropping based on the selected region. Here is an example of cropping the selection region using the [crop](#) method.

Here is an example of circle cropping using the [select](#) and [crop](#) method.

APP.JSX

```

{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
export default class App extends React.Component {
  imgObj;
  imageEditorCreated() {
    if (Browser.isDevice) {
      this.imgObj.open('flower.png');
    }
    else {
      this.imgObj.open('bridge.png');
    }
  }
  btnClick() {
    this.imgObj.select("Square");
    this.imgObj.crop();
  }
  render() {
    return (
      <div className='e-img-editor-sample'>
        <ImageEditorComponent ref={ (img) => { this.imgObj = img; } }
        created={this.imageEditorCreated.bind(this)} toolbar = {[[]]}>
          </ImageEditorComponent>
        </div>
      )
  }
}

```



```

        <ButtonComponent cssClass='e-primary' content='Click'
onClick={this.btnClick.bind(this)} />
      </div>
    </div>);
  }
}
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

APP.TSX

```

{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
function App() {
  let imgObj: ImageEditorComponent;
  function imageEditorCreated(): void {
    if (Browser.isDevice) {
      imgObj.open('flower.png');
    } else {
      imgObj.open('bridge.png');
    }
  }
  function btnClick(): void {
    imgObj.select("Square");
    imgObj.crop();
  }
  return (
    <div className='e-img-editor-sample'>
      <ImageEditorComponent ref={img => { imgObj = img }}
created={imageEditorCreated} toolbar = {[[]]}>
        </ImageEditorComponent>
        <div>
          <ButtonComponent cssClass='e-primary' content='Click'
onClick = {btnClick}/>
        </div>
      </div>
    );
}
export default App;
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Image Editor</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />

```

```
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
base/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
buttons/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
splitbuttons/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
popups/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
inputs/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
navigations/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-
editor/styles/material.css" rel="stylesheet" />
<link href="index.css" rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></scr
ipt>
<script src="systemjs.config.js"></script>
</head>
<body>
  <div id='image-editor'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>
```

Cropping event

The [cropping](#) event is triggered when performing cropping on the image. This event is passed an object that contains information about the cropping event, such as the start and end point of the selection region. And this event uses [CropEventArgs](#) to handle the cropping action in the image.

The parameter available in the [cropping](#) event is,

[CroppingEventArgs.startPoint](#) – The x and y coordinates of a start point as [ImageEditorPoint](#) of the selection region.

[CroppingEventArgs.endPoint](#) - The x and y coordinates of an end point as [ImageEditorPoint](#) of the selection region.

[CroppingEventArgs.cancel](#) - To cancel the cropping action.

Annotation in the React Image Editor component

The React Image Editor allows adding annotations to the image, including text, freehand drawings, and shapes like rectangles, ellipses, arrows, paths, and lines. This gives the flexibility to mark up the image with notes, sketches, and other visual elements as needed. These annotation tools can help to communicate and share ideas more effectively.

Text annotation

The text annotation feature in the Image Editor provides the capability to add and customize labels, captions, and other text elements directly onto the image. With this feature, you can easily insert text at specific locations within the image and customize various aspects of the text to meet your requirements.

You have control over the customization options including text content, font family, font style and font size for the text annotation.

Add a text

The [drawText](#) method in the React Image Editor allows you to insert a text annotation into the image with specific customization options. This method accepts the following parameters:

- x: Specifies the x-coordinate of the text, determining its horizontal position within the image.
- y: Specifies the y-coordinate of the text, determining its vertical position within the image.
- text: Specifies the actual text content to be added to the image.
- fontFamily: Specifies the font family of the text, allowing you to choose a specific typeface or style for the text.
- fontSize: Specifies the font size of the text, determining its relative size within the image.
- bold: Specifies whether the text should be displayed in bold style. Set to true for bold text, and false for regular text.
- italic: Specifies whether the text should be displayed in italic style. Set to true for italic text, and false for regular text.
- color: Specifies the font color of the text, allowing you to define the desired color using appropriate color values or names.
- isSelected: Specifies to show the text in the selected state.

By utilizing the [drawText](#) method with these parameters, you can precisely position and customize text annotations within the image. This provides the flexibility to add labels, captions, or other text elements with specific font styles, sizes, and colors, enhancing the visual presentation and clarity of the image.

Here is an example of adding a text in a button click using [drawText](#) method.

APP.JSX

```
{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
export default class App extends React.Component {
  imgObj;
  imageEditorCreated() {
    if (Browser.isDevice) {
      this.imgObj.open('flower.png');
    }
    else {
      this.imgObj.open('bridge.png');
    }
  }
  btnClick() {
    let dimension = imgObj.getImageDimension();
    imgObj.drawText(dimension.x, dimension.y);
  }
  render() {
    return (<div className='e-img-editor-sample'>
      <ImageEditorComponent ref={ (img) => { this.imgObj = img; }}
        created={this.imageEditorCreated.bind(this)} toolbar = {[[]]}>
        </ImageEditorComponent>
        <div>
          <ButtonComponent cssClass='e-primary' content='Click'
            onClick={this.btnClick.bind(this)} />

```

```

        </div>
      </div>);
    }
  }
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

APP.TSX

```

{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
function App() {
  let imgObj: ImageEditorComponent;
  function imageEditorCreated(): void {
    if (Browser.isDevice) {
      imgObj.open('flower.png');
    } else {
      imgObj.open('bridge.png');
    }
  }
  function btnClick(): void {
    let dimension: any = imgObj.getImageDimension();
    imgObj.drawText(dimension.x, dimension.y);
  }
  return (
    <div className='e-img-editor-sample'>
      <ImageEditorComponent ref={(img) => { imgObj = img }}
created={imageEditorCreated} toolbar = {[[]]}>
        </ImageEditorComponent>
        <div>
          <ButtonComponent cssClass='e-primary' content='Click'
onClick = {btnClick}/>
        </div>
      </div>
    );
}
export default App;
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Image Editor</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
base/styles/material.css" rel="stylesheet" />

```

```

<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
buttons/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
splitbuttons/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
popups/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
inputs/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
navigations/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-
editor/styles/material.css" rel="stylesheet" />
<link href="index.css" rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></scr
ipt>
<script src="systemjs.config.js"></script>
</head>
<body>
  <div id='image-editor'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Multiline text

The [drawText](#) method in the React Image Editor component is commonly used to insert text annotations into an image. If the provided text parameter contains a newline character (\n), the text will be automatically split into multiple lines, with each line appearing on a separate line in the annotation.

Here is an example of adding a multiline text in a button click using [drawText](#) method.

APP.JSX

```

{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
export default class App extends React.Component {
  imgObj;
  imageEditorCreated() {
    if (Browser.isDevice) {
      this.imgObj.open('flower.png');
    }
    else {
      this.imgObj.open('bridge.png');
    }
  }
  btnClick() {
    let dimension = imgObj.getImageDimension();
    imgObj.drawText(dimension.x, dimension.y, 'Enter\nText');
  }
  render() {
    return (<div className='e-img-editor-sample'>

```

```

        <ImageEditorComponent ref={ (img) => { this.imgObj = img; }}
        created={this.imageEditorCreated.bind(this)} toolbar = {[[]]}>
        </ImageEditorComponent>
        <div>
            <ButtonComponent cssClass='e-primary' content='Click'
            onClick={this.btnClick.bind(this)} />
        </div>
    </div>);
    }
}
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

APP.TSX

```

{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
function App() {
    let imgObj: ImageEditorComponent;
    function imageEditorCreated(): void {
        if (Browser.isDevice) {
            imgObj.open('flower.png');
        } else {
            imgObj.open('bridge.png');
        }
    }
    function btnClick(): void {
        let dimension: any = imgObj.getImageDimension();
        imgObj.drawText(dimension.x, dimension.y, 'Enter\nText');
    }
    return (
        <div className='e-img-editor-sample'>
            <ImageEditorComponent ref={ (img) => { imgObj = img; }}
            created={imageEditorCreated} toolbar = {[[]]}>
            </ImageEditorComponent>
            <div>
                <ButtonComponent cssClass='e-primary' content='Click'
                onClick = {btnClick} />
            </div>
        </div>
    );
}
export default App;
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Image Editor</title>

```

```

<meta charset="utf-8" />
<meta name="viewport" content="width=device-width, initial-scale=1.0" />
<meta name="description" content="Essential JS 2 for React Components" />
<meta name="author" content="Syncfusion" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
base/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
buttons/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
splitbuttons/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
popups/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
inputs/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
navigations/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-
editor/styles/material.css" rel="stylesheet" />
<link href="index.css" rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></scr
ipt>
<script src="systemjs.config.js"></script>
</head>
<body>
  <div id='image-editor'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Delete a text

The [deleteShape](#) method in the React Image Editor allows you to remove a text annotation from the image editor. To use this method, you need to pass the [shapeld](#) of the annotation as a parameter.

The [shapeld](#) is a unique identifier assigned to each text annotation within the image editor. It serves as a reference to a specific annotation, enabling targeted deletion of the desired text element. By specifying the [shapeld](#) associated with the text annotation you want to remove, you can effectively delete it from the image editor.

To retrieve the inserted text annotations, you can utilize the [getShapeSetting](#) method, which provides a collection of annotations represented by [ShapeSettings](#). This method allows you to access and work with the annotations that have been inserted into the image.

Here is an example of deleting a text in a button click using [deleteShape](#) method.

APP.JSX

```

{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
export default class App extends React.Component {
  imgObj;

```

```

imageEditorCreated() {
    if (Browser.isDevice) {
        this.imgObj.open('flower.png');
    }
    else {
        this.imgObj.open('bridge.png');
    }
}
btnClick() {
    let dimension = imgObj.getImageDimension();
    imgObj.drawText(dimension.x, dimension.y, 'Enter\nText');
}
btnClick() {
    imgObj.deleteShape('shape_1');
}
render() {
    return (<div className='e-img-editor-sample'>
        <ImageEditorComponent ref={ (img) => { this.imgObj = img; }}
        created={this.imageEditorCreated.bind(this)} toolbar = {[[]]}>
        </ImageEditorComponent>
        <div>
            <ButtonComponent cssClass='e-primary' content='Click'
            onClick={this.btnClick.bind(this)} />
            <ButtonComponent cssClass='e-primary' content='Delete
            Text' onClick = {this.delClick.bind(this)} />
        </div>
        </div>);
}
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

APP.TSX

```

{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
function App() {
    let imgObj: ImageEditorComponent;
    function imageEditorCreated(): void {
        if (Browser.isDevice) {
            imgObj.open('flower.png');
        } else {
            imgObj.open('bridge.png');
        }
    }
    function btnClick(): void {
        let dimension: any = imgObj.getImageDimension();
        imgObj.drawText(dimension.x, dimension.y, 'Enter\nText');
    }
    function delClick(): void {
        imgObj.deleteShape('shape_1');
    }
}

```



```

    return (
      <div className='e-img-editor-sample'>
        <ImageEditorComponent ref={(img) => { imgObj = img }}
        created={imageEditorCreated} toolbar = {[ ]}>
          </ImageEditorComponent>
          <div>
            <ButtonComponent cssClass='e-primary' content='Click'
            onClick = {btnClick}/>
            <ButtonComponent cssClass='e-primary' content='Delete
            Text' onClick = {delClick}/>
          </div>
        </div>
      );
    }
    export default App;
    ReactDOM.render(<App />, document.getElementById('image-editor'));
    {% enddraw %}

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Image Editor</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
  base/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
  buttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
  splitbuttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
  popups/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
  inputs/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
  navigations/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-
  editor/styles/material.css" rel="stylesheet" />
  <link href="index.css" rel="stylesheet" />
  <script
  src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></scr
  ipt>
  <script src="systemjs.config.js"></script>
</head>
<body>
  <div id='image-editor'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Customize font family and text color

The [shapeChanging](#) event in the Image Editor component is triggered when a text annotation is being modified or changed through the toolbar interaction. This event provides an opportunity to make alterations to the text's color and font family by adjusting the relevant properties.

By leveraging the [shapeChanging](#) event, you can enhance the customization options for text annotations and provide a more tailored and interactive experience within the Image Editor component.

Here is an example of changing the text's color and its font family using the [shapeChanging](#) event.

APP.JSX

```
{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
export default class App extends React.Component {
  imgObj;
  shapeChanging(args) {
    if (args.currentShapeSettings.type === 'Text') {
      args.currentShapeSettings.color = 'red';
    }
  }
  btnClick() {
    let dimension = imgObj.getImageDimension();
    imgObj.drawText(dimension.x, dimension.y, 'Enter\nText');
  }
  imageEditorCreated() {
    if (Browser.isDevice) {
      this.imgObj.open('flower.png');
    }
    else {
      this.imgObj.open('bridge.png');
    }
  }
  render() {
    return (<div className='e-img-editor-sample'>
      <ImageEditorComponent ref={(img) => { this.imgObj = img; }}
      created={this.imageEditorCreated.bind(this)}
      shapeChanging={this.shapeChanging.bind(this)} toolbar = {[[]]}>
        </ImageEditorComponent>
        <div>
          <ButtonComponent cssClass='e-primary' content='Click'
            onClick={this.btnClick.bind(this)} />
        </div>
      </div>);
  }
}
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}
```

APP.TSX

```
{% raw %}
```

```

import { ImageEditorComponent, shapeChanging } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
function App() {
    let imgObj: ImageEditorComponent;
    function shapeChanging(args: shapeChanging): void {
        if (args.currentShapeSettings.type === 'Text') {
            args.currentShapeSettings.color = 'red';
        }
    }
    function btnClick(): void {
        let dimension: any = imgObj.getImageDimension();
        imgObj.drawText(dimension.x, dimension.y, 'Enter\nText');
    }
    function imageEditorCreated(): void {
        if (Browser.isDevice) {
            imgObj.open('flower.png');
        } else {
            imgObj.open('bridge.png');
        }
    }
    return (
        <div className='e-img-editor-sample'>
            <ImageEditorComponent ref={img} => { imgObj = img } }
            created={imageEditorCreated} shapeChanging={shapeChanging} toolbar = {[[]]}>
            </ImageEditorComponent>
            <div>
                <ButtonComponent cssClass='e-primary' content='Click'
                onClick = {btnClick}/>
            </div>
        </div>
    );
}
export default App;
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Image Editor</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components" />
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-base/styles/material.css" rel="stylesheet" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-buttons/styles/material.css" rel="stylesheet" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-splitbuttons/styles/material.css" rel="stylesheet" />

```

```

<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
popups/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
inputs/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
navigations/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-
editor/styles/material.css" rel="stylesheet" />
<link href="index.css" rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></scr
ipt>
<script src="systemjs.config.js"></script>
</head>
<body>
    <div id='image-editor'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Add Additional font family

The [fontFamily](#) property in the Image Editor control provides the flexibility to incorporate supplementary font families, expanding your options for text styling and ensuring a broader range of fonts can be utilized within your design or content. The font value will be determined by the 'id' property.

By leveraging the [fontFamily](#) property, you can elevate the scope of customization for text annotations, enriching the user experience within the Image Editor control. This enhancement offers a more personalized and dynamic interaction, empowering users to tailor their text styles for a truly engaging editing experience.

APP.JSX

```

{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
export default class App extends React.Component {
    fontFamily = { default: 'Arial', items: [{id: 'arial', text: 'Arial'},
{id: 'brush script mt', text: 'Brush Script MT'},
{id: 'papyrus', text: 'Papyrus'}, {id: 'times new roman', text: 'Times
New Roman'}, {id: 'courier new', text: 'Courier New'}] };
    imgObj;
    imageEditorCreated() {
        if (Browser.isDevice) {
            this.imgObj.open('flower.png');
        }
        else {
            this.imgObj.open('bridge.png');
        }
    }
    render() {
        return (<div className='e-img-editor-sample'>

```

```

        <ImageEditorComponent ref={ (img) => { this.imgObj = img; }}
        created={this.imageEditorCreated.bind(this)} fontFamily =
        {this.fontFamily}></ImageEditorComponent>
      </div>;
    }
  }
  ReactDOM.render(<App />, document.getElementById('image-editor'));
  {% endraw %}

```

APP.TSX

```

{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
function App() {
  let imgObj: ImageEditorComponent;
  let fontFamily = { default: 'Arial', items: [{id: 'arial', text:
  'Arial'}, {id: 'brush script mt', text: 'Brush Script MT'},
  {id: 'papyrus', text: 'Papyrus'}, {id: 'times new roman', text: 'Times
  New Roman'}, {id: 'courier new', text: 'Courier New'}] };
  function imageEditorCreated(): void {
    if (Browser.isDevice) {
      imgObj.open('flower.png');
    } else {
      imgObj.open('bridge.png');
    }
  }
  return (
    <div className='e-img-editor-sample'>
      <ImageEditorComponent ref={ (img) => { imgObj = img }}
      created={imageEditorCreated} fontFamily =
      {fontFamily}></ImageEditorComponent>
    </div>
  );
}
export default App;
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Image Editor</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
  base/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
  buttons/styles/material.css" rel="stylesheet" />

```

```

<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-splitbuttons/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-popups/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-inputs/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-navigations/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-editor/styles/material.css" rel="stylesheet" />
<link href="index.css" rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></script>
<script src="systemjs.config.js"></script>
</head>
<body>
  <div id='image-editor'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Freehand drawing

The Freehand Draw annotation tool in the React Image Editor component is a versatile feature that allows users to draw and sketch directly on the image using mouse or touch input. This tool provides a flexible and creative way to add freehand drawings or annotations to the image.

The [freehandDraw](#) method is used to enable or disable the freehand drawing option in the React Image Editor component.

Here is an example of using the [freeHandDraw](#) method in a button click event.

APP.JSX

```

{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
export default class App extends React.Component {
  imgObj;
  imageEditorCreated() {
    if (Browser.isDevice) {
      this.imgObj.open('flower.png');
    }
    else {
      this.imgObj.open('bridge.png');
    }
  }
  btnClick() {
    this.imgObj.freeHandDraw(true);
  }
  applyBtnClick() {
    this.imgObj.freeHandDraw(false);
  }
}

```

```

    }
    render() {
        return (<div className='e-img-editor-sample'>
            <ImageEditorComponent ref={ (img) => { this.imgObj = img; }}
            created={this.imageEditorCreated.bind(this)} toolbar = {[[]]}>
                </ImageEditorComponent>
                <div>
                    <ButtonComponent cssClass='e-primary' content='Click'
                    onClick={this.btnClick.bind(this)} />
                    <ButtonComponent cssClass='e-primary'
                    content='Apply' onClick={this.applyBtnClick.bind(this)} />
                </div>
            </div>);
    }
}
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

APP.TSX

```

{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
function App() {
    let imgObj: ImageEditorComponent;
    function imageEditorCreated(): void {
        if (Browser.isDevice) {
            imgObj.open('flower.png');
        } else {
            imgObj.open('bridge.png');
        }
    }
    function btnClick(): void {
        imgObj.freeHandDraw(true);
    }
    function applyBtnClick(): void {
        imgObj.freeHandDraw(false);
    }
    return (
        <div className='e-img-editor-sample'>
            <ImageEditorComponent ref={ (img) => { imgObj = img; }}
            created={imageEditorCreated} toolbar = {[[]]}>
                </ImageEditorComponent>
                <div>
                    <ButtonComponent cssClass='e-primary' content='Click'
                    onClick = {btnClick} />
                    <ButtonComponent cssClass='e-primary' content='Apply'
                    onClick = {applyBtnClick} />
                </div>
            </div>
        );
    }
}
export default App;

```

```
ReactDOM.render(<App />, document.getElementById('image-editor'));  
{% endraw %}
```

INDEX.HTML

```
<!DOCTYPE html>  
<html lang="en">  
<head>  
  <title>Syncfusion React Image Editor</title>  
  <meta charset="utf-8" />  
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />  
  <meta name="description" content="Essential JS 2 for React Components" />  
  <meta name="author" content="Syncfusion" />  
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-base/styles/material.css" rel="stylesheet" />  
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-buttons/styles/material.css" rel="stylesheet" />  
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-splitbuttons/styles/material.css" rel="stylesheet" />  
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-popups/styles/material.css" rel="stylesheet" />  
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-inputs/styles/material.css" rel="stylesheet" />  
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-navigations/styles/material.css" rel="stylesheet" />  
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-editor/styles/material.css" rel="stylesheet" />  
  <link href="index.css" rel="stylesheet" />  
  <script  
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></script>  
  <script src="systemjs.config.js"></script>  
</head>  
<body>  
  <div id='image-editor'>  
    <div id='loader'>Loading....</div>  
  </div>  
</body>  
</html>
```

Adjust the stroke width and color

The [shapeChanging](#) event in the React Image Editor component is triggered when a freehand annotation is being modified or changed through the toolbar interaction. This event provides an opportunity to make alterations to the freehand annotation's color and stroke width by adjusting the relevant properties.

By leveraging the [shapeChanging](#) event, you can enhance the customization options for freehand annotations and provide a more tailored and interactive experience within the Image Editor component.

Here is an example of changing the freehand draw stroke width and color using the [shapeChanging](#) event.

APP.JSX

```
{% raw %}
```



```

import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
export default class App extends React.Component {
  imgObj;
  shapeChanging(args) {
    if (args.currentShapeSettings.type === 'FreehandDraw') {
      args.currentShapeSettings.strokeColor = 'red';
    }
  }
  imageEditorCreated() {
    if (Browser.isDevice) {
      this.imgObj.open('flower.png');
    }
    else {
      this.imgObj.open('bridge.png');
    }
  }
  render() {
    return (<div className='e-img-editor-sample'>
      <ImageEditorComponent ref={img) => { this.imgObj = img; }}
      created={this.imageEditorCreated.bind(this)}
      shapeChanging={this.shapeChanging.bind(this)} toolbar = {[[]]}>
        </ImageEditorComponent>
      </div>);
  }
}
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

APP.TSX

```

{% raw %}
import { ImageEditorComponent, shapeChanging } from '@syncfusion/ej2-react-
image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
function App() {
  let imgObj: ImageEditorComponent;
  function shapeChanging(args: shapeChanging): void {
    if (args.currentShapeSettings.type === 'FreehandDraw') {
      args.currentShapeSettings.color = 'red';
    }
  }
  function imageEditorCreated(): void {
    if (Browser.isDevice) {
      imgObj.open('flower.png');
    } else {
      imgObj.open('bridge.png');
    }
  }
  return (

```

```

    <div className='e-img-editor-sample'>
      <ImageEditorComponent ref={img} => { imgObj = img }}
      created={imageEditorCreated} shapeChanging={shapeChanging} toolbar = {[[]]}>
        </ImageEditorComponent>
      </div>
    );
  }
  export default App;
  ReactDOM.render(<App />, document.getElementById('image-editor'));
  {% enddraw %}

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Image Editor</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
base/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
buttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
splitbuttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
popups/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
inputs/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
navigations/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-
editor/styles/material.css" rel="stylesheet" />
  <link href="index.css" rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></scr
ipt>
  <script src="systemjs.config.js"></script>
</head>
<body>
  <div id='image-editor'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Delete a freehand drawing

The [deleteShape](#) method in the React Image Editor allows you to remove a freehand annotation from the image editor. To use this method, you need to pass the [shapeld](#) of the annotation as a parameter.

The [shapeld](#) is a unique identifier assigned to each freehand annotation within the image editor. It serves as a reference to a specific annotation, enabling targeted deletion of the desired annotation. By

specifying the [shapeId](#) associated with the freehand annotation you want to remove, you can effectively delete it from the image editor.

To retrieve the inserted freehand annotations, you can utilize the [getShapeSetting](#) method, which provides a collection of annotations represented by [ShapeSettings](#). This method allows you to access and work with the annotations that have been inserted into the image.

Here is an example of deleting a freehand annotation in a button click using [deleteShape](#) method.

APP.JSX

```
{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
export default class App extends React.Component {
  imgObj;
  imageEditorCreated() {
    if (Browser.isDevice) {
      this.imgObj.open('flower.png');
    }
    else {
      this.imgObj.open('bridge.png');
    }
  }
  btnClick() {
    imgObj.freeHandDraw(true);
  }
  delClick() {
    imgObj.deleteShape('pen_1');
  }
  render() {
    return (
      <div className='e-img-editor-sample'>
        <ImageEditorComponent ref={(img) => { this.imgObj = img; }}
        created={this.imageEditorCreated.bind(this)} toolbar = {[[]]}>
          </ImageEditorComponent>
        </div>
        <div>
          <ButtonComponent cssClass='e-primary' content='Click'
            onClick={this.btnClick.bind(this)} />
          <ButtonComponent cssClass='e-primary' content='Delete'
            onClick = {this.delClick.bind(this)} />
        </div>
      </div>);
  }
}
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}
```

APP.TSX

```
{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
```

```

import * as ReactDOM from "react-dom";
function App() {
  let imgObj: ImageEditorComponent;
  function imageEditorCreated(): void {
    if (Browser.isDevice) {
      imgObj.open('flower.png');
    } else {
      imgObj.open('bridge.png');
    }
  }
  function btnClick(): void {
    imgObj.freeHandDraw(true);
  }
  function delClick(): void {
    imgObj.deleteShape('pen_1');
  }
  return (
    <div className='e-img-editor-sample'>
      <ImageEditorComponent ref={ (img) => { imgObj = img } }
created={imageEditorCreated} toolbar = {[[]]}>
        </ImageEditorComponent>
        <div>
          <ButtonComponent cssClass='e-primary' content='Click'
onClick = {btnClick}/>
          <ButtonComponent cssClass='e-primary' content='Delete'
onClick = {delClick}/>
        </div>
      </div>
    );
}
export default App;
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Image Editor</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
base/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
buttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
splitbuttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
popups/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
inputs/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
navigations/styles/material.css" rel="stylesheet" />

```

```
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-
editor/styles/material.css" rel="stylesheet" />
<link href="index.css" rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></scr
ipt>
<script src="systemjs.config.js"></script>
</head>
<body>
  <div id='image-editor'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>
```

Shape annotation

The Image Editor component provides the ability to add shape annotations to an image. These shape annotations include rectangles, ellipses, arrows, paths, and lines, allowing you to highlight, emphasize, or mark specific areas or elements within the image.

Add a rectangle / ellipse / line / arrow / path

The [drawRectangle](#) method is used to insert a rectangle to the React Image Editor component. Rectangle annotations are valuable tools for highlighting, emphasizing, or marking specific areas of an image to draw attention or provide additional context.

The [drawRectangle](#) method in the React Image Editor component takes seven parameters to define the properties of the rectangle annotation:

- x: Specifies the x-coordinate of the top-left corner of the rectangle.
- y: Specifies the y-coordinate of the top-left corner of the rectangle.
- width: Specifies the width of the rectangle.
- height: Specifies the height of the rectangle.
- strokeWidth: Specifies the stroke width of the rectangle's border.
- strokeColor: Specifies the stroke color of the rectangle's border.
- fillColor: Specifies the fill color of the rectangle.
- degree: Specifies the degree to rotate the rectangle.
- isSelected: Specifies to show the rectangle in the selected state.

The [drawEllipse](#) method is used to insert an ellipse to the React Image Editor component. Ellipse annotations are valuable for highlighting, emphasizing, or marking specific areas of an image.

The [drawEllipse](#) method in the Image Editor component takes seven parameters to define the properties of the ellipse annotation:

- x: Specifies the x-coordinate of the center of the ellipse.
- y: Specifies the y-coordinate of the center of the ellipse.
- radiusX: Specifies the horizontal radius (radiusX) of the ellipse.
- radiusY: Specifies the vertical radius (radiusY) of the ellipse.
- strokeWidth: Specifies the width of the ellipse's stroke (border).
- strokeColor: Specifies the color of the ellipse's stroke (border).
- fillColor: Specifies the fill color of the ellipse.

- degree: Specifies the degree to rotate the ellipse.
- isSelected: Specifies to show the ellipse in the selected state.

The [drawLine](#) method is used to insert a line to the React Image Editor component. Line annotations are valuable for highlighting, emphasizing, or marking specific areas of an image.

The [drawLine](#) method in the Image Editor component takes seven parameters to define the properties of the ellipse annotation:

- startX - Specifies the x-coordinate of the start point.
- startY - Specifies the y-coordinate of the start point.
- endX - Specifies the x-coordinate of the end point.
- endY - Specifies the y-coordinate of the end point.
- strokeWidth - Specifies the stroke width of the line.
- strokeColor - Specifies the stroke color of the line.
- isSelected: Specifies to show the line in the selected state.

The [drawArrow](#) method is used to insert a arrow to the React Image Editor component. Arrow annotations are valuable for highlighting, emphasizing, or marking specific areas of an image.

The [drawArrow](#) method in the Image Editor component takes seven parameters to define the properties of the ellipse annotation:

- startX - Specifies the x-coordinate of the start point.
- startY - Specifies the y-coordinate of the start point.
- endX - Specifies the x-coordinate of the end point.
- endY - Specifies the y-coordinate of the end point.
- strokeWidth - Specifies the stroke width of the arrow.
- strokeColor - Specifies the stroke color of the arrow.
- arrowStart - Specifies the arrowhead as ImageEditorArrowHeadType at the start of arrow.
- arrowEnd - Specifies the arrowhead as ImageEditorArrowHeadType at the end of the arrow.
- isSelected: Specifies to show the arrow in the selected state.

The [drawPath](#) method is used to insert a path to the React Image Editor component. Path annotations are valuable for highlighting, emphasizing, or marking specific areas of an image.

The [drawPath](#) method in the Image Editor component takes three parameters to define the properties of the ellipse annotation:

- points - Specifies collection of x and y coordinates as ImageEditorPoint to draw a path.
- strokeWidth - Specifies the stroke width of the path.
- strokeColor - Specifies the stroke color of the path.
- isSelected: Specifies to show the path in the selected state.

Here is an example of inserting rectangle, ellipse, arrow, path, and line in a button click event.

APP.JSX

```
{% raw %}  
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';  
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
```

```

import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
export default class App extends React.Component {
  imgObj;
  imageEditorCreated() {
    if (Browser.isDevice) {
      this.imgObj.open('flower.png');
    }
    else {
      this.imgObj.open('bridge.png');
    }
  }
  btnClick() {
    let dimension = imgObj.getImageDimension();
    imgObj.drawRectangle(dimension.x, dimension.y);
    imgObj.drawEllipse(dimension.x, dimension.y);
    imgObj.drawLine(dimension.x, dimension.y);
    imgObj.drawArrow(dimension.x, dimension.y+10, dimension.x+50,
dimension.y+10, 10);
    imgObj.drawPath([
{x: dimension.x, y: dimension.y},
{x: dimension.x+50, y: dimension.y+50},
{x: dimension.x+20, y: dimension.y+50}],
8);
  }
  render() {
    return (


=> { this.imgObj = img; }
} created={
this.imageEditorCreated.bind(this)
} toolbar = {[]}>
        </ImageEditorComponent>
        <div>
          <ButtonComponent cssClass='e-primary' content='Click'
onClick={
this.btnClick.bind(this)
}/>
        </div>
      </div>);
  }
}
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}


```

APP.TSX

```

{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
function App() {
  let imgObj: ImageEditorComponent;
  function imageEditorCreated(): void {
    if (Browser.isDevice) {
      imgObj.open('flower.png');
    }
    else {
      imgObj.open('bridge.png');
    }
  }
}

```

```

function btnClick(): void {
    let dimension: any = imgObj.getImageDimension();
    imgObj.drawRectangle(dimension.x, dimension.y);
    imgObj.drawEllipse(dimension.x, dimension.y);
    imgObj.drawLine(dimension.x, dimension.y);
    imgObj.drawArrow(dimension.x, dimension.y+10, dimension.x+50,
dimension.y+10, 10);
    imgObj.drawPath([
{x: dimension.x, y: dimension.y}, {x:
dimension.x+50, y: dimension.y+50}, {x: dimension.x+20, y: dimension.y+50}],
8);
}
return (
    <div className='e-img-editor-sample'>
        <ImageEditorComponent ref={(img) => { imgObj = img }}
created={imageEditorCreated} toolbar = {[[]]}>
            </ImageEditorComponent>
            <div>
                <ButtonComponent cssClass='e-primary' content='Click'
onClick = {btnClick}/>
            </div>
        </div>
    );
}
export default App;
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% enddraw %}

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Image Editor</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components" />
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
base/styles/material.css" rel="stylesheet" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
buttons/styles/material.css" rel="stylesheet" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
splitbuttons/styles/material.css" rel="stylesheet" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
popups/styles/material.css" rel="stylesheet" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
inputs/styles/material.css" rel="stylesheet" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
navigations/styles/material.css" rel="stylesheet" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-
editor/styles/material.css" rel="stylesheet" />
    <link href="index.css" rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></scr
ipt>
    <script src="systemjs.config.js"></script>

```



```

</head>
<body>
  <div id='image-editor'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Delete a shape

The [deleteShape](#) method in the React Image Editor allows you to remove a shape annotation from the image editor. To use this method, you need to pass the [shapeId](#) of the annotation as a parameter.

The [shapeId](#) is a unique identifier assigned to each shape annotation within the image editor. It serves as a reference to a specific annotation, enabling targeted deletion of the desired annotation. By specifying the [shapeId](#) associated with the shape annotation you want to remove, you can effectively delete it from the image editor.

To retrieve the inserted shape annotations, you can utilize the [getShapeSetting](#) method, which provides a collection of annotations represented by [ShapeSettings](#). This method allows you to access and work with the annotations that have been inserted into the image.

Here is an example of deleting rectangle, ellipse, arrow, path, and line in a button click event.

APP.JSX

```

{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
export default class App extends React.Component {
  imgObj;
  toolbar = ['Annotate', "Line", "Rectangle", "Circle", "Ellipse", "Arrow",
"Path"];
  shapeChanging(args) {
    if (args.action === 'select') {
      id = args.currentShapeSettings.id;
    }
  }
  btnClick() {
    imgObj.deleteShape(id);
  }
  imageEditorCreated() {
    if (Browser.isDevice) {
      this.imgObj.open('flower.png');
    }
    else {
      this.imgObj.open('bridge.png');
    }
  }
  render() {
    return (<div id="wrapperDiv">
      <ImageEditorComponent toolbar={this.toolbar} ref={(img) => {
this.imgObj = img; }} created={this.imageEditorCreated.bind(this)}
toolbarItemClicked={this.toolbarItemClicked.bind(this)} />

```

```

        </div>);
    }
}
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

APP.TSX

```

{% raw %}
import { ImageEditorComponent, shapeChanging } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
function App() {
    let imgObj: ImageEditorComponent;
    let id: string;
    let toolbar = ['Annotate', "Line", "Rectangle", "Circle", "Ellipse", "Arrow", "Path"];
    function shapeChanging(args: shapeChanging): void {
        if (args.action === 'select') {
            id = args.currentShapeSettings.id;
        }
    }
    function btnClick(): void {
        imgObj.deleteShape(id);
    }
    function imageEditorCreated(): void {
        if (Browser.isDevice) {
            imgObj.open('flower.png');
        } else {
            imgObj.open('bridge.png');
        }
    }
    return (
        <div className='e-img-editor-sample'>
            <ImageEditorComponent ref={(img) => { imgObj = img }}
                created={imageEditorCreated} shapeChanging={shapeChanging} toolbar =
                {toolbar} showQuickAccessToolbar = {false}>
                </ImageEditorComponent>
            <div>
                <ButtonComponent cssClass='e-primary' content='Click'
                    onClick = {btnClick}/>
            </div>
        </div>
    );
}
export default App;
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">

```

```
<head>
  <title>Syncfusion React Image Editor</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
base/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
buttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
splitbuttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
popups/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
inputs/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
navigations/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-
editor/styles/material.css" rel="stylesheet" />
  <link href="index.css" rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></scr
ipt>
  <script src="systemjs.config.js"></script>
</head>
<body>
  <div id='image-editor'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>
```

Image annotation

The image annotation feature in the Image Editor provides the capability to add and customize images directly onto the image. With this feature, you can easily insert image or icons at specific locations within the image and customize various aspects of the image to meet your requirements. You have control over the customization options including rotate, flip, transparency for the image annotation.

Add an image annotation

The [drawImage](#) method serves the purpose of inserting an image into the Image Editor control, allowing for image annotations to be added. These image annotations can be used for various purposes, such as adding logos, watermarks, or decorative elements to the image.

The [drawImage](#) method in the Image Editor control takes six parameters to define the properties of the image annotation:

- data: Specified the image data or url of the image to be inserted.
- x: Specifies the x-coordinate of the top-left corner of the image.
- y: Specifies the y-coordinate of the top-left corner of the image.
- width: Specifies the width of the image.
- height: Specifies the height of the image.
- isAspectRatio: Specifies whether the image is rendered with aspect ratio or not.

- degree: Specifies the degree to rotate the image.
- opacity: Specifies the value for the image.
- isSelected: Specifies to show the image in the selected state.

In the following example, you can use the [drawImage](#) method in the button click event.

APP.JSX

```
{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
export default class App extends React.Component {
  toolbar = [];
  imgObj;
  imageEditorCreated() {
    if (Browser.isDevice) {
      this.imgObj.open('flower.png');
    }
    else {
      this.imgObj.open('bridge.png');
    }
  }
  btnClick() {
    let dimension = imgObj.getImageDimension();
    this.imgObj.drawImage('flower.png', dimension.x, dimension.y, 100,
80, true, 0);
  }
  render() {
    return (<div className='e-img-editor-sample'>
      <ImageEditorComponent ref={img => { this.imgObj = img; }}
created={this.imageEditorCreated.bind(this)} toolbar =
{this.toolbar}></ImageEditorComponent>
      <div>
        <ButtonComponent cssClass='e-primary' content='Add Image'
onClick={this.btnClick.bind(this)}>
      </div>
    </div>);
  }
}
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}
```

APP.TSX

```
{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
function App() {
  let imgObj: ImageEditorComponent;
  let toolbar = [];
}
```

```

function imageEditorCreated(): void {
  if (Browser.isDevice) {
    imgObj.open('flower.png');
  } else {
    imgObj.open('bridge.png');
  }
}
function btnClick(): void {
  let dimension: any = imgObj.getImageDimension();
  imgObj.drawImage('flower.png', dimension.x, dimension.y, 100, 80,
true, 0);
}
return (
  <div className='e-img-editor-sample'>
    <ImageEditorComponent ref={ (img) => { imgObj = img } }
created={imageEditorCreated} toolbar = {toolbar}></ImageEditorComponent>
    <div>
      <ButtonComponent cssClass='e-primary' content='Add Image' onClick
= {btnClick}/>
    </div>
  </div>
);
}
export default App;
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Image Editor</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
base/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
buttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
splitbuttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
popups/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
inputs/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
navigations/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-
editor/styles/material.css" rel="stylesheet" />
  <link href="index.css" rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></scr
ipt>
  <script src="systemjs.config.js"></script>

```

```

</head>
<body>
  <div id='image-editor'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Transform in the React Image Editor component

The Image Editor provides a range of transformation options for manipulating both the image and its annotations. These options include rotation, flipping, zooming, and panning. These transformations offer flexibility in adjusting the image and enhancing its visual appearance.

Rotate an image

The Image Editor allows to rotate the image and its annotations by a specific number of degrees clockwise or anti-clockwise using [rotate](#) method. This method takes a single parameter: the angle of rotation in degrees. A positive value will rotate the image clockwise, while a negative value will rotate it anti-clockwise.

Here is an example of rotating an image in a button click event.

APP.JSX

```

{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
export default class App extends React.Component {
  imgObj;
  imageEditorCreated() {
    if (Browser.isDevice) {
      this.imgObj.open('flower.png');
    }
    else {
      this.imgObj.open('bridge.png');
    }
  }
  btnClick() {
    this.imgObj.rotate(90);
  }
  render() {
    return (
      <div className='e-img-editor-sample'>
        <ImageEditorComponent ref={(img) => { this.imgObj = img; }}
        created={this.imageEditorCreated.bind(this)} toolbar = {[]}>
        </ImageEditorComponent>
      </div>
      <ButtonComponent cssClass='e-primary' content='Click'
      onClick={this.btnClick.bind(this)} />
    </div>);
  }
}
ReactDOM.render(<App />, document.getElementById('image-editor'));

```

```
{% endraw %}
```

APP.TSX

```
{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
function App() {
  let imgObj: ImageEditorComponent;
  function imageEditorCreated(): void {
    if (Browser.isDevice) {
      imgObj.open('flower.png');
    } else {
      imgObj.open('bridge.png');
    }
  }
  function btnClick(): void {
    imgObj.rotate(90);
  }
  return (
    <div className='e-img-editor-sample'>
      <ImageEditorComponent ref={(img) => { imgObj = img }}
created={imageEditorCreated} toolbar = {[[]]}>
        </ImageEditorComponent>
        <div>
          <ButtonComponent cssClass='e-primary' content='Click' onClick
= {btnClick}/>
        </div>
      </div>
    );
  }
export default App;
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}
```

INDEX.HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Image Editor</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
base/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
buttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
splitbuttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
popups/styles/material.css" rel="stylesheet" />
```

```

<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
inputs/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
navigations/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-
editor/styles/material.css" rel="stylesheet" />
<link href="index.css" rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></scr
ipt>
<script src="systemjs.config.js"></script>
</head>
<body>
  <div id='image-editor'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Flip an image

The Image Editor provides the [flip](#) method, which allows you to flip both the image and its annotations either horizontally or vertically. This method takes a single parameter of type `ImageEditorDirection`, which specifies the direction in which the flip operation should be applied.

The [Direction](#) parameter accepts two values: 'Horizontal' and 'Vertical'. When you choose 'Horizontal', the image and annotations will be flipped along the horizontal axis, resulting in a mirror effect. On the other hand, selecting 'Vertical' will flip them along the vertical axis, producing a vertical mirror effect.

Here is an example of flipping an image in a button click event.

APP.JSX

```

{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
export default class App extends React.Component {
  imgObj;
  imageEditorCreated() {
    if (Browser.isDevice) {
      this.imgObj.open('flower.png');
    }
    else {
      this.imgObj.open('bridge.png');
    }
  }
  btnClick() {
    this.imgObj.flip("Horizontal"); // Horizontal flip
  }
  render() {
    return (<div className='e-img-editor-sample'>
      <ImageEditorComponent ref={(img) => { this.imgObj = img; }}
created={this.imageEditorCreated.bind(this)} toolbar = {[[]]}>
    </ImageEditorComponent>

```



```

        <div>
            <ButtonComponent cssClass='e-primary' content='Click'
onClick={this.btnClick.bind(this)} />
        </div>
    </div>);
    }
}
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

APP.TSX

```

{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
function App() {
    let imgObj: ImageEditorComponent;
    function imageEditorCreated(): void {
        if (Browser.isDevice) {
            imgObj.open('flower.png');
        } else {
            imgObj.open('bridge.png');
        }
    }
    function btnClick(): void {
        imgObj.flip("Horizontal"); // Horizontal flip
    }
    return (
        <div className='e-img-editor-sample'>
            <ImageEditorComponent ref={img => { imgObj = img }}
created={imageEditorCreated} toolbar = {[[]]}>
                </ImageEditorComponent>
                <div>
                    <ButtonComponent cssClass='e-primary' content='Click' onClick
= {btnClick}/>
                </div>
            </div>
        );
    }
}
export default App;
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Image Editor</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components" />
    <meta name="author" content="Syncfusion" />

```

```

<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
base/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
buttons/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
splitbuttons/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
popups/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
inputs/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
navigations/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-
editor/styles/material.css" rel="stylesheet" />
<link href="index.css" rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></scr
ipt>
<script src="systemjs.config.js"></script>
</head>
<body>
  <div id='image-editor'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Straightening in the React Image Editor control

The straightening feature in an Image Editor allows users to adjust an image by rotating it clockwise or counter clockwise. The rotating degree value should be within the range of -45 to +45 degrees for accurate straightening. Positive values indicate clockwise rotation, while negative values indicate counter clockwise rotation.

Apply straightening to the image

The Image Editor control includes a [straightenImage](#) method, which allows you to adjust the degree of an image. This method takes one parameter that define how the straightening should be carried out:

- **degree:** Specifies the amount of rotation for straightening the image. Positive values indicate clockwise rotation, while negative values indicate counterclockwise rotation.

Here is an example of straightening the image using the [straightenImage](#) method.

APP.JSX

```

{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
export default class App extends React.Component {
  imgObj;
  imageEditorCreated() {
    if (Browser.isDevice) {
      this.imgObj.open('flower.png');
    }
  }
}

```

```

    }
    else {
      this.imgObj.open('bridge.png');
    }
  }
  render() {
    return (<div className='e-img-editor-sample'>
      <ImageEditorComponent ref={ (img) => { this.imgObj = img; }}
created={this.imageEditorCreated.bind(this)}></ImageEditorComponent>
      </div>);
  }
}
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

APP.TSX

```

{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
function App() {
  let imgObj: ImageEditorComponent;
  function imageEditorCreated(): void {
    if (Browser.isDevice) {
      imgObj.open('flower.png');
    } else {
      imgObj.open('bridge.png');
    }
  }
  return (
    <div className='e-img-editor-sample'>
      <ImageEditorComponent ref={ (img) => { imgObj = img }}
created={imageEditorCreated}></ImageEditorComponent>
      </div>
    );
}
export default App;
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Image Editor</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
base/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
buttons/styles/material.css" rel="stylesheet" />

```

```

<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-splitbuttons/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-popups/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-inputs/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-navigations/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-editor/styles/material.css" rel="stylesheet" />
<link href="index.css" rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></script>
<script src="systemjs.config.js"></script>
</head>
<body>
  <div id='image-editor'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Zoom in or out an image

The Image Editor allows to magnify an image using the [zoom](#) method. This method allows one to zoom in and out of the image and provides a more detailed view of the image's hidden areas. This method takes two parameters to perform zooming.

- zoomFactor - Specifies a value to controlling the level of magnification applied to the image.
- zoomPoint - Specifies x and y coordinates of a point as ImageEditorPoint on image to perform zooming.

Here is an example of zooming an image in a button click event.

APP.JSX

```

{% raw %}
import { ImageEditorComponent, ZoomSettingsModel } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
export default class App extends React.Component {
  imgObj;
  zoomSettings = {maxZoomFactor: 30, minZoomFactor: 0.1};
  zoomLevel = 1;
  imageEditorCreated() {
    if (Browser.isDevice) {
      this.imgObj.open('flower.png');
    }
    else {
      this.imgObj.open('bridge.png');
    }
  }
}

```

```

    zoomInClick() {
      if (zoomLevel < 1) {
        zoomLevel += 0.1;
      } else {
        zoomLevel += 1;
      }
      value = zoomSettings.maxZoomFactor;
      if (zoomLevel > value) {
        zoomLevel = value;
      }
      imgObj.zoom(zoomLevel); // Zoom in
    }
    zoomOutClick() {
      if (zoomLevel <= 1) {
        zoomLevel -= 0.1;
      } else {
        zoomLevel -= 1;
      }
      value = zoomSettings.minZoomFactor;
      if (zoomLevel < value) {
        zoomLevel = value;
      }
      imgObj.zoom(zoomLevel); // Zoom out
    }
    panClick() {
      this.imgObj.zoom(2); // Zoom in
      this.imgObj.pan(true);
    }
    render() {
      return (
        <div className='e-img-editor-sample'>
          <ImageEditorComponent ref={(img) => { this.imgObj = img; }}
            created={this.imageEditorCreated.bind(this)} toolbar = {[[]]}>
            </ImageEditorComponent>
            <div>
              <ButtonComponent cssClass='e-primary' content='Zoom In'
                onClick={this.zoomInClick.bind(this)} />
              <ButtonComponent cssClass='e-primary' content='Zoom Out'
                onClick={this.zoomOutClick.bind(this)} />
              <ButtonComponent cssClass='e-primary' content='PA n'
                onClick={this.panClick.bind(this)} />
            </div>
          </div>);
    }
  }
  ReactDOM.render(<App />, document.getElementById('image-editor'));
  {% endraw %}

```

APP.TSX

```

{% raw %}
import { ImageEditorComponent, ZoomSettingsModel } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";

```

```

function App() {
  let imgObj: ImageEditorComponent;
  let zoomSettings: ZoomSettingsModel = {maxZoomFactor: 30, minZoomFactor:
0.1};
  let zoomLevel: number = 1;
  function imageEditorCreated(): void {
    if (Browser.isDevice) {
      imgObj.open('flower.png');
    } else {
      imgObj.open('bridge.png');
    }
  }
  function zoomInClick(): void {
    if(zoomLevel < 1) {
      zoomLevel += 0.1;
    }else {
      zoomLevel += 1;
    }
    const value: any = zoomSettings.maxZoomFactor;
    if (zoomLevel > value) {
      zoomLevel = value;
    }
    imgObj.zoom(zoomLevel); // Zoom in
  }
  function zoomOutClick(): void {
    if(zoomLevel <= 1) {
      zoomLevel -= 0.1;
    }else {
      zoomLevel -= 1;
    }
    const value: any = zoomSettings.minZoomFactor;
    if (zoomLevel < value) {
      zoomLevel = value;
    }
    imgObj.zoom(zoomLevel); // Zoom out
  }
  function panClick(): void {
    imgObj.zoom(2); // Zoom in
    imgObj.pan(true);
  }
  return (
    <div className='e-img-editor-sample'>
      <ImageEditorComponent ref={img} => { imgObj = img }>
created={imageEditorCreated} toolbar = {[[]]}>
      </ImageEditorComponent>
      <div>
        <ButtonComponent cssClass='e-primary' content='Zoom In'
onClick = {zoomInClick}/>
        <ButtonComponent cssClass='e-primary' content='Zoom Out'
onClick = {zoomOutClick}/>
        <ButtonComponent cssClass='e-primary' content='PAN' onClick =
{panClick}/>
      </div>
    </div>
  );
}
export default App;

```

```
ReactDOM.render(<App />, document.getElementById('image-editor'));  
{% endraw %}
```

INDEX.HTML

```
<!DOCTYPE html>  
<html lang="en">  
<head>  
  <title>Syncfusion React Image Editor</title>  
  <meta charset="utf-8" />  
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />  
  <meta name="description" content="Essential JS 2 for React Components" />  
  <meta name="author" content="Syncfusion" />  
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-base/styles/material.css" rel="stylesheet" />  
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-buttons/styles/material.css" rel="stylesheet" />  
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-splitbuttons/styles/material.css" rel="stylesheet" />  
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-popups/styles/material.css" rel="stylesheet" />  
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-inputs/styles/material.css" rel="stylesheet" />  
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-navigations/styles/material.css" rel="stylesheet" />  
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-editor/styles/material.css" rel="stylesheet" />  
  <link href="index.css" rel="stylesheet" />  
  <script  
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></script>  
  <script src="systemjs.config.js"></script>  
</head>  
<body>  
  <div id='image-editor'>  
    <div id='loader'>Loading....</div>  
  </div>  
</body>  
</html>
```

Maximum and Minimum zoom level

The [maxZoomFactor](#) property is a useful feature in the Image Editor that allows you to define the maximum level of zoom permitted for an image. This property sets a limit on how much the image can be magnified, preventing excessive zooming that may result in a loss of image quality or visibility.

By default, the [minZoomFactor](#) value is set to 10, meaning that the image can be zoomed in up to 10 times its original size. This ensures that the zooming functionality remains within reasonable bounds and maintains the integrity of the image.

The [maxZoomFactor](#) property allows you to specify the minimum level of zoom that is allowed for an image. By setting this property, you can prevent the image from being zoomed out beyond a certain point, ensuring that it remains visible and usable even at the smallest zoom level.

By default, the [maxZoomFactor](#) value is set to 0.1, meaning that the image can be zoomed out up to 10 times its original size.

Here is an example of specifying [minZoomFactor](#) and [maxZoomFactor](#) property in [zoomSettings](#) options in an image editor.

APP.JSX

```
{% raw %}
import { ImageEditorComponent, ZoomSettingsModel } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
export default class App extends React.Component {
  imgObj;
  zoomSettings = {maxZoomFactor: 30, minZoomFactor: 0.1};
  zoomLevel = 1;
  imageEditorCreated() {
    if (Browser.isDevice) {
      this.imgObj.open('flower.png');
    }
    else {
      this.imgObj.open('bridge.png');
    }
  }
  zoomInClick() {
    if(zoomLevel < 1) {
      zoomLevel += 0.1;
    }else {
      zoomLevel += 1;
    }
    value = zoomSettings.maxZoomFactor;
    if (zoomLevel > value) {
      zoomLevel = value;
    }
    imgObj.zoom(zoomLevel); // Zoom in
  }
  zoomOutClick() {
    if(zoomLevel <= 1) {
      zoomLevel -= 0.1;
    }else {
      zoomLevel -= 1;
    }
    value = zoomSettings.minZoomFactor;
    if (zoomLevel < value) {
      zoomLevel = value;
    }
    imgObj.zoom(zoomLevel); // Zoom out
  }
  panClick() {
    this.imgObj.zoom(2); // Zoom in
    this.imgObj.pan(true);
  }
  render() {
    return (<div className='e-img-editor-sample'>
      <ImageEditorComponent ref={ (img) => { this.imgObj = img; }}
        created={this.imageEditorCreated.bind(this)} toolbar = {[[]]}>
      </ImageEditorComponent>
    
```



```

        <div>
            <ButtonComponent cssClass='e-primary' content='Zoom In'
onClick={this.zoomInClick.bind(this)} />
            <ButtonComponent cssClass='e-primary' content='Zoom Out'
onClick={this.zoomOutClick.bind(this)} />
            <ButtonComponent cssClass='e-primary' content='PAN'
onClick={this.panClick.bind(this)} />
        </div>
    </div>;
}
}
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

APP.TSX

```

{% raw %}
import { ImageEditorComponent, ZoomSettingsModel } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
function App() {
    let imgObj: ImageEditorComponent;
    let zoomSettings: ZoomSettingsModel = {maxZoomFactor: 30, minZoomFactor: 0.1};
    let zoomLevel: number = 1;
    function imageEditorCreated(): void {
        if (Browser.isDevice) {
            imgObj.open('flower.png');
        } else {
            imgObj.open('bridge.png');
        }
    }
    function zoomInClick(): void {
        if(zoomLevel < 1) {
            zoomLevel += 0.1;
        }else {
            zoomLevel += 1;
        }
        const value: any = zoomSettings.maxZoomFactor;
        if (zoomLevel > value) {
            zoomLevel = value;
        }
        imgObj.zoom(zoomLevel); // Zoom in
    }
    function zoomOutClick(): void {
        if(zoomLevel <= 1) {
            zoomLevel -= 0.1;
        }else {
            zoomLevel -= 1;
        }
        const value: any = zoomSettings.minZoomFactor;
        if (zoomLevel < value) {
            zoomLevel = value;
        }
    }
}

```

```

    }
    imgObj.zoom(zoomLevel); // Zoom out
  }
  function panClick(): void {
    imgObj.zoom(2); // Zoom in
    imgObj.pan(true);
  }
  return (
    <div className='e-img-editor-sample'>
      <ImageEditorComponent ref={img} => { imgObj = img } }
    created={imageEditorCreated} toolbar = {[[]]}>
      </ImageEditorComponent>
      <div>
        <ButtonComponent cssClass='e-primary' content='Zoom In'
        onClick = {zoomInClick}/>
        <ButtonComponent cssClass='e-primary' content='Zoom Out'
        onClick = {zoomOutClick}/>
        <ButtonComponent cssClass='e-primary' content='PAAn' onClick =
        {panClick}/>
      </div>
    </div>
  );
}
export default App;
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% enddraw %}

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Image Editor</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
  base/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
  buttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
  splitbuttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
  popups/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
  inputs/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
  navigations/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-
  editor/styles/material.css" rel="stylesheet" />
  <link href="index.css" rel="stylesheet" />
  <script
  src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></scr
  ipt>
  <script src="systemjs.config.js"></script>

```

```
</head>
<body>
  <div id='image-editor'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>
```

Panning an image

The Image Editor allows to pan an image when the image exceeds the canvas size or selection range. When zooming in on an image or applying a selection for cropping, it is common for the image to exceed the size of the canvas or exceed the selection range. So, the panning is used to view the entire image, by clicking on the canvas and dragging it in the direction they want to move.

Here is an example of Panning an image in a button click event.

APP.JSX

```
{% raw %}
import { ImageEditorComponent, ZoomSettingsModel } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
export default class App extends React.Component {
  imgObj;
  zoomSettings = {maxZoomFactor: 30, minZoomFactor: 0.1};
  zoomLevel = 1;
  imageEditorCreated() {
    if (Browser.isDevice) {
      this.imgObj.open('flower.png');
    }
    else {
      this.imgObj.open('bridge.png');
    }
  }
  zoomInClick() {
    if(zoomLevel < 1) {
      zoomLevel += 0.1;
    }else {
      zoomLevel += 1;
    }
    value = zoomSettings.maxZoomFactor;
    if (zoomLevel > value) {
      zoomLevel = value;
    }
    imgObj.zoom(zoomLevel); // Zoom in
  }
  zoomOutClick() {
    if(zoomLevel <= 1) {
      zoomLevel -= 0.1;
    }else {
      zoomLevel -= 1;
    }
    value = zoomSettings.minZoomFactor;
```

```

        if (zoomLevel < value) {
            zoomLevel = value;
        }
        imgObj.zoom(zoomLevel); // Zoom out
    }
    panClick() {
        this.imgObj.zoom(2); // Zoom in
        this.imgObj.pan(true);
    }
    render() {
        return (<div className='e-img-editor-sample'>
            <ImageEditorComponent ref={(img) => { this.imgObj = img; }}
created={this.imageEditorCreated.bind(this)} toolbar = {[[]]}>
                </ImageEditorComponent>
                <div>
                    <ButtonComponent cssClass='e-primary' content='Zoom In'
onClick={this.zoomInClick.bind(this)} />
                    <ButtonComponent cssClass='e-primary' content='Zoom Out'
onClick={this.zoomOutClick.bind(this)} />
                    <ButtonComponent cssClass='e-primary' content='PAN'
onClick={this.panClick.bind(this)} />
                </div>
            </div>);
    }
}
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

APP.TSX

```

{% raw %}
import { ImageEditorComponent, ZoomSettingsModel } from '@syncfusion/ej2-
react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
function App() {
    let imgObj: ImageEditorComponent;
    let zoomSettings: ZoomSettingsModel = {maxZoomFactor: 30, minZoomFactor:
0.1};
    let zoomLevel: number = 1;
    function imageEditorCreated(): void {
        if (Browser.isDevice) {
            imgObj.open('flower.png');
        } else {
            imgObj.open('bridge.png');
        }
    }
    function zoomInClick(): void {
        if(zoomLevel < 1) {
            zoomLevel += 0.1;
        }else {
            zoomLevel += 1;
        }
        const value: any = zoomSettings.maxZoomFactor;

```

```

        if (zoomLevel > value) {
            zoomLevel = value;
        }
        imgObj.zoom(zoomLevel); // Zoom in
    }
    function zoomOutClick(): void {
        if (zoomLevel <= 1) {
            zoomLevel -= 0.1;
        } else {
            zoomLevel -= 1;
        }
        const value: any = zoomSettings.minZoomFactor;
        if (zoomLevel < value) {
            zoomLevel = value;
        }
        imgObj.zoom(zoomLevel); // Zoom out
    }
    function panClick(): void {
        imgObj.zoom(2); // Zoom in
        imgObj.pan(true);
    }
    return (
        <div className='e-img-editor-sample'>
            <ImageEditorComponent ref={ (img) => { imgObj = img } }
created={imageEditorCreated} toolbar = {[[]]}>
                </ImageEditorComponent>
                <div>
                    <ButtonComponent cssClass='e-primary' content='Zoom In'
onClick = {zoomInClick}/>
                    <ButtonComponent cssClass='e-primary' content='Zoom Out'
onClick = {zoomOutClick}/>
                    <ButtonComponent cssClass='e-primary' content='PAN' onClick =
{panClick}/>
                </div>
            </div>
        );
    }
    export default App;
    ReactDOM.render(<App />, document.getElementById('image-editor'));
    {% endraw %}

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Image Editor</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components" />
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
base/styles/material.css" rel="stylesheet" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
buttons/styles/material.css" rel="stylesheet" />

```

```
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-splitbuttons/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-popups/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-inputs/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-navigations/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-editor/styles/material.css" rel="stylesheet" />
<link href="index.css" rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></script>
<script src="systemjs.config.js"></script>
</head>
<body>
  <div id='image-editor'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>
```

Panning event

The [panning](#) event is activated when the user begins dragging the image within the canvas. This event provides an opportunity to perform specific actions, like adjusting the position of an image, in response to the gesture of panning. And these event uses [panEventArgs](#) to handle the panning action when the user starts dragging the image.

The parameter available in the [panEventArgs](#) events are,

- `PanEventArgs.startPoint` - The x and y coordinates as `ImageEditorPoint` for the start point.
- `PanEventArgs.endpoint` - The x and y coordinates as `ImageEditorPoint` for the end point.
- `PanEventArgs.cancel` – Specifies the boolean value to cancel the panning action.

Zooming event

The [zooming](#) event is triggered when performing zooming the image. This event can be used to perform certain actions, such as updating the position of the image. This event is passed an object that contains information about the zooming event, such as the amount of zooming performed. And this event uses [ZoomEventArgs](#) to handle the zooming action in the image.

The parameter available in the Zooming event is,

- `ZoomEventArgs.zoomPoint` - The x and y coordinates as `ImageEditorPoint` for the zoom point.
- `ZoomEventArgs.previousZoomFactor` - The previous zoom factor applied in the image editor.
- `ZoomEventArgs.currentZoomFactor` - The current zoom factor to be applied in the image editor.
- `ZoomEventArgs.cancel` – Specify a boolean value to cancel the zooming action.
- `ZoomEventArgs.zoomTrigger` - The type of zooming performed in the image editor.

Rotating event

The [rotating](#) event is triggered when performing rotating the image. This event is passed an object that contains information about the rotating event, such as the amount of rotation performed. And this event uses [RotateEventArgs](#) to handle the rotating action in the image.

The parameter available in the Rotating event is,

- RotateEventArgs.previousDegree: The degree of rotation before the recent rotation action was applied in the Image Editor.
- RotateEventArgs.currentDegree: The current degree of rotation after the rotation action has been performed in the Image Editor.

RotateEventArgs.cancel – Specifies a boolean value to cancel the rotating action.

Flipping event

The [flipping](#) event is triggered when performing flipping the image. This event is passed an object that contains information about the flipping event, such as the amount of flip performed. And this event uses [FlipEventArgs](#) to handle the flipping action in the image.

The parameter available in the [flipping](#) event is,

- FlipEventArgs.direction - The flip direction as ImageEditorDirection to be applied in the image editor.
- FlipEventArgs.cancel - Specifies a boolean value to cancel the flip action.

Toolbar in the React Image Editor component

The toolbars in the Image Editor are a key component for interacting with and editing images. They provide a range of tools and options that can be customized to suit the needs and preferences. Add or remove items from the toolbar to create a personalized set of tools, or they can even create their own custom toolbar from scratch. This flexibility and customization allow them to create a unique image editing experience that is tailored to their specific needs and workflow.

In the Image Editor, the [toolbar](#) property provides the ability to customize the toolbar by adding or removing items, as well as defining a completely custom toolbar. This feature is valuable for creating a personalized image editing experience that aligns with specific requirements and workflows.

Built-in toolbar items

Specifies the toolbar items to perform UI interactions. Refer to the built-in toolbar items for the default value.

- Crop
- Transform
- Annotate
- ZoomIn
- ZoomOut
- Open
- Reset
- Save
- Pan

Add a custom toolbar items

The [toolbar](#) property in the Image Editor allows to add or remove toolbar items to include only the tools they frequently use, streamlining the editing process and reducing clutter.

Here is an example of adding custom toolbar items to rotate and flip transformation using [toolbar](#) property.

APP.JSX

```
{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import * as React from 'react';
import * as ReactDOM from "react-dom";
export default class App extends React.Component {
  toolbar = ['Annotate', "Line", "Rectangle", "Text", 'ZoomIn', 'ZoomOut',
  { text: 'Custom' }];
  imageEditorCreated() {
    if (Browser.isDevice) {
      this.imgObj.open('flower.png');
    }
    else {
      this.imgObj.open('bridge.png');
    }
  }
  toolbarItemClicked(args) {
    if (args.item.text == "Custom") {
      this.imgObj.rotate(90);
    }
  }
  render() {
    return (<div id="wrapperDiv">
      <ImageEditorComponent toolbar={this.toolbar} ref={(img) => {
        this.imgObj = img; }} created={this.imageEditorCreated.bind(this)}
        toolbarItemClicked={this.toolbarItemClicked.bind(this)} />
    </div>);
  }
}
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}
```

APP.TSX

```
{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
function App() {
  let imgObj: ImageEditorComponent;
  let toolbar = ['Annotate', "Line", "Rectangle", "Text", 'ZoomIn',
  'ZoomOut', {text: 'Custom'}];
  function imageEditorCreated(): void {
    if (Browser.isDevice) {
      imgObj.open('flower.png');
    }
    else {
      imgObj.open('bridge.png');
    }
  }
}
```



```

    }
  }
  function toolbarItemClicked(args): void {
    if(args.item.text == "Custom") {
      imgObj.rotate(90);
    }
  }
  return (
    <div id="wrapperDiv">
      <ImageEditorComponent toolbar={toolbar} ref={(img) => { imgObj =
img }} created={imageEditorCreated} toolbarItemClicked={toolbarItemClicked}/>
    </div>
  );
}
export default App;
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Image Editor</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
base/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
buttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
splitbuttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
popups/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
inputs/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
navigations/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-
editor/styles/material.css" rel="stylesheet" />
  <link href="index.css" rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></scr
ipt>
  <script src="systemjs.config.js"></script>
</head>
<body>
  <div id='image-editor'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Show or hide a toolbar

The [toolbar](#) property controls the visibility of the toolbar in the Image Editor. When the [toolbar](#) property is set to an empty list, the toolbar is hidden. Conversely, if the [toolbar](#) property contains a list of items, the toolbar is shown, displaying the specified items. This feature provides flexibility for users to personalize their image editing experience.

Here is an example of hiding the toolbar of the image editor using [toolbar](#) property.

APP.JSX

```
{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
export default class App extends React.Component {
  imgObj;
  toolbar = ['Annotate', 'Finetune', 'Filter', 'Confirm', 'Reset', 'Save', 'ZoomIn', 'ZoomOut'];
  imageEditorCreated() {
    if (Browser.isDevice) {
      this.imgObj.open('flower.png');
    }
    else {
      this.imgObj.open('bridge.png');
    }
  }
  render() {
    return (
      <div className='e-img-editor-sample'>
        <ImageEditorComponent ref={(img) => { this.imgObj = img; }}
        created={this.imageEditorCreated.bind(this)} toolbar = {toolbar}>
          </ImageEditorComponent>
        </div>
      );
  }
}
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}
```

APP.TSX

```
{% raw %}
import { ImageEditorComponent, ToolbarEventArgs } from '@syncfusion/ej2-react-image-editor';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
function App() {
  let imgObj: ImageEditorComponent;
  let toolbar = ['Annotate', 'Finetune', 'Filter', 'Confirm', 'Reset', 'Save', 'ZoomIn', 'ZoomOut'];
  function imageEditorCreated(): void {
    if (Browser.isDevice) {
      imgObj.open('flower.png');
    }
    else {
      imgObj.open('bridge.png');
    }
  }
}
```

```

    }
    return (
      <div className='e-img-editor-sample'>
        <ImageEditorComponent ref={(img) => { imgObj = img }}
        created={imageEditorCreated} toolbar = {toolbar}>
          </ImageEditorComponent>
        </div>
      );
    }
  }
  export default App;
  ReactDOM.render(<App />, document.getElementById('image-editor'));
  {% enddraw %}

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Image Editor</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
base/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
buttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
splitbuttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
popups/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
inputs/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
navigations/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-
editor/styles/material.css" rel="stylesheet" />
  <link href="index.css" rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></scr
ipt>
  <script src="systemjs.config.js"></script>
</head>
<body>
  <div id='image-editor'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Show or hide a toolbar item

The [toolbar](#) property is utilized to control the visibility of toolbar items in the Image Editor. By default, the [toolbar](#) property includes the default toolbar items. So, if you wish to hide the default toolbar items then you need to explicitly define the required items using [toolbar](#) property. This allows you to

customize the toolbar by displaying only the specific items you require, tailoring the editing experience to your preferences.

Here is an example of hiding the cropping and selection toolbar items using [toolbar](#) property.

APP.JSX

```
{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
export default class App extends React.Component {
  imgObj;
  toolbar = ['Annotate' , 'Finetune' , 'Filter' , 'Confirm' , 'Reset' ,
'Save', 'ZoomIn', 'ZoomOut'];
  imageEditorCreated() {
    if (Browser.isDevice) {
      this.imgObj.open('flower.png');
    }
    else {
      this.imgObj.open('bridge.png');
    }
  }
  render() {
    return (<div className='e-img-editor-sample'>
      <ImageEditorComponent ref={ (img) => { this.imgObj = img; }}
created={this.imageEditorCreated.bind(this)} toolbar = {toolbar}>
        </ImageEditorComponent>
      </div>);
  }
}
ReactDOM.render(<App />, document.getElementById('image-editor'));
```

APP.TSX

```
{% raw %}
import { ImageEditorComponent, ToolbarEventArgs } from '@syncfusion/ej2-
react-image-editor';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
function App() {
  let imgObj: ImageEditorComponent;
  let toolbar = ['Annotate' , 'Finetune' , 'Filter' , 'Confirm' , 'Reset' ,
'Save', 'ZoomIn', 'ZoomOut'];
  function imageEditorCreated(): void {
    if (Browser.isDevice) {
      imgObj.open('flower.png');
    } else {
      imgObj.open('bridge.png');
    }
  }
  return (
    <div className='e-img-editor-sample'>
```

```

        <ImageEditorComponent ref={(img) => { imgObj = img }}
        created={imageEditorCreated} toolbar = {toolbar}>
        </ImageEditorComponent>
    </div>
    );
}
export default App;
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% enddraw %}

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Image Editor</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components" />
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
base/styles/material.css" rel="stylesheet" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
buttons/styles/material.css" rel="stylesheet" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
splitbuttons/styles/material.css" rel="stylesheet" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
popups/styles/material.css" rel="stylesheet" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
inputs/styles/material.css" rel="stylesheet" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
navigations/styles/material.css" rel="stylesheet" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-
editor/styles/material.css" rel="stylesheet" />
    <link href="index.css" rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></scr
ipt>
    <script src="systemjs.config.js"></script>
</head>
<body>
    <div id='image-editor'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Enable or disable a toolbar item

The [toolbar](#) property is employed to enable or disable toolbar items in the Image Editor. By default, the [toolbar](#) property includes the default toolbar items, and these items cannot be disabled. However, if you have defined custom toolbar items using the [toolbarItemModel](#), you can enable or disable them by configuring their respective properties within the [toolbar](#) property. This provides the flexibility to control the availability and functionality of custom toolbar items based on your specific requirements.

Here is an example of disabling the custom toolbar item using [toolbar](#) property.

Toolbar template

The [toolbarTemplate](#) property in the Image Editor provides the capability to fully customize the toolbar by supplying a custom template. This feature is valuable when you want to create a distinct and personalized image editing experience that goes beyond the default toolbar or the customizable toolbar options offered by the Image Editor. By defining a custom template for the toolbar, you have complete control over its layout, appearance, and functionality. This empowers you to design a unique and tailored toolbar that aligns perfectly with your specific requirements and desired user experience.

Here is an example of using [toolbarTemplate](#) to render only the button to toggle the freehand draw option.

The toolbar of the Image Editor can be replaced with the user specific UI using the [toolbarTemplate](#) property.

APP.JSX

```
{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
export default class App extends React.Component {
  imgObj;
  imageEditorCreated() {
    if (Browser.isDevice) {
      this.imgObj.open('flower.png');
    }
    else {
      this.imgObj.open('bridge.png');
    }
  }
  buttonTemplate(data) {
    return (<ButtonComponent cssClass='e-primary' content='Click'
onClick={this.btnClick.bind(this)} />);
  }
  btnClick() {
    this.imgObj.freeHandDraw(true);
  }
  render() {
    return (<div className='e-img-editor-sample'>
      <ImageEditorComponent toolbarTemplate={this.buttonTemplate}
ref={(img) => { this.imgObj = img; }}
created={this.imageEditorCreated.bind(this)} toolbar = {[[]]} />
      </div>);
  }
}
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}
```

APP.TSX

```
{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
```

```

import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
function App() {
  let imgObj: ImageEditorComponent;
  function imageEditorCreated(): void {
    if (Browser.isDevice) {
      imgObj.open('flower.png');
    } else {
      imgObj.open('bridge.png');
    }
  }
  function buttonTemplate(data) {
    return (<ButtonComponent cssClass='e-primary' content='Click'
onClick = {btnClick}/>);
  }
  function btnClick(): void {
    imgObj.freeHandDraw(true);
  }
  return (
    <div className='e-img-editor-sample'>
      <ImageEditorComponent toolbarTemplate={buttonTemplate} ref={ (img) =>
{ imgObj = img } } created={imageEditorCreated} toolbar = {[]}/>
    </div>
  );
}
export default App;
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% enddraw %}

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Image Editor</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
base/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
buttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
splitbuttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
popups/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
inputs/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
navigations/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-
editor/styles/material.css" rel="stylesheet" />
  <link href="index.css" rel="stylesheet" />

```

```

<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></scr
ipt>
<script src="systemjs.config.js"></script>
</head>
<body>
  <div id='image-editor'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Customize Contextual Toolbar

The [toolbarUpdating](#) event is triggered when inserting or selecting annotations, which opens the contextual toolbar in the Image Editor. Within this event, the [toolbarItems](#) property in the [ToolbarEventArgs](#) is utilized to add or remove contextual toolbar items.

In the following example, the contextual toolbar for rectangle will be rendered with only stroke color by excluding fill color and stroke width using [toolbarUpdating](#) event.

APP.JSX

```

{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
export default class App extends React.Component {
  imgObj;
  imageEditorCreated() {
    if (Browser.isDevice) {
      this.imgObj.open('flower.png');
    }
    else {
      this.imgObj.open('bridge.png');
    }
  }
  toolbarUpdating(args) {
    if (args.toolbarType === 'pen') {
      args.toolbarItems.forEach(item => {
        if (item.align === 'Center' && (item.tooltipText === 'Stroke
Width' || item.tooltipText === 'Remove' || item.type === 'Separator')) {
          item.visible = false;
        }
      });
    }
  }
  render() {
    return (<div className='e-img-editor-sample'>
      <ImageEditorComponent ref={(img) => { this.imgObj = img; }}
      toolbarUpdating={this.toolbarUpdating.bind(this)}
      created={this.imageEditorCreated.bind(this)} toolbar = {[[]]}>
        </ImageEditorComponent>
      </div>);
  }
}

```



```
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}
```

APP.TSX

```
{% raw %}
import { ImageEditorComponent, ToolbarEventArgs } from '@syncfusion/ej2-react-image-editor';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
import { ItemModel } from '@syncfusion/ej2-navigations';
function App() {
    let imgObj: ImageEditorComponent;
    function imageEditorCreated(): void {
        if (Browser.isDevice) {
            imgObj.open('flower.png');
        } else {
            imgObj.open('bridge.png');
        }
    }
    function toolbarUpdating(args: ToolbarEventArgs): void {
        if (args.toolbarType === 'pen') {
            args.toolbarItems.forEach((item: ItemModel) => {
                if (item.align === 'Center' && (item.tooltipText === 'Stroke Width' || item.tooltipText === 'Remove' || item.type === 'Separator')) {
                    item.visible = false;
                }
            });
        }
    }
    return (
        <div className='e-img-editor-sample'>
            <ImageEditorComponent ref={img} => { imgObj = img } {
toolbarUpdating={toolbarUpdating} created={imageEditorCreated}>
            </ImageEditorComponent>
        </div>
    );
}
export default App;
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}
```

INDEX.HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Image Editor</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components" />
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-base/styles/material.css" rel="stylesheet" />
```

```

<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
buttons/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
splitbuttons/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
popups/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
inputs/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
navigations/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-
editor/styles/material.css" rel="stylesheet" />
<link href="index.css" rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></scr
ipt>
<script src="systemjs.config.js"></script>
</head>
<body>
  <div id='image-editor'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Toolbar item clicked event

The [toolbarItemClicked](#) event is triggered when a toolbar item is clicked in the Image Editor. This event is particularly useful when you have added custom options to both the main toolbar and contextual toolbar, as it allows you to capture the user's interaction with those custom options. By subscribing to the [toolbarItemClicked](#) event, you can execute specific actions or handle logic based on the toolbar item that was clicked.

Here is an example of toolbar item clicking event using [toolbarItemClicked](#) property.

APP.JSX

```

{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
export default class App extends React.Component {
  imgObj;
  toolbar = ['Annotate', "Line", "Rectangle", "Text", 'ZoomIn', 'ZoomOut',
{ text: 'Custom' }];
  toolbarItemClicked (args) {
    if (args.item.text === 'Custom') {
      imageEditorObj.rotate(90);
    }
  }
  imageEditorCreated() {
    if (Browser.isDevice) {
      this.imgObj.open('flower.png');
    }
    else {
      this.imgObj.open('bridge.png');
    }
  }
}

```

```

    }
  }
  render() {
    return (<div className='e-img-editor-sample'>
      <ImageEditorComponent ref={img} => { this.imgObj = img; }}
      toolbar={this.toolbar} created={this.imageEditorCreated.bind(this)}
      toolbarItemClicked={this.toolbarItemClicked.bind(this)}>
        </ImageEditorComponent>
      </div>);
  }
}
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

APP.TSX

```

{% raw %}
import { ImageEditorComponent, ToolbarEventArgs, ClickEventArgs } from
'@syncfusion/ej2-react-image-editor';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
function App() {
  let imgObj: ImageEditorComponent;
  let toolbar = ['Annotate', "Line", "Rectangle", "Text", 'ZoomIn',
'ZoomOut', {text: 'Custom'}];
  function toolbarItemClicked (args: ClickEventArgs) {
    if (args.item.text === 'Custom') {
      imgObj.rotate(90);
    }
  }
  function imageEditorCreated(): void {
    if (Browser.isDevice) {
      imgObj.open('flower.png');
    } else {
      imgObj.open('bridge.png');
    }
  }
  return (
    <div className='e-img-editor-sample'>
      <ImageEditorComponent ref={img} => { imgObj = img }>
        toolbar={toolbar} created={imageEditorCreated}
        toolbarItemClicked={toolbarItemClicked} >
      </ImageEditorComponent>
    </div>
  );
}
export default App;
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>

```

```
<title>Syncfusion React Image Editor</title>
<meta charset="utf-8" />
<meta name="viewport" content="width=device-width, initial-scale=1.0" />
<meta name="description" content="Essential JS 2 for React Components" />
<meta name="author" content="Syncfusion" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
base/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
buttons/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
splitbuttons/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
popups/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
inputs/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
navigations/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-
editor/styles/material.css" rel="stylesheet" />
<link href="index.css" rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></scr
ipt>
<script src="systemjs.config.js"></script>
</head>
<body>
  <div id='image-editor'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>
```

Quick access toolbar in the React Image Editor component

The quick access toolbars in the React Image Editor play a vital role in facilitating interactions with annotations like Rectangle, Ellipse, Line, Arrow, and Path. These toolbars offer a diverse array of tools and options that can be tailored to match the specific requirements and preferences associated with each annotation type. The toolbar is only displayed when an annotation is selected, ensuring a focused and contextual user experience. Users have the flexibility to add or remove items from the toolbar, allowing them to create a personalized set of tools. Additionally, users can also build a completely custom toolbar from the ground up, providing them with complete control over the available options and functionality.

Add a custom toolbar item

The quick access toolbar that appears when inserting annotations in the Image Editor is customizable using the [quickAccessToolbarOpen](#) event. This event is triggered when the quick access toolbar is opened, allowing you to modify its contents. To add additional toolbar items to the quick access toolbar, you can access the `toolbarItems` property of the `QuickAccessToolbarEventArgs` within the event handler. By adding or removing items from the `toolbarItems` property based on the `item` property, you can customize the options available in the quick access toolbar according to your needs. This gives you the ability to extend the functionality of the quick access toolbar and provide additional tools and options for working with inserted annotations.

Here is an example of adding the custom toolbar item to the quick access toolbar.

APP.JSX

```
{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
export default class App extends React.Component {
  imgObj;
  imageEditorCreated() {
    if (Browser.isDevice) {
      this.imgObj.open('flower.png');
    }
    else {
      this.imgObj.open('bridge.png');
    }
  }
  quickAccessToolbarOpen(args) {
    args.toolbarItems = ['Clone'];
  }
  render() {
    return (<div className='e-img-editor-sample'>
      <ImageEditorComponent ref={(img) => { this.imgObj = img; }}
        created={this.imageEditorCreated.bind(this)}
        quickAccessToolbarOpen={this.quickAccessToolbarOpen.bind(this)} toolbar =
        {[]}>
        </ImageEditorComponent>
      </div>);
  }
}
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}
```

APP.TSX

```
{% raw %}
import { ImageEditorComponent, ImageFinetuneOption } from '@syncfusion/ej2-
react-image-editor';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
function App() {
  let imgObj: ImageEditorComponent;
  function imageEditorCreated(): void {
    if (Browser.isDevice) {
      imgObj.open('flower.png');
    } else {
      imgObj.open('bridge.png');
    }
  }
  function quickAccessToolbarOpen(args: any): void {
    args.toolbarItems = ['Clone'];
  }
  return (
    <div className='e-img-editor-sample'>
```

```

    <ImageEditorComponent ref={{img) => { imgObj = img }}
    created={imageEditorCreated} quickAccessToolbarOpen= {quickAccessToolbarOpen}
  ></ImageEditorComponent>
  </div>
  );
}
export default App;
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% enddraw %}

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Image Editor</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
base/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
buttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
splitbuttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
popups/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
inputs/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
navigations/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-
editor/styles/material.css" rel="stylesheet" />
  <link href="index.css" rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></scr
ipt>
  <script src="systemjs.config.js"></script>
</head>
<body>
  <div id='image-editor'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Undo and redo actions in the Vue Image Editor

The undo and redo functionalities provide a way to reverse and repeat editing actions performed on an image. These features are essential for maintaining control and flexibility during the editing process.

In an image editor, the undo and redo history typically have a limited capacity, and the number of steps that can be stored is 16 steps, meaning that the editor keeps track of the most recent 16 actions

performed on the image. Once the history reaches its maximum capacity, any new actions beyond the 16th step will result in the removal of the oldest action from the history.

Undo the action

The undo action in an image editor allows users to revert the most recent editing action or a series of actions back to their previous state. When the undo command is triggered, the image editor undoes the last applied modification, effectively restoring the image to its state before the action was performed. The undo action is useful for correcting mistakes, removing unwanted changes, or exploring different editing options without permanently altering the image.

Redo the action

The redo action in an image editor allows users to reapply previously undone actions or modifications to the image. When the redo command is triggered, the image editor reapplies the last action that was undone, bringing the image back to the state it was in after the action was initially applied. The redo is useful when users want to repeat an action that was previously undone or restore changes that were temporarily reversed.

Here is an example of undoing and redoing the action using the [undo](#) and [redo](#) method.

APP.JSX

```
{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
export default class App extends React.Component {
  imgObj;
  imageEditorCreated() {
    if (Browser.isDevice) {
      this.imgObj.open('flower.png');
    }
    else {
      this.imgObj.open('bridge.png');
    }
  }
  btnClick() {
    let dimension = imgObj.getImageDimension();
    imgObj.drawText(dimension.x, dimension.y);
  }
  undoClick() {
    this.imgObj.undo();
  }
  redoClick() {
    this.imgObj.redo();
  }
  render() {
    return (<div className='e-img-editor-sample'>
      <ImageEditorComponent ref={ (img) => { this.imgObj = img; }}
        created={this.imageEditorCreated.bind(this)} toolbar = {[[]]}>
        </ImageEditorComponent>
      <div>
        <ButtonComponent cssClass='e-primary' content='Click'
          onClick={this.btnClick.bind(this)} />
      </div>
    </div>);
  }
}
```

```

        <ButtonComponent cssClass='e-primary' content='Undo'
onClick={this.undoClick.bind(this)}>/>
        <ButtonComponent cssClass='e-primary' content='Redo'
onClick={this.redoClick.bind(this)}>/>
      </div>
    </div>);
  }
}
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

APP.TSX

```

{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
function App() {
  let imgObj: ImageEditorComponent;
  function imageEditorCreated(): void {
    if (Browser.isDevice) {
      imgObj.open('flower.png');
    } else {
      imgObj.open('bridge.png');
    }
  }
  function btnClick(): void {
    let dimension: any = imgObj.getImageDimension();
    imgObj.drawText(dimension.x, dimension.y);
  }
  function undoClick(): void {
    imgObj.undo();
  }
  function redoClick(): void {
    imgObj.redo();
  }
  return (
    <div className='e-img-editor-sample'>
      <ImageEditorComponent ref={(img) => { imgObj = img }}
created={imageEditorCreated} toolbar = {[[]]}>
        </ImageEditorComponent>
        <div>
          <ButtonComponent cssClass='e-primary' content='Click'
onClick = {btnClick}>/>
          <ButtonComponent cssClass='e-primary' content='Undo'
onClick = {undoClick}>/>
          <ButtonComponent cssClass='e-primary' content='Redo'
onClick = {redoClick}>/>
        </div>
      </div>
    );
}
export default App;
ReactDOM.render(<App />, document.getElementById('image-editor'));

```



```
{% endraw %}
```

INDEX.HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Image Editor</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
base/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
buttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
splitbuttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
popups/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
inputs/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
navigations/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-
editor/styles/material.css" rel="stylesheet" />
  <link href="index.css" rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></scr
ipt>
  <script src="systemjs.config.js"></script>
</head>
<body>
  <div id='image-editor'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>
```

Filters in the React Image Editor component

Filters are pre-defined effects that can be applied to an image to alter its appearance or mood. Image filters can be used to add visual interest or to enhance certain features of the image. Some common types of image filters include cold, warm, chrome, sepia, and invert. This can be done by either using the toolbar or the [applyImageFilter](#) method which takes a single parameter: the filter applied to an image.

Apply filter effect

The [applyImageFilter](#) method is utilized to apply filters to an image. By passing the desired filter type as the first parameter of the method, specified as [ImageFilterOption](#) the method applies the corresponding filter to the image. This allows for easy and convenient application of various filters to enhance or modify the image based on the chosen filter type.

The [applyImageFilter](#) method is used to perform filtering by specifying the type of filter as [ImageFilterOption](#) and send it a first parameter of the method.

Here is an example of filtering using the [applyImageFilter](#) method.

APP.JSX

```
{% raw %}
import { ImageEditorComponent, ImageFilterOption } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
export default class App extends React.Component {
  imgObj;
  imageEditorCreated() {
    if (Browser.isDevice) {
      this.imgObj.open('flower.png');
    }
    else {
      this.imgObj.open('bridge.png');
    }
  }
  chromeClick() {
    this.imgObj.applyImageFilter(ImageFilterOption.Chrome);
  }
  coldClick() {
    this.imgObj.applyImageFilter(ImageFilterOption.Cold);
  }
  warmClick() {
    this.imgObj.applyImageFilter(ImageFilterOption.Warm);
  }
  grayScaleClick() {
    this.imgObj.applyImageFilter(ImageFilterOption.Grayscale);
  }
  sepiaClick() {
    this.imgObj.applyImageFilter(ImageFilterOption.Sepia);
  }
  invertClick() {
    this.imgObj.applyImageFilter(ImageFilterOption.Invert);
  }
  render() {
    return (<div className='e-img-editor-sample'>
      <ImageEditorComponent ref={ (img) => { this.imgObj = img; }}
        created={this.imageEditorCreated.bind(this)} toolbar = {[[]]}>
        </ImageEditorComponent>
        <div>
          <ButtonComponent cssClass='e-primary'
content='Chrome' onClick={this.chromeClick.bind(this)} />
          <ButtonComponent cssClass='e-primary' content='Cold'
onClick={this.coldClick.bind(this)} />
          <ButtonComponent cssClass='e-primary' content='Warm'
onClick={this.warmClick.bind(this)} />
          <ButtonComponent cssClass='e-primary'
content='GrayScale' onClick={this.grayScaleClick.bind(this)} />
          <ButtonComponent cssClass='e-primary' content='Sepia'
onClick={this.sepiaClick.bind(this)} />
          <ButtonComponent cssClass='e-primary'
content='Invert' onClick={this.invertClick.bind(this)} />

```

```

        </div>
      </div>);
    }
  }
  ReactDOM.render(<App />, document.getElementById('image-editor'));
  {% endraw %}

```

APP.TSX

```

{% raw %}
import { ImageEditorComponent, ImageFilterOption } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";

function App() {
  let imgObj: ImageEditorComponent;
  function imageEditorCreated(): void {
    if (Browser.isDevice) {
      imgObj.open('flower.png');
    } else {
      imgObj.open('bridge.png');
    }
  }
  function chromeClick(): void {
    imgObj.applyImageFilter(ImageFilterOption.Chrome);
  }
  function coldClick(): void {
    imgObj.applyImageFilter(ImageFilterOption.Cold);
  }
  function warmClick(): void {
    imgObj.applyImageFilter(ImageFilterOption.Warm);
  }
  function grayScaleClick(): void {
    imgObj.applyImageFilter(ImageFilterOption.Grayscale);
  }
  function sepiaClick(): void {
    imgObj.applyImageFilter(ImageFilterOption.Sepia);
  }
  function invertClick(): void {
    imgObj.applyImageFilter(ImageFilterOption.Invert);
  }
  return (
    <div className='e-img-editor-sample'>
      <ImageEditorComponent ref={img} => { imgObj = img } {
created={imageEditorCreated} toolbar = {[[]]}>
        </ImageEditorComponent>
        <div>
          <ButtonComponent cssClass='e-primary' content='Chrome'
onClick = {chromeClick}/>
          <ButtonComponent cssClass='e-primary' content='Cold'
onClick = {coldClick}/>
          <ButtonComponent cssClass='e-primary' content='Warm'
onClick = {warmClick}/>

```

```

        <ButtonComponent cssClass='e-primary' content='Grayscale'
onClick = {grayScaleClick}/>
        <ButtonComponent cssClass='e-primary' content='Sepia'
onClick = {sepiaClick}/>
        <ButtonComponent cssClass='e-primary' content='Invert'
onClick = {invertClick}/>
      </div>
    </div>
  );
}
export default App;
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Image Editor</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
base/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
buttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
splitbuttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
popups/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
inputs/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
navigations/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-
editor/styles/material.css" rel="stylesheet" />
  <link href="index.css" rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></scr
ipt>
  <script src="systemjs.config.js"></script>
</head>
<body>
  <div id='image-editor'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>

```

Image filtering event

The [imageFiltering](#) event is triggered when applying filtering on the image. This event is passed an object that contains information about the filtering event, such as the type of filtering.

The parameter available in the [ImageFilterEventArgs](#) event is,

[ImageFilterEventArgs.filter](#) - The type of filtering as [ImageFilterOption](#) to be applied in the image editor.

[ImageFilterEventArgs.cancel](#) – Specifies to cancel the filtering action.

Please note that the Filter and Finetune features were unavailable on iOS due to the non-functioning [CanvasContext.filter](#) property on this platform.

Finetune in Image Editor component

Fine-tuning involves making precise adjustments to the settings of an image filter in order to achieve a specific desired effect. It provides control over the intensity and specific aspects of the filter's impact on the image. For example, fine-tuning allows you to modify parameters like brightness, saturation, or other relevant properties to fine-tune the level or quality of the filter's effect. This level of control enables you to achieve the exact look or outcome you want for your image.

Adjust the brightness, contrast, or sharpness

The [finetuneImage](#) method is designed to facilitate fine-tuning operations on an image. It accepts two parameters: the first parameter is [ImageFinetuneOption](#) which determines the type of fine-tuning to be applied (brightness, contrast, or sharpness), and the second parameter represents the fine-tuning value, indicating the degree or intensity of the adjustment. This method allows for convenient adjustment of brightness, contrast, or sharpness by specifying the desired type and corresponding value.

The [finetuneImage](#) method is used to perform brightness, contrast, or sharpness fine-tuning by specifying this type as a first parameter and specifying the fine-tuning value as the second parameter of the method.

Here is an example of brightness, contrast, and sharpness fine-tuning using the [finetuneImage](#) method.

APP.JSX

```
{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
export default class App extends React.Component {
  imgObj;
  imageEditorCreated() {
    if (Browser.isDevice) {
      this.imgObj.open('flower.png');
    }
    else {
      this.imgObj.open('bridge.png');
    }
  }
  brightnessClick() {
    this.imgObj.finetuneImage(ImageFinetuneOption.Brightness, 10);
  }
  contrastClick() {
    this.imgObj.finetuneImage(ImageFinetuneOption.Contrast, 10);
  }
  render() {
    return (<div className='e-img-editor-sample'>
```

```

        <ImageEditorComponent ref={ (img) => { this.imgObj = img; }}
        created={this.imageEditorCreated.bind(this)} toolbar = {[[]]}>
            </ImageEditorComponent>
            <div>
                <ButtonComponent cssClass='e-primary'
content='Brightness' onClick={this.brightnessClick.bind(this)} />
                <ButtonComponent cssClass='e-primary'
content='Contrast' onClick={this.contrastClick.bind(this)} />
            </div>
        </div>;
    }
}
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

APP.TSX

```

{% raw %}
import { ImageEditorComponent, ImageFinetuneOption } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
function App() {
    let imgObj: ImageEditorComponent;
    function imageEditorCreated(): void {
        if (Browser.isDevice) {
            imgObj.open('flower.png');
        } else {
            imgObj.open('bridge.png');
        }
    }
    function brightnessClick(): void {
        imgObj.finetuneImage(ImageFinetuneOption.Brightness,10);
    }
    function contrastClick(): void {
        imgObj.finetuneImage(ImageFinetuneOption.Contrast,10);
    }
    return (
        <div className='e-img-editor-sample'>
            <ImageEditorComponent ref={ (img) => { imgObj = img; }}
created={imageEditorCreated} toolbar = {[[]]}>
                </ImageEditorComponent>
                <div>
                    <ButtonComponent cssClass='e-primary'
content='Brightness' onClick = {brightnessClick}/>
                    <ButtonComponent cssClass='e-primary' content='Contrast'
onClick = {contrastClick}/>
                </div>
            </div>
        );
    }
export default App;
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

INDEX.HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Image Editor</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-base/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-buttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-splitbuttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-popups/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-inputs/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-navigations/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-editor/styles/material.css" rel="stylesheet" />
  <link href="index.css" rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></scr
ipt>
  <script src="systemjs.config.js"></script>
</head>
<body>
  <div id='image-editor'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>
```

Adjust the hue, exposure, blur, or opacity

The [finetuneImage](#) method is designed to facilitate fine-tuning operations on an image. It accepts two parameters: the first parameter is [ImageFinetuneOption](#) which determines the type of fine-tuning to be applied (hue, exposure, or blur), and the second parameter represents the fine-tuning value, indicating the degree or intensity of the adjustment. This method allows for convenient adjustment of hue, exposure, or blur by specifying the desired type and corresponding value.

Here is an example of hue, exposure, and blur fine-tuning using the [finetuneImage](#) method.

APP.JSX

```
{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from 'react-dom';
```

```

export default class App extends React.Component {
  imgObj;
  imageEditorCreated() {
    if (Browser.isDevice) {
      this.imgObj.open('flower.png');
    }
    else {
      this.imgObj.open('bridge.png');
    }
  }
  blurClick() {
    this.imgObj.finetuneImage(ImageFinetuneOption.Blur, 10);
  }
  exposureClick() {
    this.imgObj.finetuneImage(ImageFinetuneOption.Exposure, 10);
  }
  hueClick() {
    this.imgObj.finetuneImage(ImageFinetuneOption.Hue, 10);
  }
  opacityClick() {
    this.imgObj.finetuneImage(ImageFinetuneOption.Opacity, 10);
  }
  render() {
    return (
      <div className='e-img-editor-sample'>
        <ImageEditorComponent ref={ (img) => { this.imgObj = img; }}
          created={this.imageEditorCreated.bind(this)} toolbar = {[[]]}>
          </ImageEditorComponent>
          <div>
            <ButtonComponent cssClass='e-primary' content='Blur'
              onClick={this.blurClick.bind(this)} />
            <ButtonComponent cssClass='e-primary'
              content='Exposure' onClick={this.exposureClick.bind(this)} />
            <ButtonComponent cssClass='e-primary' content='Hue'
              onClick={this.hueClick.bind(this)} />
            <ButtonComponent cssClass='e-primary'
              content='Opacity' onClick={this.opacityClick.bind(this)} />
          </div>
        </div>);
  }
}
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% enddraw %}

```

APP.TSX

```

{% raw %}
import { ImageEditorComponent, ImageFinetuneOption } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
function App() {
  let imgObj: ImageEditorComponent;
  function imageEditorCreated(): void {
    if (Browser.isDevice) {

```



```

        imgObj.open('flower.png');
      } else {
        imgObj.open('bridge.png');
      }
    }
    function blurClick(): void {
      imgObj.finetuneImage(ImageFinetuneOption.Blur,10);
    }
    function exposureClick(): void {
      imgObj.finetuneImage(ImageFinetuneOption.Exposure,10);
    }
    function hueClick(): void {
      imgObj.finetuneImage(ImageFinetuneOption.Hue,10);
    }
    function opacityClick(): void {
      imgObj.finetuneImage(ImageFinetuneOption.Opacity,10);
    }
    return (
      <div className='e-img-editor-sample'>
        <ImageEditorComponent ref={ (img) => { imgObj = img } }
created={imageEditorCreated} toolbar = {[[]]}>
          </ImageEditorComponent>
          <div>
            <ButtonComponent cssClass='e-primary' content='Blur'
onClick = {blurClick}/>
            <ButtonComponent cssClass='e-primary' content='Exposure'
onClick = {exposureClick}/>
            <ButtonComponent cssClass='e-primary' content='Hue'
onClick = {hueClick}/>
            <ButtonComponent cssClass='e-primary' content='Opacity'
onClick = {opacityClick}/>
          </div>
        </div>
      );
    }
  export default App;
  ReactDOM.render(<App />, document.getElementById('image-editor'));
  {% enddraw %}

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Image Editor</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
base/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
buttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
splitbuttons/styles/material.css" rel="stylesheet" />

```

```

<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
popups/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
inputs/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
navigations/styles/material.css" rel="stylesheet" />
<link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-
editor/styles/material.css" rel="stylesheet" />
<link href="index.css" rel="stylesheet" />
<script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></scr
ipt>
<script src="systemjs.config.js"></script>
</head>
<body>
    <div id='image-editor'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Finetune value changing event

The [finetuneValueChanging](#) event is triggered when performing fine-tuning on the image. This event is passed an object that contains information about the fine-tuning event, such as the type of fine-tuning and the value of fine-tuning performed.

The parameter available in the [FinetuneEventArgs](#) event is,

`FinetuneEventArgs.finetune` - The type of fine-tuning as `ImageFinetuneOption` to be applied in the image editor.

`FinetuneEventArgs.value` - The fine-tuning value to be applied in the image editor.

`FinetuneEventArgs.cancel` – Specifies a boolean value to cancel the fine-tuning action.

Please note that the Filter and Finetune features were unavailable on iOS due to the non-functioning `CanvasContext.filter` property on this platform.

Resize

The resize feature in an Image Editor is a valuable tool that empowers users to modify the size or dimensions of an image to meet their specific requirements. Whether it's for printing, web display, or any other purpose, this feature allows users to tailor images to their desired specifications.

Apply resize to the image

The Image Editor control includes a [resize](#) method, which allows you to adjust the size of an image. This method takes three parameters that define how the resizing should be carried out:

- `width`: Specifies the resizing width of the image.
- `height`: Specifies the resizing height of the image.
- `isAspectRatio`: Specifies a boolean value indicating whether the image should maintain its original aspect ratio during resizing. When set to true, the image will be resized while preserving its aspect ratio

Here is an example of resizing the image using the [resize](#) method.

APP.JSX

```
{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
export default class App extends React.Component {
  toolbar = [];
  imgObj;
  imageEditorCreated() {
    if (Browser.isDevice) {
      this.imgObj.open('flower.png');
    }
    else {
      this.imgObj.open('bridge.png');
    }
  }
  aspectClick() {
    this.imgObj.resize(300, 400, true);
  }
  nonaspectClick() {
    this.imgObj.resize(400, 100, false);
  }
  render() {
    return (<div className='e-img-editor-sample'>
      <ImageEditorComponent ref={img => { this.imgObj = img; }}
created={this.imageEditorCreated.bind(this)} toolbar = {this.toolbar}>
      </ImageEditorComponent>
      <div>
        <ButtonComponent cssClass='e-primary' content='Aspect Ratio'
onClick={this.aspectClick.bind(this)} />
        <ButtonComponent cssClass='e-primary' content='Non Aspect
Ratio' onClick={this.nonaspectClick.bind(this)} />
      </div>
    </div>);
  }
}
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}
```

APP.TSX

```
{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
function App() {
  let imgObj: ImageEditorComponent;
  let toolbar = [];
  function imageEditorCreated(): void {
    if (Browser.isDevice) {
      imgObj.open('flower.png');
    }
  }
}
```

```

    } else {
      imgObj.open('bridge.png');
    }
  }
  function aspectClick(): void {
    imgObj.resize(450, 342, true);
  }
  function nonaspectClick(): void {
    imgObj.resize(450, 342, false);
  }
  return (
    <div className='e-img-editor-sample'>
      <ImageEditorComponent ref={(img) => { imgObj = img }}
created={imageEditorCreated} toolbar = {toolbar}>
        </ImageEditorComponent>
        <div>
          <ButtonComponent cssClass='e-primary' content='Aspect Ratio'
onClick = {aspectClick}/>
          <ButtonComponent cssClass='e-primary' content='Non Aspect Ratio'
onClick = {nonaspectClick}/>
        </div>
      </div>
    );
  }
}
export default App;
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% enddraw %}

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Image Editor</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
base/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
buttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
splitbuttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
popups/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
inputs/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
navigations/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-
editor/styles/material.css" rel="stylesheet" />
  <link href="index.css" rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></scr
ipt>

```

```
<script src="systemjs.config.js"></script>
</head>
<body>
  <div id='image-editor'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>
```

Resizing event

The [resizing](#) event is triggered when resizing the image. This event provides information encapsulated within an object, which includes details about the previous and current height and width of an image.

The parameter available in [ResizeEventArgs](#) is,

- [ResizeEventArgs.previousWidth](#) - The width of the image before resizing is performed.
- [ResizeEventArgs.previousHeight](#) - The height of the image before resizing is performed.
- [ResizeEventArgs.width](#) - The width of the image after resizing is performed.
- [ResizeEventArgs.height](#) - The width of the image after resizing is performed.
- [ResizeEventArgs.isAspectRatio](#) - The type of resizing performed such as aspect ratio or non-aspect ratio.
- [ResizeEventArgs.cancel](#) - Specifies a boolean value to cancel the resizing action.

Frames

The frame feature in an Image Editor provides users with the capability to add decorative borders or frames around their images. Frames are a visual design element that can enhance the overall appearance and appeal of an image.

Apply frame to the Image

The [drawFrame](#) method is a function designed to enable the application of various frame options to an image. This method simplifies the process of adding decorative frames, such as mat, bevel, line, hook, and inset, to an image by allowing users to specify their desired frame type.

Depending on the frame type selected, users may have additional customization options, such as adjusting the frame's thickness, color, texture, or other attributes. This allows for fine-tuning the appearance of the frame to match the image's theme or the user's preferences

The [drawFrame](#) method in the Image Editor control takes nine parameters to define the properties of the frame to the image:

- `frameType` - Specified the image data or url of the image to be inserted.
- `Color` - Specifies the color for the frame.
- `gradientColor` - Specifies the gradient color for the frame.
- `size` - Specifies the size of the frame.
- `inset` - Specifies the inset value for line, hook, and inset type frames.
- `offset` - Specifies the offset value for line and inset type frames.
- `borderRadius` - Specifies the border radius for line type frame.
- `frameLineStyle` - Specifies the frame line style for line type frame.
- `lineCount` - Specifies the line count for the line type frame.

In the following example, you can use the drawFrame method in the button click event.

APP.JSX

```
{% raw %}
import { ImageEditorComponent, FrameType, FrameLineStyle } from
 '@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
export default class App extends React.Component {
  imgObj;
  imageEditorCreated() {
    if (Browser.isDevice) {
      this.imgObj.open('flower.png');
    }
    else {
      this.imgObj.open('bridge.png');
    }
  }
  matClick() {
    this.imgObj.drawFrame(FrameType.Line, 'red', 'blue', 20, 20, 20, 20,
FrameLineStyle.Solid, 1);
  }
  bevelClick() {
    this.imgObj.drawFrame(FrameType.Bevel, 'red', 'blue', 20, 20, 20, 20,
FrameLineStyle.Solid, 1);
  }
  lineClick() {
    this.imgObj.drawFrame(FrameType.Line, 'red', 'blue', 20, 20, 20, 20,
FrameLineStyle.Solid, 1);
  }
  insetClick() {
    this.imgObj.drawFrame(FrameType.Inset, 'red', 'blue', 20, 20, 20, 20,
FrameLineStyle.Solid, 1);
  }
  hookClick() {
    this.imgObj.drawFrame(FrameType.Hook, 'red', 'blue', 20, 20, 20, 20,
FrameLineStyle.Solid, 1);
  }
  render() {
    return (<div className='e-img-editor-sample'>
      <ImageEditorComponent ref={ (img) => { this.imgObj = img; }}
created={this.imageEditorCreated.bind(this)} toolbar = {[[]]}>
        </ImageEditorComponent>
        <div>
          <ButtonComponent cssClass='e-primary' content='Mat'
onClick={this.matClick.bind(this)} />
          <ButtonComponent cssClass='e-primary' content='Bevel'
onClick={this.bevelClick.bind(this)} />
          <ButtonComponent cssClass='e-primary' content='Line'
onClick={this.lineClick.bind(this)} />
          <ButtonComponent cssClass='e-primary' content='Inset'
onClick={this.insetClick.bind(this)} />
          <ButtonComponent cssClass='e-primary' content='Hook'
onClick={this.hookClick.bind(this)} />
        </div>
      </div>
    );
  }
}
```

```

        </div>
    </div>);
}
}
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

APP.TSX

```

{% raw %}
import { ImageEditorComponent, FrameType, FrameLineStyle } from
'@syncfusion/ej2-react-image-editor';
import { ButtonComponent } from '@syncfusion/ej2-react-buttons';
import { Browser } from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
function App() {
    let imgObj: ImageEditorComponent;
    function imageEditorCreated(): void {
        if (Browser.isDevice) {
            imgObj.open('flower.png');
        } else {
            imgObj.open('bridge.png');
        }
    }
    function matClick(): void {
        imgObj.drawFrame(FrameType.Mat, 'red', 'blue', 20, 20, 20, 20,
FrameLineStyle.Solid, 1);
    }
    function bevelClick(): void {
        imgObj.drawFrame(FrameType.Bevel, 'red', 'blue', 20, 20, 20, 20,
FrameLineStyle.Solid, 1);
    }
    function lineClick(): void {
        imgObj.drawFrame(FrameType.Line, 'red', 'blue', 20, 20, 20, 20,
FrameLineStyle.Solid, 1);
    }
    function insetClick(): void {
        imgObj.drawFrame(FrameType.Inset, 'red', 'blue', 20, 20, 20, 20,
FrameLineStyle.Solid, 1);
    }
    function hookClick(): void {
        imgObj.drawFrame(FrameType.Hook, 'red', 'blue', 20, 20, 20, 20,
FrameLineStyle.Solid, 1);
    }
    return (
        <div className='e-img-editor-sample'>
            <ImageEditorComponent ref={(img) => { imgObj = img }}
created={imageEditorCreated} toolbar = {[[]]}>
                </ImageEditorComponent>
                <div>
                    <ButtonComponent cssClass='e-primary' content='Mat'
onClick = {matClick}/>
                    <ButtonComponent cssClass='e-primary' content='Bevel'
onClick = {bevelClick}/>

```

```

        <ButtonComponent cssClass='e-primary' content='Line'
onClick = {lineClick}/>
        <ButtonComponent cssClass='e-primary' content='Inset'
onClick = {insetClick}/>
        <ButtonComponent cssClass='e-primary' content='Hook'
onClick = {hookClick}/>
    </div>
</div>

);
}
export default App;
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

INDEX.HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Syncfusion React Image Editor</title>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta name="description" content="Essential JS 2 for React Components" />
    <meta name="author" content="Syncfusion" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
base/styles/material.css" rel="stylesheet" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
buttons/styles/material.css" rel="stylesheet" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
splitbuttons/styles/material.css" rel="stylesheet" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
popups/styles/material.css" rel="stylesheet" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
inputs/styles/material.css" rel="stylesheet" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-
navigations/styles/material.css" rel="stylesheet" />
    <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-
editor/styles/material.css" rel="stylesheet" />
    <link href="index.css" rel="stylesheet" />
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></scr
ipt>
    <script src="systemjs.config.js"></script>
</head>
<body>
    <div id='image-editor'>
        <div id='loader'>Loading....</div>
    </div>
</body>
</html>

```

Frame changing event

The [frameChanging](#) event is triggered when applying frame on the image. This event provides information encapsulated within an object, which includes details about the frame applied in an image. This information encompasses:

Frame Type: This indicates the specific type of frame being applied, whether it's a mat, bevel, line, or hook.

Customization Values: These values contain information about any adjustments or modifications made to the frame. For instance, if the frame can be customized with attributes like color, size, or style, these details are conveyed within the event object.

The parameter available in the [FrameChangeEventArgs](#) is

- [FrameChangeEventArgs.previousFrameSetting](#) - The frame settings including size, color, inset, offset, gradient color which is applied before changing the frame.
- [FrameChangeEventArgs.currentFrameSetting](#) - The frame settings including size, color, inset, offset, gradient color which is going to apply after changing the frame.
- [FrameChangeEventArgs.cancel](#) - Specifies a boolean value to cancel the frame changing action.

Localization in the React Image Editor component

The **Localization** library allows you to localize the default text content of the Image Editor. The Image Editor has static text that can be changed to other cultures (Arabic, Deutsch, French, etc.) by defining the **locale** value and translation object.

The following list of properties and its values are used in the Image Editor.

Locale key words Text
----- -----
Browse Browse
Crop Crop
ZoomIn Zoom In
ZoomOut Zoom Out
Transform Transform
Annotation Annotation
Text Add Text
Pen Pen
Reset Reset
Save Save
Select Select
RotateLeft Rotate Left
RotateRight Rotate Right
HorizontalFlip Horizontal Flip
VerticalFlip Vertical Flip
OK OK
Cancel Cancel

FillColor	Fill Color
StrokeColor	Stroke Color
StrokeWidth	StrokeWidth
FontFamily	Font Family
FontStyle	Font Style
FontSize	Font Size
FontColor	Font Color
Pan	Pan
Move	Move
Custom	Custom
Square	Square
Circle	Circle
Rectangle	Rectangle
Line	Line
Default	Default
Bold	Bold
Italic	Italic
BoldItalic	Bold Italic
XSmall	X-Small
Small	Small
Medium	Medium
Large	Large
XLarge	X-Large
ABC	ABC

APP.JSX

```
{% raw %}  
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';  
import { L10n } from '@syncfusion/ej2-base';  
import * as React from 'react';  
import * as ReactDOM from "react-dom";  
L10n.load({  
  'de-DE': {  
    'image-editor': {  
      'Browse': 'Durchsuche',  
      'Crop': 'Ernte',  
      'ZoomIn': 'Hineinzoomen',  
      'ZoomOut': 'Rauszoomen',  
      'Transform': 'Verwandeln',  
      'Annotation': 'Anmerkung',  
    }  
  }  
});
```

```

        'Text': 'Text hinzufügen',
        'Pen': 'Stift',
        'Reset': 'Zurücksetzen',
        'Save': 'Speichern',
        'Select': 'Auswählen',
        'RotateLeft': 'Nach links drehen',
        'RotateRight': 'Drehe nach rechts',
        'HorizontalFlip': 'Horizontaler Flip',
        'VerticalFlip': 'Vertikaler Flip',
        'OK': 'OK',
        'Cancel': 'Absagen',
        'FillColor': 'Füllfarbe',
        'StrokeColor': 'Strichfarbe',
        'StrokeWidth': 'Strichbreite',
        'FontFamily': 'Schriftfamilie',
        'FontStyle': 'Schriftstil',
        'FontSize': 'Schriftgröße',
        'FontColor': 'Schriftfarbe',
        'Pan': 'Pfanne',
        'Move': 'Bewegen',
        'Custom': 'Brauch',
        'Square': 'Quadrat',
        'Circle': 'Kreis',
        'Rectangle': 'Rechteck',
        'Line': 'Linie',
        'Default': 'Standard',
        'Bold': 'Fett gedruckt',
        'Italic': 'Kursiv',
        'BoldItalic': 'Fett Kursiv',
    }
}
});
export default class App extends React.Component {
    imgObj;
    imageEditorCreated() {
        if (Browser.isDevice) {
            this.imgObj.open('flower.png');
        }
        else {
            this.imgObj.open('bridge.png');
        }
    }
    render() {
        return (<div className='e-img-editor-sample'>
            <ImageEditorComponent locale='de-DE' ref={(img) => { this.imgObj
= img; }} created={this.imageEditorCreated.bind(this)} />
            </div>);
    }
}
ReactDOM.render(<App />, document.getElementById('image-editor'));
{% endraw %}

```

APP.TSX

```

{% raw %}
import { ImageEditorComponent } from '@syncfusion/ej2-react-image-editor';

```

```

import { L10n, Browser} from '@syncfusion/ej2-base';
import * as React from 'react';
import * as ReactDOM from "react-dom";
L10n.load({
  'de-DE': {
    'image-editor': {
      'Browse': 'Durchsuche',
      'Crop': 'Ernte',
      'ZoomIn': 'Hineinzoomen',
      'ZoomOut': 'Rauszoomen',
      'Transform': 'Verwandeln',
      'Annotation': 'Anmerkung',
      'Text': 'Text hinzufügen',
      'Pen': 'Stift',
      'Reset': 'Zurücksetzen',
      'Save': 'Speichern',
      'Select': 'Auswählen',
      'RotateLeft': 'Nach links drehen',
      'RotateRight': 'Drehe nach rechts',
      'HorizontalFlip': 'Horizontaler Flip',
      'VerticalFlip': 'Vertikaler Flip',
      'OK': 'OK',
      'Cancel': 'Absagen',
      'FillColor': 'Füllfarbe',
      'StrokeColor': 'Strichfarbe',
      'StrokeWidth': 'Strichbreite',
      'FontFamily': 'Schriftfamilie',
      'FontStyle': 'Schriftstil',
      'FontSize': 'Schriftgröße',
      'FontColor': 'Schriftfarbe',
      'Pan': 'Pfanne',
      'Move': 'Bewegen',
      'Custom': 'Brauch',
      'Square': 'Quadrat',
      'Circle': 'Kreis',
      'Rectangle': 'Rechteck',
      'Line': 'Linie',
      'Default': 'Standard',
      'Bold': 'Fett gedruckt',
      'Italic': 'Kursiv',
      'BoldItalic': 'Fett Kursiv',
    }
  }
});
function App() {
  let imgObj: ImageEditorComponent;
  function imageEditorCreated(): void {
    if (Browser.isDevice) {
      imgObj.open('flower.png');
    } else {
      imgObj.open('bridge.png');
    }
  }
  return (
    <div className='e-img-editor-sample'>
      <ImageEditorComponent locale='de-DE' ref={(img) => { imgObj = img }}
        created={imageEditorCreated}/>
    </div>
  );
}

```

```
        </div>
      );
    }
    export default App;
    ReactDOM.render(<App />, document.getElementById('image-editor'));
    {% endraw %}
```

INDEX.HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Syncfusion React Image Editor</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <meta name="description" content="Essential JS 2 for React Components" />
  <meta name="author" content="Syncfusion" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-base/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-buttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-splitbuttons/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-popups/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-inputs/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-navigations/styles/material.css" rel="stylesheet" />
  <link href="https://cdn.syncfusion.com/ej2/20.3.56/ej2-image-editor/styles/material.css" rel="stylesheet" />
  <link href="index.css" rel="stylesheet" />
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/systemjs/0.19.38/system.js"></script>
  <script src="systemjs.config.js"></script>
</head>
<body>
  <div id='image-editor'>
    <div id='loader'>Loading....</div>
  </div>
</body>
</html>
```

Accessibility in React Image Editor component

The Image Editor component followed the accessibility guidelines and standards, including [ADA, Section 508](#), [WCAG 2.2](#) standards, and [WCAG roles](#) that are commonly used to evaluate accessibility.

The accessibility compliance for the Image Editor component is outlined below.

| Accessibility Criteria | Compatibility |

| -- | -- |

| [WCAG 2.2](#) Support | |

| [Section 508](#) Support | |

| Screen Reader Support | |

| Right-To-Left Support | |

| Color Contrast | |

| Mobile Device Support | |

| Keyboard Navigation Support | |

| [Accessibility Checker](#) Validation | |

| [Axe-core](#) Accessibility Validation | |

<style>

.post .post-content img {

display: inline-block;

margin: 0.5em 0;

}

</style>

<div> - All
features of the component meet the requirement.</div>

<div> - Some features of the component do not meet the requirement.</div>

<div> - The component does not meet the requirement.</div>

Keyboard interaction

The Image Editor component followed the keyboard interaction guideline, making it easy for people who use assistive technologies (AT) and those who completely rely on keyboard navigation. The following keyboard shortcuts are supported by the Image Editor component.

| **Press** | **To do this** |

| --- | --- |

| **Ctrl + Z** | **Undo the last user action.** |

| **Ctrl + Y** | **Redo the last user action.** |

| **Ctrl + S** | **To save the Image.** |

| Ctrl + O | To open the Image. |

| Delete | To delete the shape once the shape got selected through mouse click . |

Ensuring accessibility

The Image Editor component's accessibility levels are ensured through an [accessibility-checker](#) and [axe-core](#) software tools during automated testing.

The accessibility compliance of the Image Editor component is shown in the following sample. Open the [sample](#) in a new window to evaluate the accessibility of the Image Editor component with accessibility tools.

See also

- [Accessibility in Syncfusion React components](#)

InplaceEditor

Getting Started

This section briefly explains about how to create a simple In-place Editor and demonstrate the basic usage of the In-place Editor component.

Dependencies

The following is the list of dependencies required to use the In-place Editor component in your application.

```
`javascript
|-- @syncfusion/ej2-react-inplace-editor
|-- @syncfusion/ej2-react-base
|-- @syncfusion/ej2-base
|-- @syncfusion/ej2-buttons
|-- @syncfusion/ej2-calendars
|-- @syncfusion/ej2-data
|-- @syncfusion/ej2-dropdowns
|-- @syncfusion/ej2-inputs
|-- @syncfusion/ej2-popups
|-- @syncfusion/ej2-richtexteditor
`,`
```

Set up your development environment

Before starting, need to install [Create-react-app](#) command line interface into your machine globally by using following command.

```
`bash
npm install -g create-react-app
`,`
```

Create a new project using create-react-app command as follows

```
<div class='tsx'>
`bash
create-react-app quickstart --scripts-version=react-scripts-ts
cd quickstart
`

</div>
<div class='jsx'>
`

create-react-app quickstart
cd quickstart
`

</div>
```

Install the below required dependency package in order to use the **In-place Editor** component in your application.

```
`bash
npm install @syncfusion/ej2-react-inplace-editor --save
`
```

The above package installs [In-place Editor dependencies](#) which are required to render the In-place Editor component in React environment.

- In-place Editor CSS files are available in the **ej2-react-inplace-editor** package folder. Import the In-place Editor component's required CSS references as follows in **src/App.css**.

```
`css
@import '../node_modules/@syncfusion/ej2-base/styles/material.css';
@import '../node_modules/@syncfusion/ej2-buttons/styles/material.css';
@import '../node_modules/@syncfusion/ej2-calendars/styles/material.css';
@import '../node_modules/@syncfusion/ej2-dropdowns/styles/material.css';
@import '../node_modules/@syncfusion/ej2-inputs/styles/material.css';
@import '../node_modules/@syncfusion/ej2-lists/styles/material.css';
@import '../node_modules/@syncfusion/ej2-navigations/styles/material.css';
@import '../node_modules/@syncfusion/ej2-popups/styles/material.css';
@import '../node_modules/@syncfusion/ej2-richtexteditor/styles/material.css';
@import '../node_modules/@syncfusion/ej2-splitbuttons/styles/material.css';
```



```
@import '../node_modules/@syncfusion/ej2-react-inplace-editor/styles/material.css';  
`
```

Add the In-place Editor with Textbox

By default, Essential JS2 React TextBox component is rendered in In-place Editor with [type](#) property sets as Text.

- Import the In-place Editor component to your `src/App.tsx` file using following code.

[Class-component]

```
`ts  
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';  
import * as React from 'react';  
import './App.css';  
class App extends React.Component {  
  public model = { placeholder: 'Enter employee name' };  
  public render() {  
    return (  
      <InPlaceEditorComponent id='element' model={this.model} type='Text' value='Andrew'/>  
    );  
  }  
}  
export default App;  
`
```

[Functional-component]

```
`ts  
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';  
import * as React from 'react';  
import './App.css';  
function App () {  
  const model = { placeholder: 'Enter employee name' };  
  return (  
    <InPlaceEditorComponent id='element' model={model} type='Text' value='Andrew'/>  
  );  
}  
export default App;
```

`

Configuring DropDownList

You can render Essential JS 2 React DropDownList by changing [type](#) property as [DropDownList](#) and configure its properties and methods using [model](#) property.

In the below sample, [type](#) and [model](#) values are configured to render the [DropDownList](#) component.

[Class-component]

```
`ts
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
import './App.css';
class App extends React.Component {
  public genderData = ['Male', 'Female'];
  public model = { placeholder: 'Select gender', dataSource: this.genderData };
  public render() {
    return (
      <InPlaceEditorComponent id='element' model={this.model} type='DropDownList' mode='Inline'/>
    );
  }
}
export default App;
```

`

[Functional-component]

```
`ts
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
import './App.css';
function App () {
  const genderData = ['Male', 'Female'];
  const model = { placeholder: 'Select gender', dataSource: genderData };
  return (
    <InPlaceEditorComponent id='element' model={model} type='DropDownList' mode='Inline'/>
  );
}
export default App;
```

,

Integrate DatePicker

You can render Essential JS2 [DatePicker](#) by changing [type](#) property as [Date](#) and also configure its properties and methods using [model](#) property.

In the below sample, [type](#) and [model](#) values are configured to render the [DatePicker](#) component.

[Class-component]

```
`ts
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
import './App.css';
class App extends React.Component {
  public model = { showTodayButton: true };
  public value = new Date('04/12/2018');
  public render() {
    return (
      <InPlaceEditorComponent id='element' model={this.model} type='Date' value={this.value}/>
    );
  }
}
export default App;
```

,

[Functional-component]

```
`ts
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
import './App.css';
function App () {
  const model = { showTodayButton: true };
  const value = new Date('04/12/2018');
  return (
    <InPlaceEditorComponent id='element' model={model} type='Date' value={value}/>
  );
}
export default App;
```

Run the application

- Run the application in the browser using the following command.

npm start

Output will be as follows:

[Class-component]

APP.JSX

```
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
class App extends React.Component {
  genderData = ['Male', 'Female'];
  dateModel = { showTodayButton: true, placeholder: 'Select date of birth' };
  dateValue = new Date('04/12/2018');
  elementModel = { placeholder: 'Enter your name' };
  genderModel = { dataSource: this.genderData, placeholder: 'Select gender' };
  render() {
    return (
      <div id='container'>
        <div className="control-group">
          <div className="e-heading">
            <h3> Modify Basic Details </h3>
          </div>
          <table>
            <tr>
              <td>Name</td>
              <td className='left'>
                <InPlaceEditorComponent id='element' mode='Inline'
                value='Andrew' model={this.elementModel}/>
              </td>
            </tr>
            <tr>
              <td>Date of Birth</td>
              <td className='left'>
                <InPlaceEditorComponent id='dateofbirth' type="Date"
                mode='Inline' value={this.dateValue} model={this.dateModel}/>
              </td>
            </tr>
            <tr>
              <td>Gender</td>
              <td className='left'>
                <InPlaceEditorComponent id='gender'
                type="DropDownList" mode='Inline' value='Male' model={this.genderModel}/>
              </td>
            </tr>
          </table>
        </div>
      </div>
    );
  }
}
```

```

        </div>
    </div>);
    }
}
export default App;

```

APP.TSX

```

import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-
editor';
import * as React from 'react';
class App extends React.Component {
    public genderData = ['Male', 'Female'];
    public dateModel = { showTodayButton: true, placeholder: 'Select date of
birth' };
    public dateValue = new Date('04/12/2018');
    public elementModel = { placeholder: 'Enter your name' };
    public genderModel = { dataSource: this.genderData, placeholder: 'Select
gender' };
    public render() {
        return (
            <div id='container'>
                <div className="control-group">
                    <div className="e-heading">
                        <h3> Modify Basic Details </h3>
                    </div>
                    <table>
                        <tbody>
                            <tr>
                                <td>Name</td>
                                <td className='left'>
                                    <InPlaceEditorComponent id='element' mode='Inline'
value='Andrew' model={this.elementModel}/>
                                </td>
                            </tr>
                            <tr>
                                <td>Date of Birth</td>
                                <td className='left'>
                                    <InPlaceEditorComponent id='dateofbirth' type="Date"
mode='Inline' value={this.dateValue} model={this.dateModel}/>
                                </td>
                            </tr>
                            <tr>
                                <td>Gender</td>
                                <td className='left'>
                                    <InPlaceEditorComponent id='gender'
type="DropDownList" mode='Inline' value='Male' model={this.genderModel}/>
                                </td>
                            </tr>
                        </tbody>
                    </table>
                </div>
            </div>
        );
    }
}

```

```
export default App;
```

[Functional-component]

APP.JSX

```
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
function App() {
    const genderData = ['Male', 'Female'];
    const dateModel = { showTodayButton: true, placeholder: 'Select date of birth' };
    const dateValue = new Date('04/12/2018');
    const elementModel = { placeholder: 'Enter your name' };
    const genderModel = { dataSource: genderData, placeholder: 'Select gender' };
    return (<div id='container'>
        <div className="control-group">
            <div className="e-heading">
                <h3> Modify Basic Details </h3>
            </div>
            <table>
                <tr>
                    <td>Name</td>
                    <td className='left'>
                        <InPlaceEditorComponent id='element' mode='Inline'
value='Andrew' model={elementModel}/>
                    </td>
                </tr>
                <tr>
                    <td>Date of Birth</td>
                    <td className='left'>
                        <InPlaceEditorComponent id='dateofbirth'
type="Date" mode='Inline' value={dateValue} model={dateModel}/>
                    </td>
                </tr>
                <tr>
                    <td>Gender</td>
                    <td className='left'>
                        <InPlaceEditorComponent id='gender'
type="DropDownList" mode='Inline' value='Male' model={genderModel}/>
                    </td>
                </tr>
            </table>
        </div>
    </div>);
}
```

```
export default App;
```

APP.TSX

```
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
function App () {
```

```

const genderData = ['Male', 'Female'];
const dateModel = { showTodayButton: true, placeholder: 'Select date of
birth' };
const dateValue = new Date('04/12/2018');
const elementModel = { placeholder: 'Enter your name' };
const genderModel = { dataSource: genderData, placeholder: 'Select gender'
};

return (
  <div id='container'>
    <div className="control-group">
      <div className="e-heading">
        <h3> Modify Basic Details </h3>
      </div>
      <table>
        <tr>
          <td>Name</td>
          <td className='left'>
            <InPlaceEditorComponent id='element' mode='Inline'
value='Andrew' model={elementModel}/>
          </td>
        </tr>
        <tr>
          <td>Date of Birth</td>
          <td className='left'>
            <InPlaceEditorComponent id='dateofbirth'
type="Date" mode='Inline' value={dateValue} model={dateModel}/>
          </td>
        </tr>
        <tr>
          <td>Gender</td>
          <td className='left'>
            <InPlaceEditorComponent id='gender'
type="DropDownList" mode='Inline' value='Male' model={genderModel}/>
          </td>
        </tr>
      </table>
    </div>
  </div>
);
}
export default App;

```

Submitting data to the server (save)

You can submit editor value to server by configuring the [url](#), [adaptor](#) and [primaryKey](#) property.

Property	Usage
url	Gets the url for server submit action.
adaptor	Specifies the adaptor type that are used by DataManager to communicate with DataSource.
primaryKey	Defines the unique primary key of editable field which can be used for saving data in data-base.

[primaryKey](#) property is mandatory. If it's not set, edited data are not sent to the server.

Refresh with modified value

The edited data is submitted to the server and you can see the new values getting reflected in the In-place Editor.

[Class-component]

APP.JSX

```
{% raw %}
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
class App extends React.Component {
    frameWorkList = ['Andrew Fuller', 'Janet Leverling', 'Laura Callahan', 'Margaret Hamilt', 'Michael Suyama', 'Nancy Davloio', 'Robert King'];
    model = { dataSource: this.frameWorkList, placeholder: 'Select employee',
    popupHeight: '200px' };
    url = "https://ej2services.syncfusion.com/development/web-services/api/Editor/UpdateData";
    actionSuccess(e) {
        const newEle = document.getElementById('newValue');
        const oldEle = document.getElementById('oldValue');
        oldEle.textContent = newEle.textContent;
        newEle.textContent = e.value;
    }
    render() {
        return (<div id='container'>
            <div className="control-group">
                Best Employee of the year: <InPlaceEditorComponent id='element'
                type="DropDownList" mode='Inline' value='Andrew Fuller' name='Employee'
                url={this.url} primaryKey="Employee" adaptor="UrlAdaptor" model={this.model}
                actionSuccess={this.actionSuccess}/>
            </div>
            <table style={{ 'margin': 'auto', 'width': '50%' }}>
                <tr>
                    <td style={{ textAlign: 'left' }}>
                        Old Value :
                    </td>
                    <td id="oldValue" style={{ textAlign: 'left' }}/>
                </tr>
                <tr>
                    <td style={{ textAlign: 'left' }}>
                        New Value :
                    </td>
                    <td id="newValue" style={{ textAlign: 'left' }}>
                        Andrew Fuller
                    </td>
                </tr>
            </table>
        </div>);
    }
}
export default App;
{% endraw %}
```


APP.TSX

```
{% raw %}
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-
editor';
import * as React from 'react';
class App extends React.Component<{}, {}> {
public frameworkList = ['Andrew Fuller', 'Janet Leverling', 'Laura Callahan',
'Margaret Hamilt', 'Michael Suyama', 'Nancy Davloio', 'Robert King'];
public model = { dataSource: this.frameworkList, placeholder: 'Select
employee', popupHeight: '200px' };
public url = "https://ej2services.syncfusion.com/development/web-
services/api/Editor/UpdateData";
public actionSuccess(e: any) {
const newEle = document.getElementById('newValue') as HTMLElement;
const oldEle = document.getElementById('oldValue') as HTMLElement;
oldEle.textContent = newEle.textContent;
newEle.textContent = e.value;
}
public render() {
return (
<div id='container'>
<div className="control-group">
Best Employee of the year: <InPlaceEditorComponent id='element'
type="DropDownList" mode='Inline' value='Andrew Fuller' name='Employee'
url={this.url} primaryKey="Employee" adaptor="UrlAdaptor" model={this.model}
actionSuccess={this.actionSuccess} />
</div>
<table style={{'margin': 'auto', 'width': '50%'}}>
<tbody>
<tr>
<td style={{textAlign: 'left'}}>
Old Value :
</td>
<td id="oldValue" style={{textAlign: 'left'}}/>
</tr>
<tr>
<td style={{textAlign: 'left'}}>
New Value :
</td>
<td id="newValue" style={{textAlign: 'left'}}>
Andrew Fuller
</td>
</tr>
</tbody>
</table>
</div>
);
}
}
export default App;
{% endraw %}
```

[Functional-component]**APP.JSX**

```
{% raw %}
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-
editor';
import * as React from 'react';
function App() {
    const frameWorkList = ['Andrew Fuller', 'Janet Leverling', 'Laura
Callahan', 'Margaret Hamilt', 'Michael Suyama', 'Nancy Davloio', 'Robert
King'];
    const model = { dataSource: frameWorkList, placeholder: 'Select
employee', popupHeight: '200px' };
    const url = "https://ej2services.syncfusion.com/development/web-
services/api/Editor/UpdateData";
    function actionSuccess(e) {
        const newEle = document.getElementById('newValue');
        const oldEle = document.getElementById('oldValue');
        oldEle.textContent = newEle.textContent;
        newEle.textContent = e.value;
    }
    return (<div id='container'>
        <div className="control-group">
            Best Employee of the year: <InPlaceEditorComponent id='element'
type="DropDownList" mode='Inline' value='Andrew Fuller' name='Employee'
url={url} primaryKey="Employee" adaptor="UrlAdaptor" model={model}
actionSuccess={actionSuccess}/>
        </div>
        <table style={{ 'margin': 'auto', 'width': '50%' }}>
            <tr>
                <td style={{ textAlign: 'left' }}>
                    Old Value :
                </td>
                <td id="oldValue" style={{ textAlign: 'left' }}/>
            </tr>
            <tr>
                <td style={{ textAlign: 'left' }}>
                    New Value :
                </td>
                <td id="newValue" style={{ textAlign: 'left' }}>
                    Andrew Fuller
                </td>
            </tr>
        </table>
    </div>);
}
export default App;
{% endraw %}
```

APP.TSX

```
{% raw %}
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-
editor';
import * as React from 'react';
function App() {
    const frameWorkList : string[] = ['Andrew Fuller', 'Janet Leverling', 'Laura
Callahan', 'Margaret Hamilt', 'Michael Suyama', 'Nancy Davloio', 'Robert
King'];
    const model = { dataSource: frameWorkList, placeholder: 'Select
employee', popupHeight: '200px' };
    const url = "https://ej2services.syncfusion.com/development/web-
services/api/Editor/UpdateData";
    function actionSuccess(e) {
        const newEle = document.getElementById('newValue');
        const oldEle = document.getElementById('oldValue');
        oldEle.textContent = newEle.textContent;
        newEle.textContent = e.value;
    }
    return (<div id='container'>
        <div className="control-group">
            Best Employee of the year: <InPlaceEditorComponent id='element'
type="DropDownList" mode='Inline' value='Andrew Fuller' name='Employee'
url={url} primaryKey="Employee" adaptor="UrlAdaptor" model={model}
actionSuccess={actionSuccess}/>
        </div>
        <table style={{ 'margin': 'auto', 'width': '50%' }}>
            <tr>
                <td style={{ textAlign: 'left' }}>
                    Old Value :
                </td>
                <td id="oldValue" style={{ textAlign: 'left' }}/>
            </tr>
            <tr>
                <td style={{ textAlign: 'left' }}>
                    New Value :
                </td>
                <td id="newValue" style={{ textAlign: 'left' }}>
                    Andrew Fuller
                </td>
            </tr>
        </table>
    </div>);
}
export default App;
{% endraw %}
```

```

const model = {  dataSource: frameWorkList, placeholder: 'Select employee',
popupHeight: '200px' };
const url  = "https://ej2services.syncfusion.com/development/web-
services/api/Editor/UpdateData";
function actionSuccess(e: any) {
    const newEle = document.getElementById('newValue') as HTMLElement;
    const oldEle = document.getElementById('oldValue') as HTMLElement;
    oldEle.textContent = newEle.textContent;
    newEle.textContent = e.value;
}
return (
    <div id='container'>
        <div className="control-group">
            Best Employee of the year: <InPlaceEditorComponent id='element'
type="DropDownList" mode='Inline' value='Andrew Fuller' name='Employee'
url={url} primaryKey="Employee" adaptor="UrlAdaptor" model={model}
actionSuccess={actionSuccess} />
        </div>
        <table style={{ 'margin': 'auto', 'width': '50%' }}>
            <tr>
                <td style={{textAlign: 'left'}}>
                    Old Value :
                </td>
                <td id="oldValue" style={{textAlign: 'left'}}/>
            </tr>
            <tr>
                <td style={{textAlign: 'left'}}>
                    New Value :
                </td>
                <td id="newValue" style={{textAlign: 'left'}}>
                    Andrew Fuller
                </td>
            </tr>
        </table>
    </div>
);
}
export default App;
{% endraw %}

```

See Also

- [Types of rendering the editor](#)

Getting Started

This section briefly explains about how to create a simple In-place Editor and demonstrate the basic usage of the In-place Editor component.

Dependencies

The following is the list of dependencies required to use the In-place Editor component in your application.

```
`javascript
```

```
|-- @syncfusion/ej2-react-inplace-editor
```

```
|-- @syncfusion/ej2-react-base
|-- @syncfusion/ej2-base
|-- @syncfusion/ej2-buttons
|-- @syncfusion/ej2-calendars
|-- @syncfusion/ej2-data
|-- @syncfusion/ej2-dropdowns
|-- @syncfusion/ej2-inputs
|-- @syncfusion/ej2-popups
|-- @syncfusion/ej2-richtexteditor
\
```

Set up your development environment

Before starting, need to install [Create-react-app](#) command line interface into your machine globally by using following command.

```
`bash
npm install -g create-react-app
\
```

Create a new project using create-react-app command as follows

```
<div class='tsx'>
`bash
create-react-app quickstart --scripts-version=react-scripts-ts
cd quickstart
\

</div>
<div class='jsx'>
\

create-react-app quickstart
cd quickstart
\

</div>
```

Install the below required dependency package in order to use the **In-place Editor** component in your application.

```
`bash
npm install @syncfusion/ej2-react-inplace-editor --save
\
```

The above package installs [In-place Editor dependencies](#) which are required to render the In-place Editor component in React environment.

- In-place Editor CSS files are available in the `ej2-react-inplace-editor` package folder. Import the In-place Editor component's required CSS references as follows in `src/App.css`.

```
`css
@import '../node_modules/@syncfusion/ej2-base/styles/material.css';
@import '../node_modules/@syncfusion/ej2-buttons/styles/material.css';
@import '../node_modules/@syncfusion/ej2-calendars/styles/material.css';
@import '../node_modules/@syncfusion/ej2-dropdowns/styles/material.css';
@import '../node_modules/@syncfusion/ej2-inputs/styles/material.css';
@import '../node_modules/@syncfusion/ej2-lists/styles/material.css';
@import '../node_modules/@syncfusion/ej2-navigations/styles/material.css';
@import '../node_modules/@syncfusion/ej2-popups/styles/material.css';
@import '../node_modules/@syncfusion/ej2-richtexteditor/styles/material.css';
@import '../node_modules/@syncfusion/ej2-splitbuttons/styles/material.css';
@import '../node_modules/@syncfusion/ej2-react-inplace-editor/styles/material.css';
`
```

Add the In-place Editor with Textbox

By default, Essential JS2 React TextBox component is rendered in In-place Editor with [type](#) property sets as Text.

- Import the In-place Editor component to your `src/App.tsx` file using following code.

```
`ts
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
import './App.css';
function App() {
  const model: object = { placeholder: 'Enter employee name' };
  return (
    <InPlaceEditorComponent id='element' model={model} type='Text' value='Andrew'/>
  );
}
export default App;
```

Configuring DropDownList

You can render Essential JS 2 React DropDownList by changing [type](#) property as [DropDownList](#) and configure its properties and methods using [model](#) property.

In the below sample, [type](#) and [model](#) values are configured to render the [DropDownList](#) component.

```
`ts
```

```
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
import './App.css';
function App() {
  const genderData: string[] = ['Male', 'Female'];
  const model: object = { placeholder: 'Select gender', dataSource: genderData };
  return (
    <InPlaceEditorComponent id='element' model={model} type='DropDownList' mode='Inline' />
  );
}
export default App;
```

Integrate DatePicker

You can render Essential JS2 [DatePicker](#) by changing [type](#) property as [Date](#) and also configure its properties and methods using [model](#) property.

In the below sample, [type](#) and [model](#) values are configured to render the [DatePicker](#) component.

```
`ts
```

```
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
import './App.css';
function App() {
  const model: object = { showTodayButton: true };
  const value: Date = new Date('04/12/2018');
  return (
    <InPlaceEditorComponent id='element' model={model} type='Date' value={value} />
  );
}
export default App;
```

Run the application

- Run the application in the browser using the following command.

```
npm start
```

Output will be as follows:

APP.JSX

```
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
function App() {
    const genderData = ['Male', 'Female'];
    const dateModel = { showTodayButton: true, placeholder: 'Select date of birth' };
    const dateValue = new Date('04/12/2018');
    const elementModel = { placeholder: 'Enter your name' };
    const genderModel = { dataSource: genderData, placeholder: 'Select gender' };
    return (<div id='container'>
        <div className="control-group">
            <div className="e-heading">
                <h3> Modify Basic Details </h3>
            </div>
            <table>
                <tr>
                    <td>Name</td>
                    <td className='left'>
                        <InPlaceEditorComponent id='element' mode='Inline'
value='Andrew' model={elementModel}/>
                    </td>
                </tr>
                <tr>
                    <td>Date of Birth</td>
                    <td className='left'>
                        <InPlaceEditorComponent id='dateofbirth' type="Date"
mode='Inline' value={dateValue} model={dateModel}/>
                    </td>
                </tr>
                <tr>
                    <td>Gender</td>
                    <td className='left'>
                        <InPlaceEditorComponent id='gender' type="DropDownList"
mode='Inline' value='Male' model={genderModel}/>
                    </td>
                </tr>
            </table>
        </div>
    </div>);
}
export default App;
```

APP.TSX

```

import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-
editor';
import * as React from 'react';
function App() {
  const genderData: string[] = ['Male', 'Female'];
  const dateModel: object = { showTodayButton: true, placeholder: 'Select
date of birth' };
  const dateValue: Date = new Date('04/12/2018');
  const elementModel: object = { placeholder: 'Enter your name' };
  const genderModel: object = { dataSource: genderData, placeholder: 'Select
gender' };
  return (
    <div id='container'>
      <div className="control-group">
        <div className="e-heading">
          <h3> Modify Basic Details </h3>
        </div>
        <table>
          <tr>
            <td>Name</td>
            <td className='left'>
              <InPlaceEditorComponent id='element' mode='Inline'
value='Andrew' model={elementModel}/>
            </td>
          </tr>
          <tr>
            <td>Date of Birth</td>
            <td className='left'>
              <InPlaceEditorComponent id='dateofbirth' type="Date"
mode='Inline' value={dateValue} model={dateModel}/>
            </td>
          </tr>
          <tr>
            <td>Gender</td>
            <td className='left'>
              <InPlaceEditorComponent id='gender' type="DropDownList"
mode='Inline' value='Male' model={genderModel}/>
            </td>
          </tr>
        </table>
      </div>
    </div>
  );
}
export default App;

```

Submitting data to the server (save)

You can submit editor value to server by configuring the [url](#), [adaptor](#) and [primaryKey](#) property.

Property	Usage
-----	-----

url	Gets the url for server submit action.
-----	--

adaptor	Specifies the adaptor type that are used by DataManager to communicate with DataSource.
----------------	---

| **primaryKey** | Defines the unique primary key of editable field which can be used for saving data in data-base. |

primaryKey property is mandatory. If it's not set, edited data are not sent to the server.

Refresh with modified value

The edited data is submitted to the server and you can see the new values getting reflected in the In-place Editor.

APP.JSX

```
{% raw %}
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-
editor';
import * as React from 'react';
function App() {
    const frameWorkList = ['Andrew Fuller', 'Janet Leverling', 'Laura
Callahan', 'Margaret Hamilt', 'Michael Suyama', 'Nancy Davloio', 'Robert
King'];
    const model = { dataSource: frameWorkList, placeholder: 'Select
employee', popupHeight: '200px' };
    const url = "https://ej2services.syncfusion.com/development/web-
services/api/Editor/UpdateData";
    const actionSuccess = (e) => {
        const newEle = document.getElementById('newValue');
        const oldEle = document.getElementById('oldValue');
        oldEle.textContent = newEle.textContent;
        newEle.textContent = e.value;
    };
    return (<div id='container'>
        <div className="control-group">
            Best Employee of the year: <InPlaceEditorComponent id='element'
type="DropDownList" mode='Inline' value='Andrew Fuller' name='Employee'
url={url} primaryKey="Employee" adaptor="UrlAdaptor" model={model}
actionSuccess={actionSuccess}/>
        </div>
        <table style={{ 'margin': 'auto', 'width': '50%' }}>
            <tr>
                <td style={{ textAlign: 'left' }}>
                    Old Value :
                </td>
                <td id="oldValue" style={{ textAlign: 'left' }}/>
            </tr>
            <tr>
                <td style={{ textAlign: 'left' }}>
                    New Value :
                </td>
                <td id="newValue" style={{ textAlign: 'left' }}>
                    Andrew Fuller
                </td>
            </tr>
        </table>

```

```

    </div>);
}
export default App;
{% endraw %}

```

APP.TSX

```

{% raw %}
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-
editor';
import * as React from 'react';
function App() {
    const frameWorkList: string[] = ['Andrew Fuller', 'Janet Leverling', 'Laura
Callahan', 'Margaret Hamilt', 'Michael Suyama', 'Nancy Davloio', 'Robert
King'];
    const model: object = { dataSource: frameWorkList, placeholder: 'Select
employee', popupHeight: '200px' };
    const url: string = "https://ej2services.syncfusion.com/development/web-
services/api/Editor/UpdateData";
    const actionSuccess = (e: any) => {
        const newEle = document.getElementById('newValue') as HTMLElement;
        const oldEle = document.getElementById('oldValue') as HTMLElement;
        oldEle.textContent = newEle.textContent;
        newEle.textContent = e.value;
    }
    return (
        <div id='container'>
            <div className="control-group">
                Best Employee of the year: <InPlaceEditorComponent id='element'
type="DropDownList" mode='Inline' value='Andrew Fuller' name='Employee'
url={url} primaryKey="Employee" adaptor="UrlAdaptor" model={model}
actionSuccess={actionSuccess} />
            </div>
            <table style={{'margin': 'auto', 'width': '50%'}}>
                <tr>
                    <td style={{textAlign: 'left'}}>
                        Old Value :
                    </td>
                    <td id="oldValue" style={{textAlign: 'left'}}/>
                </tr>
                <tr>
                    <td style={{textAlign: 'left'}}>
                        New Value :
                    </td>
                    <td id="newValue" style={{textAlign: 'left'}}>
                        Andrew Fuller
                    </td>
                </tr>
            </table>
        </div>
    );
}
export default App;
{% endraw %}

```

See Also

- [Types of rendering the editor](#)

Components in React Inplace editor component

In-place Editor renders, various components based on [type](#) property and it have built-in, injectable components. To use injectable components need to inject required modules into **In-place Editor**. By default [type](#) property set as **Text** and render the **TextBox**.

Below table explains Injectable components module name and Built-in components and their types.

Injectable Components Built in Components	
----- -----	
AutoComplete (AutoComplete)	TextBox (Text)
ComboBox (ComboBox)	DatePicker (Date)
MultiSelect (MultiSelect)	DateTimePicker (DateTime)
TimePicker (Time)	DropDownList (DropDownList)
DateRangePicker (DateRange)	MaskedTextBox (Mask)
Slider (Slider)	NumericTextBox (Numeric)
Rte (RTE)	
ColorPicker (Color)	

In the below sample, built-in and injectable based In-place Editor components are rendered.

[Class-component]

APP.JSX

```
import { AutoComplete, ColorPicker, ComboBox, Inject, InPlaceEditorComponent
} from '@syncfusion/ej2-react-inplace-editor';
import { DateRangePicker, MultiSelect, Rte, Slider, TimePicker } from
 '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
class App extends React.Component {
  frameworkList = ['Android', 'JavaScript', 'jQuery', 'TypeScript',
'Angular', 'React', 'Vue', 'Ionic'];
  multiValue = ['Android'];
  dateModel = { placeholder: 'Select date' };
  dateValue = new Date('11/23/2018');
  dateTimeValue = new Date('11/23/2018 12:30 PM');
  dropdownModel = { dataSource: this.frameworkList, placeholder: 'Select
frameworks' };
  multiSelectModel = { dataSource: frameworkList, placeholder: 'Select
frameworks' };
  maskModel = { mask: '000-000-000' };
  numericModel = { placeholder: 'Enter number' };
  textboxModel = { placeholder: 'Enter some text' };
  dateRangePickerValue = [new Date('11/12/2018'), new Date('11/15/2018')];
  rteModel = { placeholder: 'Enter your content here' };
```

```

render() {
    return (<div id='container'>
        <h3> Built-in components </h3>
        <table className="table-section">
            <tbody>
                <tr>
                    <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-
title"> DatePicker </td>
                    <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
                        <InPlaceEditorComponent id='date' mode='Inline'
type='Date' value={this.dateValue} model={this.dateModel}/>
                    </td>
                </tr>
                <tr>
                    <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-
title"> DateTimePicker </td>
                    <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
                        <InPlaceEditorComponent id='dateTime' mode='Inline'
type='DateTime' value={this.dateTimeValue} model={this.dateModel}/>
                    </td>
                </tr>
                <tr>
                    <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-
title"> DropDownList </td>
                    <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
                        <InPlaceEditorComponent id='dropDowns' mode='Inline'
type='DropDownList' value='Android' model={this.dropdownModel}/>
                    </td>
                </tr>
                <tr>
                    <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-
title"> MaskedTextBox </td>
                    <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
                        <InPlaceEditorComponent id='masked' mode='Inline'
type='Mask' value='123-345-678' model={this.maskModel}/>
                    </td>
                </tr>
                <tr>
                    <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-
title"> NumericTextBox </td>
                    <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
                        <InPlaceEditorComponent id='numeric' mode='Inline'
type='Numeric' value={10} model={this.numericModel}/>
                    </td>
                </tr>
                <tr>
                    <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-
title"> TextBox </td>
                    <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
                        <InPlaceEditorComponent id='textbox' mode='Inline'
type='Text' value='Andrew' model={this.textboxModel}/>
                    </td>
                </tr>
            </tbody>
        </table>
        <h3> Injectable Components </h3>
        <table className="table-section">

```

```

        <tbody>
          <tr>
            <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-
title"> AutoComplete </td>
            <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
              <InPlaceEditorComponent id='autoComplete' mode='Inline'
type='AutoComplete' value='Android' model={this.dropdownModel}>
                <Inject services={[AutoComplete]} />
              </InPlaceEditorComponent>
            </td>
          </tr>
          <tr>
            <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-
title"> ColorPicker </td>
            <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
              <InPlaceEditorComponent id='color' mode='Inline'
type='Color' value='#81aefd'>
                <Inject services={[ColorPicker]} />
              </InPlaceEditorComponent>
            </td>
          </tr>
          <tr>
            <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-
title"> ComboBox </td>
            <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
              <InPlaceEditorComponent id='comboBox' mode='Inline'
type='ComboBox' value='Android' model={this.dropdownModel}>
                <Inject services={[ComboBox]} />
              </InPlaceEditorComponent>
            </td>
          </tr>
          <tr>
            <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-
title"> DateRangePicker </td>
            <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
              <InPlaceEditorComponent id='dateRange' mode='Inline'
type='DateRange' value={this.dateRangePickerValue} model={this.dateModel}>
                <Inject services={[DateRangePicker]} />
              </InPlaceEditorComponent>
            </td>
          </tr>
          <tr>
            <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-
title"> MultiSelect </td>
            <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
              <InPlaceEditorComponent id='multiSelect' mode='Inline'
type='MultiSelect' value={this.multiValue} model={this.multiSelectModel}>
                <Inject services={[MultiSelect]} />
              </InPlaceEditorComponent>
            </td>
          </tr>
          <tr>
            <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-
title"> RTE </td>
            <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
              <InPlaceEditorComponent id='rte' mode='Inline' type='RTE'
value='<p>Enter your content here</p>' model={this.rteModel}>

```

```

                <Inject services={[Rte]}/>
            </InPlaceEditorComponent>
        </td>
    </tr>
    <tr>
        <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-
title"> Slider </td>
        <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
            <InPlaceEditorComponent id='slider' mode='Inline'
type='Slider' value={20}>
                <Inject services={[Slider]}/>
            </InPlaceEditorComponent>
        </td>
    </tr>
    <tr>
        <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-
title"> TimePicker </td>
        <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
            <InPlaceEditorComponent id='time' mode='Inline'
type='Time' value={this.dateValue} model={this.dateModel}>
                <Inject services={[TimePicker]}/>
            </InPlaceEditorComponent>
        </td>
    </tr>
</tbody>
</table>
</div>);
    }
}
;
export default App;

```

APP.TSX

```

import { AutoComplete, ColorPicker, ComboBox, Inject, InPlaceEditorComponent
} from '@syncfusion/ej2-react-inplace-editor';
import { DateRangePicker, MultiSelect, Rte, Slider, TimePicker } from
 '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
class App extends React.Component<{}, {}> {
    public frameworkList = ['Android', 'JavaScript', 'jQuery', 'TypeScript',
'Angular', 'React', 'Vue', 'Ionic'];
    public multiValue = ['Android'];
    public dateModel = { placeholder: 'Select date' };
    public dateValue = new Date('11/23/2018');
    public dateTimeValue = new Date('11/23/2018 12:30 PM');
    public dropdownModel = { dataSource: this.frameworkList, placeholder:
'Select frameworks' };
    public multiSelectModel = { dataSource: this.frameworkList, placeholder:
'Select frameworks' };
    public maskModel = { mask: '000-000-000' };
    public numericModel = { placeholder: 'Enter number' };
    public textboxModel = { placeholder: 'Enter some text' };
    public dateRangePickerValue = [new Date('11/12/2018'), new
Date('11/15/2018')];
    public rteModel = { placeholder: 'Enter your content here' };
}

```

```

public render() {
    return (
      <div id='container'>
        <h3> Built-in components </h3>
        <table className="table-section">
          <tbody>
            <tr>
              <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-
title"> DatePicker </td>
              <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
                <InPlaceEditorComponent id='date' mode='Inline'
type='Date' value={this.dateValue} model={this.dateModel}/>
              </td>
            </tr>
            <tr>
              <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-
title"> DateTimePicker </td>
              <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
                <InPlaceEditorComponent id='dateTime' mode='Inline'
type='DateTime' value={this.dateTimeValue} model={this.dateModel}/>
              </td>
            </tr>
            <tr>
              <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-
title"> DropDownList </td>
              <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
                <InPlaceEditorComponent id='dropDowns' mode='Inline'
type='DropDownList' value='Android' model={this.dropdownModel}/>
              </td>
            </tr>
            <tr>
              <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-
title"> MaskedTextBox </td>
              <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
                <InPlaceEditorComponent id='masked' mode='Inline'
type='Mask' value='123-345-678' model={this.maskModel}/>
              </td>
            </tr>
            <tr>
              <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-
title"> NumericTextBox </td>
              <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
                <InPlaceEditorComponent id='numeric' mode='Inline'
type='Numeric' value={10} model={this.numericModel}/>
              </td>
            </tr>
            <tr>
              <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-
title"> TextBox </td>
              <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
                <InPlaceEditorComponent id='textbox' mode='Inline'
type='Text' value='Andrew' model={this.textboxModel}/>
              </td>
            </tr>
          </tbody>
        </table>
        <h3> Injectable Components </h3>
      </div>
    );
  }

```

```

<table className="table-section">
  <tbody>
    <tr>
      <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-
title"> AutoComplete </td>
      <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
        <InPlaceEditorComponent id='autoComplete' mode='Inline'
type='AutoComplete' value='Android' model={this.dropdownModel} >
          <Inject services={[AutoComplete]} />
        </InPlaceEditorComponent>
      </td>
    </tr>
    <tr>
      <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-
title"> ColorPicker </td>
      <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
        <InPlaceEditorComponent id='color' mode='Inline'
type='Color' value='#81aefd'>
          <Inject services={[ColorPicker]} />
        </InPlaceEditorComponent>
      </td>
    </tr>
    <tr>
      <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-
title"> ComboBox </td>
      <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
        <InPlaceEditorComponent id='comboBox' mode='Inline'
type='ComboBox' value='Android' model={this.dropdownModel} >
          <Inject services={[ComboBox]} />
        </InPlaceEditorComponent>
      </td>
    </tr>
    <tr>
      <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-
title"> DateRangePicker </td>
      <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
        <InPlaceEditorComponent id='dateRange' mode='Inline'
type='DateRange' value={this.dateRangePickerValue} model={this.dateModel} >
          <Inject services={[DateRangePicker]} />
        </InPlaceEditorComponent>
      </td>
    </tr>
    <tr>
      <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-
title"> MultiSelect </td>
      <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
        <InPlaceEditorComponent id='multiSelect' mode='Inline'
type='MultiSelect' value={this.multiValue} model={this.multiSelectModel} >
          <Inject services={[MultiSelect]} />
        </InPlaceEditorComponent>
      </td>
    </tr>
    <tr>
      <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-
title"> RTE </td>
      <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">

```



```

        <InPlaceEditorComponent id='rte' mode='Inline' type='RTE'
value='<p>Enter your content here</p>' model={this.rteModel} >
        <Inject services={[Rte]} />
    </InPlaceEditorComponent>
    </td>
</tr>
<tr>
    <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-
title"> Slider </td>
    <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
        <InPlaceEditorComponent id='slider' mode='Inline'
type='Slider' value={20}>
        <Inject services={[Slider]} />
        </InPlaceEditorComponent>
    </td>
</tr>
<tr>
    <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-
title"> TimePicker </td>
    <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
        <InPlaceEditorComponent id='time' mode='Inline'
type='Time' value={this.dateValue} model={this.dateModel} >
        <Inject services={[TimePicker]} />
        </InPlaceEditorComponent>
    </td>
</tr>
</tbody>
</table>
</div>
    );
}
};
export default App;

```

[Functional-component]

APP.JSX

```

import { AutoComplete, ColorPicker, ComboBox, Inject, InPlaceEditorComponent
} from '@syncfusion/ej2-react-inplace-editor';
import { DateRangePicker, MultiSelect, Rte, Slider, TimePicker } from
 '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
function App() {
    let frameWorkList = ['Android', 'JavaScript', 'jQuery', 'TypeScript',
'Angular', 'React', 'Vue', 'Ionic'];
    let multiValue = ['Android'];
    let dateModel = { placeholder: 'Select date' };
    let dateValue = new Date('11/23/2018');
    let dateTimeValue = new Date('11/23/2018 12:30 PM');
    let dropdownModel = { dataSource: frameWorkList, placeholder: 'Select
frameworks' };
    let multiSelectModel = { dataSource: frameWorkList, placeholder: 'Select
frameworks' };
    let maskModel = { mask: '000-000-000' };
    let numericModel = { placeholder: 'Enter number' };

```

```

let textboxModel = { placeholder: 'Enter some text' };
let dateRangePickerValue = [new Date('11/12/2018'), new
Date('11/15/2018')];
let rteModel = { placeholder: 'Enter your content here' };
return (<div id='container'>
  <h3> Built-in components </h3>
  <table className="table-section">
    <tbody>
      <tr>
        <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6
control-title"> DatePicker </td>
        <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
          <InPlaceEditorComponent id='date' mode='Inline'
type='Date' value={dateValue} model={dateModel}/>
        </td>
      </tr>
      <tr>
        <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6
control-title"> DateTimePicker </td>
        <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
          <InPlaceEditorComponent id='dateTime' mode='Inline'
type='DateTime' value={dateTimeValue} model={dateModel}/>
        </td>
      </tr>
      <tr>
        <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6
control-title"> DropDownList </td>
        <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
          <InPlaceEditorComponent id='dropDowns' mode='Inline'
type='DropDownList' value='Android' model={dropdownModel}/>
        </td>
      </tr>
      <tr>
        <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6
control-title"> MaskedTextBox </td>
        <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
          <InPlaceEditorComponent id='masked' mode='Inline'
type='Mask' value='123-345-678' model={maskModel}/>
        </td>
      </tr>
      <tr>
        <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6
control-title"> NumericTextBox </td>
        <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
          <InPlaceEditorComponent id='numeric' mode='Inline'
type='Numeric' value={10} model={numericModel}/>
        </td>
      </tr>
      <tr>
        <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6
control-title"> TextBox </td>
        <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
          <InPlaceEditorComponent id='textbox' mode='Inline'
type='Text' value='Andrew' model={textboxModel}/>
        </td>
      </tr>
    </tbody>
  </table>

```

```

</table>
<h3> Injectable Components </h3>
<table className="table-section">
  <tbody>
    <tr>
      <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6
control-title"> AutoComplete </td>
      <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
        <InPlaceEditorComponent id='autoComplete'
mode='Inline' type='AutoComplete' value='Android' model={dropdownModel}>
          <Inject services={[AutoComplete]}/>
        </InPlaceEditorComponent>
      </td>
    </tr>
    <tr>
      <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6
control-title"> ColorPicker </td>
      <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
        <InPlaceEditorComponent id='color' mode='Inline'
type='Color' value='#81aefd">
          <Inject services={[ColorPicker]}/>
        </InPlaceEditorComponent>
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    <tr>
      <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6
control-title"> ComboBox </td>
      <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
        <InPlaceEditorComponent id='comboBox' mode='Inline'
type='ComboBox' value='Android' model={dropdownModel}>
          <Inject services={[ComboBox]}/>
        </InPlaceEditorComponent>
      </td>
    </tr>
    <tr>
      <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6
control-title"> DateRangePicker </td>
      <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
        <InPlaceEditorComponent id='dateRange' mode='Inline'
type='DateRange' value={dateRangePickerValue} model={dateModel}>
          <Inject services={[DateRangePicker]}/>
        </InPlaceEditorComponent>
      </td>
    </tr>
    <tr>
      <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6
control-title"> MultiSelect </td>
      <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
        <InPlaceEditorComponent id='multiSelect'
mode='Inline' type='MultiSelect' value={multiValue} model={multiSelectModel}>
          <Inject services={[MultiSelect]}/>
        </InPlaceEditorComponent>
      </td>
    </tr>
    <tr>
      <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6
control-title"> RTE </td>

```

```

        <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
            <InPlaceEditorComponent id='rte' mode='Inline'
type='RTE' value='<p>Enter your content here</p>' model={rteModel}>
                <Inject services={[Rte]}/>
            </InPlaceEditorComponent>
        </td>
    </tr>
    <tr>
        <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6
control-title"> Slider </td>
        <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
            <InPlaceEditorComponent id='slider' mode='Inline'
type='Slider' value={20}>
                <Inject services={[Slider]}/>
            </InPlaceEditorComponent>
        </td>
    </tr>
    <tr>
        <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6
control-title"> TimePicker </td>
        <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
            <InPlaceEditorComponent id='time' mode='Inline'
type='Time' value={dateValue} model={dateModel}>
                <Inject services={[TimePicker]}/>
            </InPlaceEditorComponent>
        </td>
    </tr>
</tbody>
</table>
</div>);
}
;
export default App;

```

APP.TSX

```

import { AutoComplete, ColorPicker, ComboBox, Inject, InPlaceEditorComponent
} from '@syncfusion/ej2-react-inplace-editor';
import { DateRangePicker, MultiSelect, Rte, Slider, TimePicker } from
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    let dropdownModel = { dataSource: frameWorkList, placeholder: 'Select
frameworks' };
    let multiSelectModel = { dataSource: frameWorkList, placeholder: 'Select
frameworks' };
    let maskModel = { mask: '000-000-000' };
    let numericModel = { placeholder: 'Enter number' };
    let textboxModel = { placeholder: 'Enter some text' };

```

```

    let dateRangePickerValue = [new Date('11/12/2018'), new
Date('11/15/2018')];
    let rteModel = { placeholder: 'Enter your content here' };
    return (
      <div id='container'>
        <h3> Built-in components </h3>
        <table className="table-section">
          <tbody>
            <tr>
              <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6
control-title"> DatePicker </td>
              <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
                <InPlaceEditorComponent id='date' mode='Inline'
type='Date' value={dateValue} model={dateModel}/>
              </td>
            </tr>
            <tr>
              <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6
control-title"> DateTimePicker </td>
              <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
                <InPlaceEditorComponent id='dateTime' mode='Inline'
type='DateTime' value={dateTimeValue} model={dateModel}/>
              </td>
            </tr>
            <tr>
              <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6
control-title"> DropDownList </td>
              <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
                <InPlaceEditorComponent id='dropDowns' mode='Inline'
type='DropDownList' value='Android' model={dropdownModel}/>
              </td>
            </tr>
            <tr>
              <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6
control-title"> MaskedTextBox </td>
              <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
                <InPlaceEditorComponent id='masked' mode='Inline'
type='Mask' value='123-345-678' model={maskModel}/>
              </td>
            </tr>
            <tr>
              <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6
control-title"> NumericTextBox </td>
              <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
                <InPlaceEditorComponent id='numeric' mode='Inline'
type='Numeric' value={10} model={numericModel}/>
              </td>
            </tr>
            <tr>
              <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6
control-title"> TextBox </td>
              <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
                <InPlaceEditorComponent id='textbox' mode='Inline'
type='Text' value='Andrew' model={textboxModel}/>
              </td>
            </tr>
          </tbody>
        </table>
      </div>
    );
  
```

```

</table>
<h3> Injectable Components </h3>
<table className="table-section">
  <tbody>
    <tr>
      <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6
control-title"> AutoComplete </td>
      <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
        <InPlaceEditorComponent id='autoComplete'
mode='Inline' type='AutoComplete' value='Android' model={dropdownModel} >
          <Inject services={[AutoComplete]} />
        </InPlaceEditorComponent>
      </td>
    </tr>
    <tr>
      <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6
control-title"> ColorPicker </td>
      <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
        <InPlaceEditorComponent id='color' mode='Inline'
type='Color' value='#81aefd'>
          <Inject services={[ColorPicker]} />
        </InPlaceEditorComponent>
      </td>
    </tr>
    <tr>
      <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6
control-title"> ComboBox </td>
      <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
        <InPlaceEditorComponent id='comboBox' mode='Inline'
type='ComboBox' value='Android' model={dropdownModel} >
          <Inject services={[ComboBox]} />
        </InPlaceEditorComponent>
      </td>
    </tr>
    <tr>
      <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6
control-title"> DateRangePicker </td>
      <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
        <InPlaceEditorComponent id='dateRange' mode='Inline'
type='DateRange' value={dateRangePickerValue} model={dateModel} >
          <Inject services={[DateRangePicker]} />
        </InPlaceEditorComponent>
      </td>
    </tr>
    <tr>
      <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6
control-title"> MultiSelect </td>
      <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
        <InPlaceEditorComponent id='multiSelect'
mode='Inline' type='MultiSelect' value={multiValue} model={multiSelectModel}
>
          <Inject services={[MultiSelect]} />
        </InPlaceEditorComponent>
      </td>
    </tr>
  </tbody>
</table>

```

```

        <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6
control-title"> RTE </td>
        <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
            <InPlaceEditorComponent id='rte' mode='Inline'
type='RTE' value='<p>Enter your content here</p>' model={rteModel} >
                <Inject services={[Rte]} />
            </InPlaceEditorComponent>
        </td>
    </tr>
    <tr>
        <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6
control-title"> Slider </td>
        <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
            <InPlaceEditorComponent id='slider' mode='Inline'
type='Slider' value={20}>
                <Inject services={[Slider]} />
            </InPlaceEditorComponent>
        </td>
    </tr>
    <tr>
        <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6
control-title"> TimePicker </td>
        <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
            <InPlaceEditorComponent id='time' mode='Inline'
type='Time' value={dateValue} model={dateModel} >
                <Inject services={[TimePicker]} />
            </InPlaceEditorComponent>
        </td>
    </tr>
</tbody>
</table>
</div>
    );
};
export default App;

```

Model configuration

Component properties and events can be customized through In-place Editor [model](#) property.

In the below code, [type](#) defined as `Date` and `DatePicker` properties are configured through [model](#) property to customize the [DatePicker](#) component at In-place Editor.

```
`ts
```

```
public model = { showTodayButton: true, placeholder: 'Select Date' };
```

```
,
```

```
[src/app/app.ts]
```

```
[Class-component]
```

```
`ts
```

```
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
```

```
import * as React from 'react';
import './App.css';
class App extends React.Component {
  public model = { showTodayButton: true, placeholder: 'Select Date' };
  public value = new Date('04/12/2018');
  public render() {
    return (
      <InPlaceEditorComponent id='element' model={this.model} type='Date' value={this.value}/>
    );
  }
}
export default App;
```

[src/app/app.ts]

[Functional-component]

```
`ts
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
import './App.css';
function App (){
  let model = { showTodayButton: true, placeholder: 'Select Date' };
  let value = new Date('04/12/2018');
  return (
    <InPlaceEditorComponent id='element' model={model} type='Date' value={value}/>
  );
}
export default App;
```

See Also

- [Built-in Components](#)

Configuration in React Inplace editor component

Rendering modes

This section explains the rendering modes supported by the In-place Editor. Possible rendering modes are given in below.

- Popup
- Inline

By default, component will be rendered with **Popup** mode, when opening an editor.

- For **Popup** mode, editable container displays as like tooltip or popover above the element.
- For **Inline** mode, editable container will be displayed instead of the popup element. To render **Inline** mode while opening the editor, specify **mode** as **Inline**.

In the following sample, the In-place Editor renders with **Inline** mode. You can dynamically switch to another mode by changing the drop-down item value.

[Class-component]

APP.JSX

```
{% raw %}
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import * as React from 'react';
class App extends React.Component {
  inplaceEditorObj;
  dropdownObj;
  modeData = ['Inline', 'Popup'];
  model = { placeholder: 'Enter some text' };
  onChange(e) {
    const mode = e.itemData.value;
    this.inplaceEditorObj.mode = mode;
    this.inplaceEditorObj.dataBind();
  }
  render() {
    return (<div id='container'>
      <table className="table-section">
        <tbody>
          <tr>
            <td> Mode: </td>
            <td>
              <DropDownListComponent id='dropDown'
                dataSource={this.modeData} width='auto' change={this.onChange =
                this.onChange.bind(this)} value='Inline' placeholder='Select Mode' />
            </td>
          </tr>
          <tr>
            <td className="sample-td"> Enter your name: </td>
            <td className="sample-td">

```

```

        <InPlaceEditorComponent ref={(text) => {
this.inplaceEditorObj = text; }} id='element' mode='Inline' value='Andrew'
model={this.model}/>
        </td>
      </tr>
    </tbody>
  </table>
</div>);
}
}
export default App;
{% endraw %}

```

APP.TSX

```

{% raw %}
import { InPlaceEditorComponent, RenderMode } from '@syncfusion/ej2-react-inplace-editor';
import { DropDownListComponent, ChangeEventArgs } from '@syncfusion/ej2-react-dropdowns';
import * as React from 'react';import { ChangeEventArgs,
DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { InPlaceEditorComponent, RenderMode } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
class App extends React.Component {
  public inplaceEditorObj: InPlaceEditorComponent;
  public dropdownObj: DropDownListComponent;
  public modeData = ['Inline', 'Popup'];
  public model = { placeholder: 'Enter some text' };
  public onChange(e: ChangeEventArgs): void {
    const mode: RenderMode = e.itemData.value as RenderMode;
    this.inplaceEditorObj.mode = mode;
    this.inplaceEditorObj.dataBind();
  }
  public render() {
    return (
      <div id='container'>
        <table className="table-section">
          <tbody>
            <tr>
              <td> Mode: </td>
              <td>
                <DropDownListComponent id='dropDown' dataSource=
{this.modeData} width='auto' change={ this.onChange =
this.onChange.bind(this) } value='Inline' placeholder='Select Mode' />
              </td>
            </tr>
            <tr>
              <td className="sample-td"> Enter your name: </td>
              <td className="sample-td">
                <InPlaceEditorComponent ref={(text) => {
this.inplaceEditorObj = text! }} id='element' mode='Inline' value='Andrew'
model={this.model} />
              </td>
            </tr>
          </tbody>
        </table>
      </div>
    );
  }
}

```

```

        </tbody>
      </table>
    </div>
  );
}
}
export default App;
{% endraw %}

```

[Functional-component]

APP.JSX

```

{% raw %}
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-
editor';
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import * as React from 'react';
function App() {
  let inplaceEditorObj;
  let dropdownObj;
  let modeData = ['Inline', 'Popup'];
  let model = { placeholder: 'Enter some text' };
  function onChange(e) {
    const mode = e.itemData.value;
    inplaceEditorObj.mode = mode;
    inplaceEditorObj.dataBind();
  }
  return (<div id='container'>
    <table className="table-section">
      <tbody>
        <tr>
          <td> Mode: </td>
          <td>
            <DropDownListComponent id='dropDown'
dataSource={modeData} width='auto' change={onChange = onChange.bind(this)}
value='Inline' placeholder='Select Mode' />
          </td>
        </tr>
        <tr>
          <td className="sample-td"> Enter your name: </td>
          <td className="sample-td">
            <InPlaceEditorComponent ref={(text) => {
inplaceEditorObj = text; }} id='element' mode='Inline' value='Andrew'
model={model} />
          </td>
        </tr>
      </tbody>
    </table>
  </div>);
}
export default App;
{% endraw %}

```

APP.TSX

```
{% raw %}
import { InPlaceEditorComponent, RenderMode } from '@syncfusion/ej2-react-inplace-editor';
import { DropDownListComponent, ChangeEventArgs } from '@syncfusion/ej2-react-dropdowns';
import * as React from 'react';import { ChangeEventArgs,
DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { InPlaceEditorComponent, RenderMode } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
function App () {
  let inplaceEditorObj: InPlaceEditorComponent;
  let dropdownObj: DropDownListComponent;
  let modeData = ['Inline', 'Popup'];
  let model = { placeholder: 'Enter some text' };
  function onChange(e: ChangeEventArgs): void {
    const mode: RenderMode = e.itemData.value as RenderMode;
    inplaceEditorObj.mode = mode;
    inplaceEditorObj.dataBind();
  }
  return (
    <div id='container'>
      <table className="table-section">
        <tbody>
          <tr>
            <td> Mode: </td>
            <td>
              <DropDownListComponent id='dropDown' dataSource={
modeData} width='auto' change={ onChange = onChange.bind(this) }
value='Inline' placeholder='Select Mode' />
            </td>
          </tr>
          <tr>
            <td className="sample-td"> Enter your name: </td>
            <td className="sample-td">
              <InPlaceEditorComponent ref={ (text) => {
inplaceEditorObj = text! }} id='element' mode='Inline' value='Andrew'
model={model} />
            </td>
          </tr>
        </tbody>
      </table>
    </div>
  );
}
export default App;
{% endraw %}
```

Pop-up customization

In-place Editor popup mode can be customized by using the [title](#) and [model](#) properties in [popupSettings](#) API.

Popup mode rendered by using the Essential JS2 React Tooltip component, so you can use tooltip properties and events to customize the behavior of popup via the [model](#) property of [popupSettings](#) API.

For more details, refer the tooltip documentation [section](#).

In the following sample, popup [title](#) and [position](#) customized using the [popupSettings](#) property. All possible tooltip position data configured in the drop-down, if we change drop down item, selected value bound to [model](#) property and applied it to [Tooltip](#) component. [Tooltip](#) have following position options.

- TopLeft
- TopCenter
- TopRight
- BottomLeft
- BottomCenter
- BottomRight
- LeftTop
- LeftCenter
- LeftBottom
- RightTop
- RightCenter
- RightBottom

[Class-component]

APP.JSX

```
{% raw %}
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
class App extends React.Component {
  inplaceEditorObj;
  dropdownObj;
  positionData = ['TopLeft', 'TopCenter', 'TopRight', 'BottomLeft', 'BottomCenter', 'BottomRight', 'LeftTop', 'LeftCenter', 'LeftBottom', 'RightTop', 'RightCenter', 'RightBottom'];
  model = { placeholder: 'Enter some text' };
  popupSettings = { title: 'Enter name', model: { position: 'BottomCenter' } };
}
onChange(e) {
  this.inplaceEditorObj.popupSettings.model.position = e.value;
  this.inplaceEditorObj.dataBind();
}
render() {
  return (
    <div id='container'>
      <table className="table-section">
        <tbody>
          <tr>
            <td> Position: </td>
            <td>
              <DropDownListComponent id='dropDown' value='BottomCenter'
                dataSource={this.positionData} placeholder='Select a position'
                popupHeight='150px' change={this.onChange = this.onChange.bind(this)} />
            </td>
          </tr>
          <tr>
            <td className="edit-heading sample-td"> Enter your name:

```

```

        <td className="sample-td">
            <InPlaceEditorComponent ref={ (text) => {
this.inplaceEditorObj = text; }} id='element' mode='Popup' value='Andrew'
model={this.model} popupSettings={this.popupSettings}/>
        </td>
    </tr>
</tbody>
</table>
</div>);
    }
}
export default App;
{% endraw %}

```

APP.TSX

```

{% raw %}
import { ChangeEventArgs, DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
class App extends React.Component {
    public inplaceEditorObj: InPlaceEditorComponent;
    public dropdownObj: DropDownListComponent;
    public positionData = ['TopLeft', 'TopCenter', 'TopRight', 'BottomLeft', 'BottomCenter', 'BottomRight', 'LeftTop', 'LeftCenter', 'LeftBottom', 'RightTop', 'RightCenter', 'RightBottom'];
    public model = { placeholder: 'Enter some text' };
    public popupSettings = { title: 'Enter name', model: { position: 'BottomCenter' } }
    public onChange(e: ChangeEventArgs): void {
        (this.inplaceEditorObj as any).popupSettings.model.position = e.value;
        this.inplaceEditorObj.dataBind();
    }
    public render() {
        return (
            <div id='container'>
                <table className="table-section">
                    <tbody>
                        <tr>
                            <td> Position: </td>
                            <td>
                                <DropDownListComponent id='dropDown' value='BottomCenter'
dataSource= {this.positionData} placeholder='Select a position'
popupHeight='150px' change={ this.onChange = this.onChange.bind(this) } />
                            </td>
                        </tr>
                        <tr>
                            <td className="edit-heading sample-td"> Enter your name:
                        </td>
                            <td className="sample-td">
                                <InPlaceEditorComponent ref={ (text) => {
this.inplaceEditorObj = text! }} id='element' mode='Popup' value='Andrew'
model={this.model} popupSettings={this.popupSettings} />
                            </td>
                        </tr>
                    </tbody>
                </table>
            </div>
        );
    }
}

```

```

        </tr>
      </tbody>
    </table>
  </div>
);
}
}
export default App;
{% endraw %}

```

[Functional-component]

APP.JSX

```

{% raw %}
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
function App() {
  let inplaceEditorObj;
  let dropdownObj;
  let positionData = ['TopLeft', 'TopCenter', 'TopRight', 'BottomLeft', 'BottomCenter', 'BottomRight', 'LeftTop', 'LeftCenter', 'LeftBottom', 'RightTop', 'RightCenter', 'RightBottom'];
  let model = { placeholder: 'Enter some text' };
  let popupSettings = { title: 'Enter name', model: { position: 'BottomCenter' } };
  function onChange(e) {
    inplaceEditorObj.popupSettings.model.position = e.value;
    inplaceEditorObj.dataBind();
  }
  return (
    <div id='container'>
      <table className="table-section">
        <tbody>
          <tr>
            <td> Position: </td>
            <td>
              <DropDownListComponent id='dropDown' value='BottomCenter'
                dataSource={positionData} placeholder='Select a position' popupHeight='150px'
                change={onChange = onChange.bind(this)} />
            </td>
          </tr>
          <tr>
            <td className="edit-heading sample-td"> Enter your name:
              <td className="sample-td">
                <InPlaceEditorComponent ref={(text) => {
                  inplaceEditorObj = text; }} id='element' mode='Popup' value='Andrew'
                  model={model} popupSettings={popupSettings} />
              </td>
            </tr>
          </tbody>
        </table>
      </div>);
}

```

```
export default App;
{% endraw %}
```

APP.TSX

```
{% raw %}
import { ChangeEventArgs, DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
function App () {
  let inplaceEditorObj: InPlaceEditorComponent;
  let dropdownObj: DropDownListComponent;
  let positionData = ['TopLeft', 'TopCenter', 'TopRight', 'BottomLeft', 'BottomCenter', 'BottomRight', 'LeftTop', 'LeftCenter', 'LeftBottom', 'RightTop', 'RightCenter', 'RightBottom'];
  let model = { placeholder: 'Enter some text' };
  let popupSettings = { title: 'Enter name', model: { position: 'BottomCenter' } }
  function onChange(e: ChangeEventArgs): void {
    (inplaceEditorObj as any).popupSettings.model.position = e.value;
    inplaceEditorObj.dataBind();
  }
  return (
    <div id='container'>
      <table className="table-section">
        <tbody>
          <tr>
            <td> Position: </td>
            <td>
              <DropDownListComponent id='dropDown' value='BottomCenter'
dataSource= {positionData} placeholder='Select a position'
popupHeight='150px' change={ onChange = onChange.bind(this) } />
            </td>
          </tr>
          <tr>
            <td className="edit-heading sample-td"> Enter your name:
            <td className="sample-td">
              <InPlaceEditorComponent ref={ (text) => {
inplaceEditorObj = text! } } id='element' mode='Popup' value='Andrew'
model={model} popupSettings={popupSettings} />
            </td>
          </tr>
        </tbody>
      </table>
    </div>
  );
}
export default App;
{% endraw %}
```


Event actions for editing

The event action of the editor that enable in the edit mode based on the [editableOn](#) property, by default **Click** is assigned, the following options are also supported.

- **Click:** The editor will be opened as single click actions.
- **DbClick:** The editor will be opened as double-click actions and it is not applicable for edit icon.
- **EditIconClick:** Disables the editing of event action of input and allows user to edit only through edit icon.

In-place Editor get focus by pressing the **tab** key from previous focusable DOM element and then by pressing **enter** key, the editor will be opened.

In the following sample, when switching drop-down item, the selected value assigned to the **editableOn** property. If you changed to **DbClick**, the editor will open when making a double click on the input.

[Class-component]

APP.JSX

```
{% raw %}
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { InplaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
class App extends React.Component {
  inplaceEditorObj;
  dropdownObj;
  editableOnData = ['Click', 'DbClick', 'EditIconClick'];
  model = { placeholder: 'Enter some text' };
  onChange(e) {
    const editType = e.itemData.value;
    this.inplaceEditorObj.editableOn = editType;
    this.inplaceEditorObj.dataBind();
  }
  render() {
    return (<div id='container'>
      <table className="table-section">
        <tbody>
          <tr>
            <td> EditableOn: </td>
            <td>
              <DropDownListComponent id='dropDown'
                dataSource={this.editableOnData} width='auto' value='Click'
                change={this.onChange = this.onChange.bind(this)} placeholder='Select edit
                type' />
            </td>
          </tr>
          <tr>
            <td className="sample-td"> Enter your name: </td>
            <td className="sample-td">
              <InplaceEditorComponent ref={(text) => {
                this.inplaceEditorObj = text; }} id='element' mode='Inline' value='Andrew'
                model={this.model} />
            </td>
          </tr>
        </tbody>
      </table>
    </div>
  )
}
```

```

        </tr>
      </tbody>
    </table>
  </div>);
}
}
export default App;
{% endraw %}

```

APP.TSX

```

{% raw %}
import { ChangeEventArgs, DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { EditableType, InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
class App extends React.Component {
  public inplaceEditorObj: InPlaceEditorComponent;
  public dropdownObj: DropDownListComponent;
  public editableOnData = ['Click', 'DbClick', 'EditIconClick'];
  public model = { placeholder: 'Enter some text' };
  public onChange(e: ChangeEventArgs): void {
    const editType: EditableType = e.itemData.value as EditableType;
    this.inplaceEditorObj.editableOn = editType;
    this.inplaceEditorObj.dataBind();
  }
  public render() {
    return (
      <div id='container'>
        <table className="table-section">
          <tbody>
            <tr>
              <td> EditableOn: </td>
              <td>
                <DropDownListComponent id='dropDown' dataSource=
{this.editableOnData} width='auto' value='Click' change={ this.onChange =
this.onChange.bind(this) } placeholder='Select edit type' />
              </td>
            </tr>
            <tr>
              <td className="sample-td"> Enter your name: </td>
              <td className="sample-td">
                <InPlaceEditorComponent ref={(text) => {
this.inplaceEditorObj = text! }} id='element' mode='Inline' value='Andrew'
model={this.model} />
              </td>
            </tr>
          </tbody>
        </table>
      </div>
    );
  }
}
export default App;
{% endraw %}

```

[Functional-component]**APP.JSX**

```
{% raw %}
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
function App() {
    let inplaceEditorObj;
    let dropdownObj;
    let editableOnData = ['Click', 'DbClick', 'EditIconClick'];
    let model = { placeholder: 'Enter some text' };
    function onChange(e) {
        const editType = e.itemData.value;
        inplaceEditorObj.editableOn = editType;
        inplaceEditorObj.dataBind();
    }
    return (<div id='container'>
        <table className="table-section">
            <tbody>
                <tr>
                    <td> EditableOn: </td>
                    <td>
                        <DropDownListComponent id='dropDown'
dataSource={editableOnData} width='auto' value='Click' change={onChange =
onChange.bind(this)} placeholder='Select edit type' />
                    </td>
                </tr>
                <tr>
                    <td className="sample-td"> Enter your name: </td>
                    <td className="sample-td">
                        <InPlaceEditorComponent ref={(text) => { inplaceEditorObj
= text; }} id='element' mode='Inline' value='Andrew' model={model} />
                    </td>
                </tr>
            </tbody>
        </table>
    </div>);
}
export default App;
{% endraw %}
```

APP.TSX

```
{% raw %}
import { ChangeEventArgs, DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { EditableType, InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
function App () {
    let inplaceEditorObj: InPlaceEditorComponent;
    let dropdownObj: DropDownListComponent;
```

```

let editableOnData = ['Click', 'DbClick', 'EditIconClick'];
let model = { placeholder: 'Enter some text' };
function onChange(e: ChangeEventArgs): void {
    const editType: EditableType = e.itemData.value as EditableType;
    inplaceEditorObj.editableOn = editType;
    inplaceEditorObj.dataBind();
}
return (
    <div id='container'>
        <table className="table-section">
            <tbody>
                <tr>
                    <td> EditableOn: </td>
                    <td>
                        <DropDownListComponent id='dropDown' dataSource=
{editableOnData} width='auto' value='Click' change={ onChange =
onChange.bind(this) } placeholder='Select edit type' />
                    </td>
                </tr>
                <tr>
                    <td className="sample-td"> Enter your name: </td>
                    <td className="sample-td">
                        <InPlaceEditorComponent ref={(text) => { inplaceEditorObj
= text! }} id='element' mode='Inline' value='Andrew' model={model} />
                    </td>
                </tr>
            </tbody>
        </table>
    </div>
);
}
export default App;
{% endraw %}

```

Action on focus out

Action to be performed when the user clicks outside the container, that means focusing out of editable content and it can be handled by the [actionOnBlur](#) property, by default **Submit** assigned. It also has the following options.

- **[Cancel](#)**: Cancels the editing and resets the old content.
- **[Submit](#)**: Submits the edited content to the server.
- **[Ignore](#)**: No action is performed with this type and allows to edit multiple editors.

In the following sample, when switching drop-down item, the selected value assigned to the [actionOnBlur](#) property.

[Class-component]

APP.JSX

```

{% raw %}
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-
editor';

```

```

import * as React from 'react';
class App extends React.Component {
  inplaceEditorObj;
  dropdownObj;
  blurActionData = ['Submit', 'Cancel', 'Ignore'];
  model = { placeholder: 'Enter some text' };
  onChange(e) {
    const editType = e.itemData.value;
    this.inplaceEditorObj.actionOnBlur = editType;
    this.inplaceEditorObj.dataBind();
  }
  render() {
    return (<div id='container'>
      <table className="table-section">
        <tbody>
          <tr>
            <td> ActionOnBlur: </td>
            <td>
              <DropDownListComponent id='dropDown'
dataSource={this.blurActionData} width='auto' value='Submit'
change={this.onChange = this.onChange.bind(this)} placeholder='Select blur
action' />
            </td>
          </tr>
          <tr>
            <td className="sample-td"> Enter your name: </td>
            <td className="sample-td">
              <InPlaceEditorComponent ref={(text) => {
this.inplaceEditorObj = text; }} id='element' mode='Inline' value='Andrew'
model={this.model} />
            </td>
          </tr>
        </tbody>
      </table>
    </div>);
  }
}
export default App;
{% enddraw %}

```

APP.TSX

```

{% raw %}
import { ChangeEventArgs, DropDownListComponent } from '@syncfusion/ej2-
react-dropdowns';
import { ActionBlur, InPlaceEditorComponent } from '@syncfusion/ej2-react-
inplace-editor';
import * as React from 'react';
class App extends React.Component {
  public inplaceEditorObj: InPlaceEditorComponent;
  public dropdownObj: DropDownListComponent;
  public blurActionData = ['Submit', 'Cancel', 'Ignore'];
  public model = { placeholder: 'Enter some text' };
  public onChange(e: ChangeEventArgs): void {
    const editType: ActionBlur = e.itemData.value as ActionBlur;
    this.inplaceEditorObj.actionOnBlur = editType;
  }
}

```

```

    this.inplaceEditorObj.dataBind();
  }
  public render() {
    return (
      <div id='container'>
        <table className="table-section">
          <tbody>
            <tr>
              <td> ActionOnBlur: </td>
              <td>
                <DropDownListComponent id='dropDown' dataSource=
{this.blurActionData} width='auto' value='Submit' change={ this.onChange =
this.onChange.bind(this) } placeholder='Select blur action' />
              </td>
            </tr>
            <tr>
              <td className="sample-td"> Enter your name: </td>
              <td className="sample-td">
                <InPlaceEditorComponent ref={(text) => {
this.inplaceEditorObj = text! }} id='element' mode='Inline' value='Andrew'
model={this.model} />
              </td>
            </tr>
          </tbody>
        </table>
      </div>
    );
  }
}
export default App;
{% endraw %}

```

[Functional-component]

APP.JSX

```

{% raw %}
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-
editor';
import * as React from 'react';
function App() {
  let inplaceEditorObj;
  let dropdownObj;
  let blurActionData = ['Submit', 'Cancel', 'Ignore'];
  let model = { placeholder: 'Enter some text' };
  function onChange(e) {
    const editType = e.itemData.value;
    inplaceEditorObj.actionOnBlur = editType;
    inplaceEditorObj.dataBind();
  }
  return (<div id='container'>
    <table className="table-section">
      <tbody>
        <tr>
          <td> ActionOnBlur: </td>

```

```

        <td>
            <DropDownListComponent id='dropDown'
dataSource={blurActionData} width='auto' value='Submit' change={onChange =
onChange.bind(this)} placeholder='Select blur action' />
        </td>
    </tr>
    <tr>
        <td className="sample-td"> Enter your name: </td>
        <td className="sample-td">
            <InPlaceEditorComponent ref={(text) => {
inplaceEditorObj = text; }} id='element' mode='Inline' value='Andrew'
model={model} />
        </td>
    </tr>
</tbody>
</table>
</div>);
}
export default App;
{% endraw %}

```

APP.TSX

```

{% raw %}
import { ChangeEventArgs, DropDownListComponent } from '@syncfusion/ej2-
react-dropdowns';
import { ActionBlur, InPlaceEditorComponent } from '@syncfusion/ej2-react-
inplace-editor';
import * as React from 'react';
function App () {
    let inplaceEditorObj: InPlaceEditorComponent;
    let dropdownObj: DropDownListComponent;
    let blurActionData = ['Submit', 'Cancel', 'Ignore'];
    let model = { placeholder: 'Enter some text' };
    function onChange(e: ChangeEventArgs): void {
        const editType: ActionBlur = e.itemData.value as ActionBlur;
        inplaceEditorObj.actionOnBlur = editType;
        inplaceEditorObj.dataBind();
    }
    return (
        <div id='container'>
            <table className="table-section">
                <tbody>
                    <tr>
                        <td> ActionOnBlur: </td>
                        <td>
                            <DropDownListComponent id='dropDown' dataSource=
{blurActionData} width='auto' value='Submit' change={ onChange =
onChange.bind(this) } placeholder='Select blur action' />
                        </td>
                    </tr>
                    <tr>
                        <td className="sample-td"> Enter your name: </td>
                        <td className="sample-td">

```

```

        <InPlaceEditorComponent ref={(text) => {
inplaceEditorObj = text! }} id='element' mode='Inline' value='Andrew'
model={model} />
        </td>
      </tr>
    </tbody>
  </table>
</div>
);
}
export default App;
{% endraw %}

```

Display modes

By default, In-place Editor input element highlighted with a dotted underline. To remove dotted underline from input element, add `data-underline="false"` attribute at In-place Editor root element.

In the following sample shows intractable and normal display modes with different samples.

[Class-component]

APP.JSX

```

import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
class App extends React.Component {
  model = { placeholder: 'Enter some text' };
  render() {
    return (
      <div id='container'>
        <h4>Example of data-underline attribute</h4>
        <table className="table-section">
          <tbody>
            <tr>
              <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-title"> Intractable UI </td>
              <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
                <InPlaceEditorComponent id='default' mode='Inline'
value='Andrew' model={this.model}/>
              </td>
            </tr>
            <tr>
              <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-title"> Normal UI </td>
              <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
                <InPlaceEditorComponent id='element' data-
underline='false' mode='Inline' value='Andrew' model={this.model}/>
              </td>
            </tr>
          </tbody>
        </table>
      </div>);
  }
}
export default App;

```


APP.TSX

```
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
class App extends React.Component {
  public model = { placeholder: 'Enter some text' };
  public render() {
    return (
      <div id='container'>
        <h4>Example of data-underline attribute</h4>
        <table className="table-section">
          <tbody>
            <tr>
              <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-title"> Intractable UI </td>
              <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
                <InPlaceEditorComponent id='default' mode='Inline'
value='Andrew' model={this.model} />
              </td>
            </tr>
            <tr>
              <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-title"> Normal UI </td>
              <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
                <InPlaceEditorComponent id='element' data-underline='false' mode='Inline' value='Andrew' model={this.model} />
              </td>
            </tr>
          </tbody>
        </table>
      </div>
    );
  }
}
export default App;
```

[Functional-component]**APP.JSX**

```
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
function App() {
  let model = { placeholder: 'Enter some text' };
  return (
    <div id='container'>
      <h4>Example of data-underline attribute</h4>
      <table className="table-section">
        <tbody>
          <tr>
            <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-title"> Intractable UI </td>
            <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
              <InPlaceEditorComponent id='default' mode='Inline'
value='Andrew' model={model}/>
            </td>
          </tr>
        </tbody>
      </table>
    </div>
  );
}
```

```

        </tr>
        <tr>
            <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-
title"> Normal UI </td>
            <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
                <InPlaceEditorComponent id='element' data-
underline='false' mode='Inline' value='Andrew' model={model}/>
            </td>
        </tr>
    </tbody>
</table>
</div>);
}
export default App;

```

APP.TSX

```

import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-
editor';
import * as React from 'react';
function App () {
    let model = { placeholder: 'Enter some text' };
    return (
        <div id='container'>
            <h4>Example of data-underline attribute</h4>
            <table className="table-section">
                <tbody>
                    <tr>
                        <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-
title"> Intractable UI </td>
                        <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
                            <InPlaceEditorComponent id='default' mode='Inline'
value='Andrew' model={model} />
                        </td>
                    </tr>
                    <tr>
                        <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6 control-
title"> Normal UI </td>
                        <td className="col-lg-6 col-md-6 col-sm-6 col-xs-6">
                            <InPlaceEditorComponent id='element' data-
underline='false' mode='Inline' value='Andrew' model={model} />
                        </td>
                    </tr>
                </tbody>
            </table>
        </div>
    );
}
export default App;

```

See Also

- [Disable the editor](#)

- [Animate the editor during popup mode](#)

Buttons in React Inplace editor component

The In-place Editor has an action for save and cancel using buttons. The [saveButton](#) and [cancelButton](#) properties accepts the [ButtonModel](#) objects for customizing the save and cancel button properties.

Buttons can be show or hide by setting a boolean value to the [showButtons](#) property.

Without buttons value actions will be performed by the following way.

- **[actionOnBlur](#)**: By clicking out-side of the editor component it will get focus out and perform action based on this property value.
- **[submitOnEnter](#)**: Pressing **Enter** key it performs the submit action, when this property set to **true**.

In the following sample, the [content](#) and [cssClass](#) properties of [Button](#) value assigned to the [saveButton](#) and [cancelButton](#) properties to customize its appearance. Also check or uncheck a checkbox buttons render or removed from the editor.

To restrict either save or cancel button rendering into a DOM, simply pass empty object `{}` in the [saveButton](#) or [cancelButton](#) properties.

For more details about buttons, refer this documentation [section](#).

[Class-component]

APP.JSX

```
{% raw %}
import { CheckBoxComponent } from '@syncfusion/ej2-react-buttons';
import { InplaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from "react";
class App extends React.Component {
  inplaceEditorObj;
  checkboxObj;
  model = { placeholder: 'Enter some text' };
  saveButton = { content: 'Ok', cssClass: 'e-outline' };
  cancelButton = { content: 'Cancel', cssClass: 'e-outline' };
  onChange(e) {
    this.inplaceEditorObj.showButtons = e.checked;
    this.inplaceEditorObj.dataBind();
  }
  render() {
    return (<div id='container'>
      <table className="table-section">
        <tbody>
          <tr>
            <td> ShowButtons: </td>
            <td>
              <CheckBoxComponent id='enableBtn' checked={true}
label='Show' change={this.onChange = this.onChange.bind(this)} />
            </td>
          </tr>
        </tbody>
      </table>
    </div>);
  }
}
```

```

        <td className="sample-td"> Enter your name: </td>
        <td className="sample-td">
            <InPlaceEditorComponent ref={(text) => {
this.inplaceEditorObj = text; }} id='element' mode='Inline' value='Andrew'
model={this.model} saveButton={this.saveButton}
cancelButton={this.cancelButton}/>
        </td>
    </tr>
</tbody>
</table>
</div>);
    }
}
;
export default App;
{% endraw %}

```

APP.TSX

```

{% raw %}
import { ChangeEventArgs, CheckBoxComponent } from '@syncfusion/ej2-react-buttons';
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from "react";
class App extends React.Component<{}, {}> {
    public inplaceEditorObj: InPlaceEditorComponent;
    public checkboxObj: CheckBoxComponent;
    public model = { placeholder: 'Enter some text' };
    public saveButton = { content: 'Ok', cssClass: 'e-outline' };
    public cancelButton = { content: 'Cancel', cssClass: 'e-outline' };
    public onChange(e: ChangeEventArgs): void {
        (this.inplaceEditorObj as any).showButtons = e.checked;
        this.inplaceEditorObj.dataBind();
    }
    public render() {
        return (
            <div id='container'>
                <table className="table-section">
                    <tbody>
                        <tr>
                            <td> ShowButtons: </td>
                            <td>
                                <CheckBoxComponent id='enableBtn' checked={true}
label='Show' change={ this.onChange = this.onChange.bind(this) } />
                            </td>
                        </tr>
                        <tr>
                            <td className="sample-td"> Enter your name: </td>
                            <td className="sample-td">
                                <InPlaceEditorComponent ref={(text) => {
this.inplaceEditorObj = text! }} id='element' mode='Inline' value='Andrew'
model={this.model} saveButton={this.saveButton}
cancelButton={this.cancelButton}/>
                            </td>
                        </tr>
                    </tbody>
                </table>
            </div>
        );
    }
}

```

```

        </tbody>
      </table>
    </div>
  );
}
};
export default App;
{% endraw %}

```

[Functional-component]

APP.JSX

```

{% raw %}
import { CheckBoxComponent } from '@syncfusion/ej2-react-buttons';
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-
editor';
import * as React from "react";
function App() {
  let inplaceEditorObj;
  let checkboxObj;
  let model = { placeholder: 'Enter some text' };
  let saveButton = { content: 'Ok', cssClass: 'e-outline' };
  let cancelButton = { content: 'Cancel', cssClass: 'e-outline' };
  function onChange(e) {
    inplaceEditorObj.showButtons = e.checked;
    inplaceEditorObj.dataBind();
  }
  return (<div id='container'>
    <table className="table-section">
      <tbody>
        <tr>
          <td> ShowButtons: </td>
          <td>
            <CheckBoxComponent id='enableBtn' checked={true}
label='Show' change={onChange.bind(this)} />
          </td>
        </tr>
        <tr>
          <td className="sample-td"> Enter your name: </td>
          <td className="sample-td">
            <InPlaceEditorComponent ref={(text) => {
inplaceEditorObj = text; }} id='element' mode='Inline' value='Andrew'
model={model} saveButton={saveButton} cancelButton={cancelButton} />
          </td>
        </tr>
      </tbody>
    </table>
  </div>);
}
;
export default App;
{% endraw %}

```

APP.TSX

```
{% raw %}
import { ChangeEventArgs, CheckBoxComponent } from '@syncfusion/ej2-react-buttons';
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from "react";
function App () {
  let inplaceEditorObj: InPlaceEditorComponent;
  let checkBoxObj: CheckBoxComponent;
  let model = { placeholder: 'Enter some text' };
  let saveButton = { content: 'Ok', cssClass: 'e-outline' };
  let cancelButton = { content: 'Cancel', cssClass: 'e-outline' };
  function onChange(e: ChangeEventArgs): void {
    (inplaceEditorObj as any).showButtons = e.checked;
    inplaceEditorObj.dataBind();
  }
  return (
    <div id='container'>
      <table className="table-section">
        <tbody>
          <tr>
            <td> ShowButtons: </td>
            <td>
              <CheckBoxComponent id='enableBtn' checked={true}
label='Show' change={ onChange = onChange.bind(this) } />
            </td>
          </tr>
          <tr>
            <td className="sample-td"> Enter your name: </td>
            <td className="sample-td">
              <InPlaceEditorComponent ref={(text) => {
inplaceEditorObj = text! }} id='element' mode='Inline' value='Andrew'
model={model} saveButton={saveButton} cancelButton={cancelButton}/>
            </td>
          </tr>
        </tbody>
      </table>
    </div>
  );
};
export default App;
{% endraw %}
```

See Also

- [In-place editor buttons](#)

Server actions in React Inplace editor component

By passing In-place Editor component value to the server, the [primaryKey](#) property value must required otherwise action not performed for remote data.

If the [URL](#) property value is empty, data passing will handled at local and also the [actionSuccess](#) event will trigger with `null` as argument value.

The following arguments are passed to the server when submit actions perform.

Arguments	Explanations
value	For processing edited value, like DB value updating.
primaryKey	For value mapping to the server, like selecting DB.
name	For field mapping to the server, like DB column field mapping.

Find the following sample server codes for defining models and controller functions to configure processing data.

```
`csharp
public class SubmitModel {
    public string Name { get; set; }
    public string PrimaryKey { get; set; }
    public string Value { get; set; }
}
`csharp
public IEnumerable<SubmitModel> UpdateData([FromBody]SubmitModel value) {
    // User can process data
    return value;
}
```

- When Server actions successfully done, the [actionSuccess](#) event will be fired with returned server data.
- If the server is not responding, the [actionFailure](#) event will be fired with data, but value not updated in the Editor.

In the following sample, the `actionSuccess` event will trigger once the value submitted successfully into the server. In this sample, both `actionSuccess` and `actionFailure` were configured and resulted value will be converted to chips.

[Class-component]

APP.JSX

```
{% raw %}
import { Inject, InPlaceEditorComponent, MultiSelect } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
class App extends React.Component {
    inplaceEditorObj;
```

```

    serviceUrl = 'https://ej2services.syncfusion.com/development/web-
services/api/Editor/UpdateData';
    frameWorkList = ['Android', 'JavaScript', 'jQuery', 'TypeScript',
'Angular', 'React', 'Vue', 'Ionic'];
    value = ['JavaScript', 'jQuery'];
    model = { mode: 'Box', dataSource: this.frameWorkList, placeholder:
'Select skill' };
    chipOnCreate() {
        this.inplaceEditorObj.element.querySelector('.e-editable-
value').innerHTML = this.chipCreation(this.inplaceEditorObj.value, true);
    }
    onActionSuccess(e) {
        e.value = this.chipCreation(e.value.split(','), true);
    }
    onActionFailure(e) {
        e.value = this.chipCreation(e.value.split(','), false);
    }
    chipCreation(data, isSuccess) {
        let value = '<div class="e-chip-list">';
        [].slice.call(data).forEach((val) => {
            value += '<div class="e-chip"> <span class="e-chip-text' +
(!isSuccess ? 'e-highlight' : '') + '> ' + val + '</span></div>';
        });
        value += '</div>';
        return value;
    }
    create() {
        this.chipOnCreate();
    }
    render() {
        return (<div id='container'>
            <span className="content-title"> Select frameworks: </span>
            <InPlaceEditorComponent ref={ (text) => { this.inplaceEditorObj =
text; } } id='multiselect' data-underline='false' mode='Inline'
type='MultiSelect' value={this.value} name='skill' url={this.serviceUrl}
primaryKey='FrameWork' adaptor='UrlAdaptor' model={this.model}
actionSuccess={this.onActionSuccess = this.onActionSuccess.bind(this)}
actionFailure={this.onActionFailure = this.onActionFailure.bind(this)}
created={this.create = this.create.bind(this)}>
                <Inject services={ [MultiSelect] }/>
            </InPlaceEditorComponent>
        </div>);
    }
}
export default App;
{% endraw %}

```

APP.TSX

```

{% raw %}
import { ActionEventArgs, Inject, InPlaceEditorComponent, MultiSelect } from
'@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
class App extends React.Component<{}, {}> {
    public inplaceEditorObj: InPlaceEditorComponent;

```



```

    public serviceUrl = 'https://ej2services.syncfusion.com/development/web-
services/api/Editor/UpdateData';
    public frameWorkList = ['Android', 'JavaScript', 'jQuery', 'TypeScript',
'Angular', 'React', 'Vue', 'Ionic'];
    public value = ['JavaScript', 'jQuery'];
    public model = { mode: 'Box', dataSource: this.frameWorkList, placeholder:
'Select skill' };
    public chipOnCreate(): void {
        (this.inplaceEditorObj as any).element.querySelector('.e-editable-
value').innerHTML = this.chipCreation((this.inplaceEditorObj.value as
string[]), true);
    }
    public onActionSuccess(e: ActionEventArgs): void {
        e.value = this.chipCreation(e.value.split(','), true);
    }
    public onActionFailure(e: ActionEventArgs): void {
        e.value = this.chipCreation(e.value.split(','), false);
    }
    public chipCreation(data: string[], isSuccess: boolean): string {
        let value: string = '<div class="e-chip-list">';
        [].slice.call(data).forEach((val: string) => {
            value += '<div class="e-chip"> <span class="e-chip-text' +
(!isSuccess ? 'e-highlight' : '') + '> ' + val + '</span></div>';
        });
        value += '</div>';
        return value;
    }
    public create(): void {
        this.chipOnCreate();
    }
    public render() {
        return (
            <div id='container'>
                <span className="content-title"> Select frameworks: </span>
                <InPlaceEditorComponent ref={ (text) => { this.inplaceEditorObj =
text! } } id='multiselect' data-underline='false' mode='Inline'
type='MultiSelect' value={this.value} name='skill' url={this.serviceUrl}
primaryKey='FrameWork' adaptor='UrlAdaptor' model={this.model}
actionSuccess={ this.onActionSuccess=this.onActionSuccess.bind(this) }
actionFailure={ this.onActionFailure=this.onActionFailure.bind(this) }
created={this.create=this.create.bind(this)} >
                    <Inject services={[MultiSelect]} />
                </InPlaceEditorComponent>
            </div>
        );
    }
}
export default App;
{% endraw %}

```

[Functional-component]

APP.JSX

```
{% raw %}
```

```

import { Inject, InPlaceEditorComponent, MultiSelect } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
function App() {
    let inplaceEditorObj;
    const serviceUrl = 'https://ej2services.syncfusion.com/development/web-services/api/Editor/UpdateData';
    const frameWorkList = ['Android', 'JavaScript', 'jQuery', 'TypeScript', 'Angular', 'React', 'Vue', 'Ionic'];
    const value = ['JavaScript', 'jQuery'];
    const model = { mode: 'Box', dataSource: frameWorkList, placeholder: 'Select skill' };
    function chipOnCreate() {
        inplaceEditorObj.element.querySelector('.e-editable-value').innerHTML = chipCreation(inplaceEditorObj.value, true);
    }
    function onActionSuccess(e) {
        e.value = chipCreation(e.value.split(','), true);
    }
    function onActionFailure(e) {
        e.value = chipCreation(e.value.split(','), false);
    }
    function chipCreation(data, isSuccess) {
        let value = '<div class="e-chip-list">';
        [].slice.call(data).forEach((val) => {
            value += '<div class="e-chip"> <span class="e-chip-text' + (!isSuccess ? 'e-highlight' : '') + '>' + val + '</span></div>';
        });
        value += '</div>';
        return value;
    }
    function create() {
        chipOnCreate();
    }
    return (<div id='container'>
        <span className="content-title"> Select frameworks: </span>
        <InPlaceEditorComponent ref={text} => { inplaceEditorObj = text; } id='multiselect' data-underline='false' mode='Inline' type='MultiSelect' value={value} name='skill' url={serviceUrl} primaryKey='FrameWork' adaptor='UrlAdaptor' model={model} actionSuccess={onActionSuccess} actionFailure={onActionFailure} created={create} => {
            <Inject services={[MultiSelect]} />
            </InPlaceEditorComponent>
        }
    </div>);
}
export default App;
{% endraw %}

```

APP.TSX

```

{% raw %}
import { ActionEventArgs, Inject, InPlaceEditorComponent, MultiSelect } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
function App() {

```

```

let inplaceEditorObj: InPlaceEditorComponent;

const serviceUrl : string =
'https://ej2services.syncfusion.com/development/web-
services/api/Editor/UpdateData';
const frameWorkList : string[] = ['Android', 'JavaScript', 'jQuery',
'TypeScript', 'Angular', 'React', 'Vue', 'Ionic'];
const value : string[] = ['JavaScript', 'jQuery'];
const model : object = { mode: 'Box', dataSource: frameWorkList,
placeholder: 'Select skill' };
function chipOnCreate(): void {
    (inplaceEditorObj as any).element.querySelector('.e-editable-
value').innerHTML = chipCreation((inplaceEditorObj.value as string[]), true);
}
function onActionSuccess(e: ActionEventArgs): void {
    e.value = chipCreation(e.value.split(','), true);
}
function onActionFailure(e: ActionEventArgs): void {
    e.value = chipCreation(e.value.split(','), false);
}
function chipCreation(data: string[], isSuccess: boolean): string {
    let value: string = '<div class="e-chip-list">';
    [].slice.call(data).forEach((val: string) => {
        value += '<div class="e-chip"> <span class="e-chip-text' +
(!isSuccess ? 'e-highlight' : '') + '> ' + val + '</span></div>';
    });
    value += '</div>';
    return value;
}
function create(): void {
    chipOnCreate();
}
return (
    <div id='container'>
        <span className="content-title"> Select frameworks: </span>
        <InPlaceEditorComponent ref={text} => { inplaceEditorObj = text!
}} id='multiselect' data-underline='false' mode='Inline' type='MultiSelect'
value={value} name='skill' url={serviceUrl} primaryKey='FrameWork'
adaptor='UrlAdaptor' model={model} actionSuccess={
onActionSuccess=onActionSuccess.bind(this) } actionFailure={
onActionFailure=onActionFailure.bind(this) }
created={create=create.bind(this)} >
        <Inject services={[MultiSelect]} />
        </InPlaceEditorComponent>
    </div>
);
}
export default App;
{% endraw %}

```

See Also

- [Indicate the server actions in the editor](#)

Data binding in React Inplace editor component

The Essential JS2 React In-place Editor component can load the data either from local data sources or remote data services using the `dataSource` property and it supports the data type of an array or `DataManager`. Also supports different kind of data services such as OData, OData V4, Web API and data formats such as XML, JSON, JSONP with the help of `DataManager` adaptors.

Local

To bind local data to the Essential JS2 React In-place Editor component, you have to assign a JavaScript array of object or string to the `dataSource` property. The local data source can also be provided as an instance of the `DataManager`.

[Class-component]

APP.JSX

```
{% raw %}
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
class App extends React.Component {
  inplaceEditorObj;
  // define the JSON of data
  gameList = [
    { Id: '1', Name: 'Maria Anders' },
    { Id: '2', Name: 'Ana Trujillo' },
    { Id: '3', Name: 'Antonio Moreno' },
    { Id: '4', Name: 'Thomas Hardy' },
    { Id: '5', Name: 'Chiristina Berglund' },
    { Id: '6', Name: 'Hanna Moos' }
  ];
  model = { dataSource: this.gameList, fields: { text: 'Name' },
placeholder: 'Select a customer' };
  render() {
    return (<div id='container'>
      <span className="content-title"> Select customer name: </span>
      <InPlaceEditorComponent ref={ (text) => { this.inplaceEditorObj =
text; }} id='dropdownelement' mode='Inline' type='DropDownList' value='Maria
Anders' model={this.model}/>
    </div>);
  }
}
export default App;
{% endraw %}
```

APP.TSX

```
{% raw %}
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
class App extends React.Component {
  public inplaceEditorObj: InPlaceEditorComponent;
  // define the JSON of data
  public gameList: object[] = [
    { Id: '1', Name: 'Maria Anders' },
    { Id: '2', Name: 'Ana Trujillo' },
    { Id: '3', Name: 'Antonio Moreno' },
    { Id: '4', Name: 'Thomas Hardy' },
    { Id: '5', Name: 'Chiristina Berglund' },
    { Id: '6', Name: 'Hanna Moos' }
  ];
}
```

```

    { Id: '2', Name: 'Ana Trujillo' },
    { Id: '3', Name: 'Antonio Moreno' },
    { Id: '4', Name: 'Thomas Hardy' },
    { Id: '5', Name: 'Chiristina Berglund' },
    { Id: '6', Name: 'Hanna Moos' }
  ];
  public model = { dataSource: this.gameList, fields: { text: 'Name' },
placeholder: 'Select a customer' };
  public render() {
    return (
      <div id='container'>
        <span className="content-title"> Select customer name: </span>
        <InPlaceEditorComponent ref={(text) => { this.inplaceEditorObj =
text! }} id='dropdownnelement' mode='Inline' type='DropDownList' value='Maria
Anders' model={this.model} />
      </div>
    );
  }
}
export default App;
{% endraw %}

```

[Functional-component]

APP.JSX

```

{% raw %}
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-
editor';
import * as React from 'react';
function App() {
  let inplaceEditorObj;
  // define the JSON of data
  let gameList = [
    { Id: '1', Name: 'Maria Anders' },
    { Id: '2', Name: 'Ana Trujillo' },
    { Id: '3', Name: 'Antonio Moreno' },
    { Id: '4', Name: 'Thomas Hardy' },
    { Id: '5', Name: 'Chiristina Berglund' },
    { Id: '6', Name: 'Hanna Moos' }
  ];
  let model = { dataSource: gameList, fields: { text: 'Name' },
placeholder: 'Select a customer' };
  return (<div id='container'>
    <span className="content-title"> Select customer name: </span>
    <InPlaceEditorComponent ref={(text) => { inplaceEditorObj = text; }}
id='dropdownnelement' mode='Inline' type='DropDownList' value='Maria Anders'
model={model}/>
  </div>);
}
export default App;
{% endraw %}

```

APP.TSX

```

{% raw %}

```

```
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
function App(){
  let inplaceEditorObj: InPlaceEditorComponent;
  // define the JSON of data
  let gameList: object[] = [
    { Id: '1', Name: 'Maria Anders' },
    { Id: '2', Name: 'Ana Trujillo' },
    { Id: '3', Name: 'Antonio Moreno' },
    { Id: '4', Name: 'Thomas Hardy' },
    { Id: '5', Name: 'Chiristina Berglund' },
    { Id: '6', Name: 'Hanna Moos' }
  ];
  let model = { dataSource: gameList, fields: { text: 'Name' }, placeholder: 'Select a customer' };
  return (
    <div id='container'>
      <span className="content-title"> Select customer name: </span>
      <InPlaceEditorComponent ref={ (text) => { inplaceEditorObj = text! } }
id='dropdownelement' mode='Inline' type='DropDownList' value='Maria Anders'
model={model} />
    </div>
  );
}
export default App;
{% enddraw %}
```

Remote

To bind remote data to the Essential JS2 React In-place Editor component, assign service data as an instance of **DataManager** to the **dataSource** property. To interact with remote data source, provide the endpoint URL.

OData V4

The OData V4 is an improved version of OData protocols, and the **DataManager** can also retrieve and consume OData V4 services. To fetch data from the server by using **DataManager** with the adaptor property configure as **ODataV4Adaptor**.

In the following sample, In-place Editor renders a **DropDownList** component and its **dataSource** property configured for fetching a data from the server by using **ODataV4Adaptor** with **DataManager**.

[Class-component]

APP.JSX

```
import { DataManager, ODataV4Adaptor, Query } from '@syncfusion/ej2-data';
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
class App extends React.Component {
  query = new Query().from('Customers').select(['ContactName', 'CustomerID']).take(6);
  model = {
    dataSource: new DataManager({
      adaptor: new ODataV4Adaptor,
```

```

        crossDomain: true,
        url: 'https://services.odata.org/V4/Northwind/Northwind.svc/'
    )),
    fields: { text: 'ContactName', value: 'CustomerID' },
    placeholder: 'Select a customer',
    query: this.query
    };
    render() {
        return (<div id='container'>
            <span className="content-title"> Select customer name: </span>
            <InPlaceEditorComponent id='dropdownnelement' mode='Inline'
type='DropDownList' value='Maria Anders' model={this.model}/>
            </div>);
    }
}
export default App;

```

APP.TSX

```

import { DataManager, ODataV4Adaptor, Query } from '@syncfusion/ej2-data';
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-
editor';
import * as React from 'react';
class App extends React.Component {
    public query: Query = new Query().from('Customers').select(['ContactName',
'CustomerID']).take(6);
    public model = {
        dataSource: new DataManager({
            adaptor: new ODataV4Adaptor,
            crossDomain: true,
            url: 'https://services.odata.org/V4/Northwind/Northwind.svc/'
        )),
        fields: { text: 'ContactName', value: 'CustomerID' },
        placeholder: 'Select a customer',
        query: this.query
    };
    public render() {
        return (
            <div id='container'>
                <span className="content-title"> Select customer name: </span>
                <InPlaceEditorComponent id='dropdownnelement' mode='Inline'
type='DropDownList' value='Maria Anders' model={this.model}/>
            </div>
        );
    }
}
export default App;

```

[Functional-component]**APP.JSX**

```

import { DataManager, ODataV4Adaptor, Query } from '@syncfusion/ej2-data';
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-
editor';
import * as React from 'react';

```

```
function App() {
  let query = new Query().from('Customers').select(['ContactName',
  'CustomerID']).take(6);
  let model = {
    dataSource: new DataManager({
      adaptor: new ODataV4Adaptor,
      crossDomain: true,
      url: 'https://services.odata.org/V4/Northwind/Northwind.svc/'
    }),
    fields: { text: 'ContactName', value: 'CustomerID' },
    placeholder: 'Select a customer',
    query: query
  };
  return (<div id='container'>
    <span className="content-title"> Select customer name: </span>
    <InPlaceEditorComponent id='dropdownnelement' mode='Inline'
type='DropDownList' value='Maria Anders' model={model}/>
    </div>);
}
export default App;
```

APP.TSX

```
import { DataManager, ODataV4Adaptor, Query } from '@syncfusion/ej2-data';
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-
editor';
import * as React from 'react';
function App () {
  let query: Query = new Query().from('Customers').select(['ContactName',
  'CustomerID']).take(6);
  let model = {
    dataSource: new DataManager({
      adaptor: new ODataV4Adaptor,
      crossDomain: true,
      url: 'https://services.odata.org/V4/Northwind/Northwind.svc/'
    }),
    fields: { text: 'ContactName', value: 'CustomerID' },
    placeholder: 'Select a customer',
    query: query
  };
  return (
    <div id='container'>
      <span className="content-title"> Select customer name: </span>
      <InPlaceEditorComponent id='dropdownnelement' mode='Inline'
type='DropDownList' value='Maria Anders' model={model}/>
    </div>
  );
}
export default App;
```

Web API

Data can fetch from the server by using [DataManager](#) with the adaptor property configure as [WebApiAdaptor](#).

In the following sample, In-place Editor render a **DropDownList** component and its **dataSource** property configured for fetching a data from the server by using **WebApiAdaptor** with **DataManager**.

[Class-component]

APP.JSX

```
import { DataManager, Query, ODataV4Adaptor } from '@syncfusion/ej2-data';
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
class App extends React.Component {
    model = {
        dataSource: new DataManager({
            url:
                'https://services.odata.org/V4/Northwind/Northwind.svc/Customers',
            adaptor: new ODataV4Adaptor
        }),
        fields: { text: 'ContactName', value: 'CustomerID' },
        query : new Query().select(['ContactName', 'CustomerID']).take(6),
        placeholder: 'Select a customer'
    };
    render() {
        return (
            <div id='container'>
                <span className="content-title"> Select customer name: </span>
                <InPlaceEditorComponent id='dropdownelement' mode='Inline'
                    type='DropDownList' value='Maria Anders' model={this.model}/>
            </div>);
    }
}
export default App;
```

APP.TSX

```
import { DataManager, Query, ODataV4Adaptor } from '@syncfusion/ej2-data';
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
class App extends React.Component {
    public model: any = {
        dataSource: new DataManager({
            url:
                'https://services.odata.org/V4/Northwind/Northwind.svc/Customers',
            adaptor: new ODataV4Adaptor
        }),
        fields: { text: 'ContactName', value: 'CustomerID' },
        query : new Query().select(['ContactName', 'CustomerID']).take(6),
        placeholder: 'Select a customer'
    };
    public render() {
        return (
            <div id='container'>
                <span className="content-title"> Select customer name: </span>
                <InPlaceEditorComponent id='dropdownelement' mode='Inline'
                    type='DropDownList' value='Maria Anders' model={this.model}/>
            </div>
        );
    }
}
```

```
    );  
  }  
}  
export default App;
```

[Functional-component]

APP.JSX

```
import { DataManager, Query, ODataV4Adaptor } from '@syncfusion/ej2-data';  
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';  
import * as React from 'react';  
function App() {  
  let model = {  
    dataSource: new DataManager({  
      url:  
'https://services.odata.org/V4/Northwind/Northwind.svc/Customers',  
      adaptor: new ODataV4Adaptor  
    }),  
    fields: { text: 'ContactName', value: 'CustomerID' },  
    query : new Query().select(['ContactName', 'CustomerID']).take(6),  
    placeholder: 'Select a customer'  
  };  
  return (<div id='container'>  
    <span className="content-title"> Select customer name: </span>  
    <InPlaceEditorComponent id='dropdownnelement' mode='Inline'  
type='DropDownList' value='Maria Anders' model={model}/>  
    </div>);  
}  
export default App;
```

APP.TSX

```
import { DataManager, Query, ODataV4Adaptor } from '@syncfusion/ej2-data';  
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';  
import * as React from 'react';  
function App () {  
  let model: any = {  
    dataSource: new DataManager({  
      url:  
'https://services.odata.org/V4/Northwind/Northwind.svc/Customers',  
      adaptor: new ODataV4Adaptor  
    }),  
    fields: { text: 'ContactName', value: 'CustomerID' },  
    query : new Query().select(['ContactName', 'CustomerID']).take(6),  
    placeholder: 'Select a customer'  
  };  
  return (  
    <div id='container'>  
      <span className="content-title"> Select customer name: </span>  
      <InPlaceEditorComponent id='dropdownnelement' mode='Inline'  
type='DropDownList' value='Maria Anders' model={model}/>  
    </div>  
  );  
};
```

```
}
export default App;
```

Integration in React Inplace editor component

The In-place Editor supports adding HTML5 input components using the [template](#) property. The Template property can be given as either a **string** or a **query selector**.

As a string

The HTML element tag can be given as a string for the template property. Here, the input is rendered as an HTML template.

```
`ts
```

```
template: "<div><input type='text' id='name'></input></div>"
```

```
`
```

As a selector

The template property also allows getting template content through query **selector**. Here, the input wrapper element 'ID' attribute is specified in the template.

```
`ts
```

```
template: "#date"
```

```
`
```

Template mode, the **value** property not handled by the In-place Editor component. So, before sending a value to the server, you need to modify at [actionBegin](#) event, otherwise, an empty string will pass. In the following template sample, before submitting a data to the server, event argument and [value](#) property content updated in the [actionBegin](#) event handler.

[Class-component]

APP.JSX

```
{% raw %}
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
class App extends React.Component {
  inVal = '2018-05-23';
  inplaceEditorObj;
  actionBegin(e) {
    const value =
this.inplaceEditorObj.element.querySelector('#date').value;
    this.inplaceEditorObj.value = value;
    e.value = value;
  }
  render() {
    return (<div>
      <div id='container'>
        <span className="content-title"> Select date: </span>
        <InPlaceEditorComponent ref={ (text) => { this.inplaceEditorObj =
text; }} id='datepicker' mode='Inline' template='#date' value='2018-05-23'
actionBegin={this.actionBegin = this.actionBegin.bind(this)} />
      </div>
    </div>
```

```

        <div id='html-template' style={{ display: "none" }}>
            <input id="date" defaultValue={this.inVal} type="date"/>
        </div>
    </div>;
}
}
export default App;
{% endraw %}

```

APP.TSX

```

{% raw %}
import { ActionBeginEventArgs, InPlaceEditorComponent } from
 '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
class App extends React.Component<{}, {}> {
    public inVal: string = '2018-05-23';
    public inplaceEditorObj: InPlaceEditorComponent;
    public actionBegin(e: ActionBeginEventArgs): void {
        const value: string =
        (this.inplaceEditorObj.element.querySelector('#date') as any).value;
        this.inplaceEditorObj.value = value;
        (e as any).value = value;
    }
    public render() {
        return (
            <div>
                <div id='container'>
                    <span className="content-title"> Select date: </span>
                    <InPlaceEditorComponent ref={(text) => { this.inplaceEditorObj =
text! }} id='datepicker' mode='Inline' template='#date' value='2018-05-23'
actionBegin={ this.actionBegin = this.actionBegin.bind(this) } />
                </div>
                <div id='html-template' style={ { display: "none" } }>
                    <input id="date" defaultValue= { this.inVal } type="date" />
                </div>
            </div>
        );
    }
}
export default App;
{% endraw %}

```

[Functional-component]

APP.JSX

```

{% raw %}
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-
editor';
import * as React from 'react';
function App() {
    let inVal = '2018-05-23';
    let inplaceEditorObj;
    function actionBegin(e) {
        const value = inplaceEditorObj.element.querySelector('#date').value;
    }
}

```

```

        inplaceEditorObj.value = value;
        e.value = value;
    }
    return (<div>
        <div id='container'>
            <span className="content-title"> Select date: </span>
            <InPlaceEditorComponent ref={(text) => { inplaceEditorObj = text;
}} id='datepicker' mode='Inline' template='#date' value='2018-05-23'
actionBegin={actionBegin = actionBegin.bind(this)} />
        </div>
        <div id='html-template' style={{ display: "none" }}>
            <input id="date" defaultValue={inVal} type="date" />
        </div>
    </div>);
}
export default App;
{% endraw %}

```

APP.TSX

```

{% raw %}
import { ActionBeginEventArgs, InPlaceEditorComponent } from
'@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
function App () {
    let inVal: string = '2018-05-23';
    let inplaceEditorObj: InPlaceEditorComponent;
    function actionBegin(e: ActionBeginEventArgs): void {
        const value: string = (inplaceEditorObj.element.querySelector('#date') as
any).value;
        inplaceEditorObj.value = value;
        (e as any).value = value;
    }
    return (
        <div>
            <div id='container'>
                <span className="content-title"> Select date: </span>
                <InPlaceEditorComponent ref={(text) => { inplaceEditorObj = text!
}} id='datepicker' mode='Inline' template='#date' value='2018-05-23'
actionBegin={ actionBegin = actionBegin.bind(this) } />
            </div>
            <div id='html-template' style={ { display: "none" } }>
                <input id="date" defaultValue= { inVal } type="date" />
            </div>
        </div>
    );
}
export default App;
{% endraw %}

```

Validation in React Inplace editor component

In-place Editor component supports validation and it can be achieved by adding rules to the [validationRules](#) property, its child property **key** must be same as [name](#) property, otherwise validation not performed. Submitting data to the server or calling the [validate](#) method validation executed.

Validation Rules

In-place Editor has following validation rules, which are used to perform validation.

| Rules | Description | Example |

|-----|-----|-----|

| **required** | The input element must have any input values | a or 1 or - |

| **email** | The input element must have valid **email** format values | <inplace@syncfusion.com> |

| **url** | The input element must have valid **url** format values | <http://syncfusion.com/> |

| **date** | The input element must have valid **date** format values | 12/25/2019 |

| **dateIso** | The input element must have valid **dateIso** format values | 2019-12-25 |

| **number** | The input element must have valid **number** format values | 1.0 or 1 |

| **maxLength** | Input value must have less than or equal to **maxLength** character length | if **maxLength: 5**, [check] is valid and [checking] is invalid |

| **minLength** | Input value must have less than or equal to **minLength** character length | if **minLength: 5**, [testing] is valid and [test] is invalid |

| **rangeLength** | Input value must have value between **rangeLength** character length | if **rangeLength: [4,5]**, [test] is valid and [key] is invalid |

| **range** | Input value must have value between **range** number | if **range: [4,5]**, [4] is valid and [6] is invalid |

| **max** | Input value must have less than or equal to **max** number | if **max: 3**, [3] is valid and [4] is invalid |

| **min** | Input value must have less than or equal to **min** number | if **min: 4**, [5] is valid and [2] is invalid |

Accessibility in React Inplace editor component

Style in React Inplace editor component

The following content provides the exact CSS structure that can be used to modify the control's appearance based on the user preference.

Customizing the In-place Editor text

Use the following CSS to customize the default In-place Editor's text content properties like font-family, font-size, color and border bottom.

```
`css
```

```
/ To change color, font family and font size /
```

```
.e-inplaceeditor .e-editable-value-wrapper .e-editable-value {
```

```
border-bottom: 2px dotted green;
```

```
color: red;
```

```
font-size: 12px;
```

font-family: Segoe UI

}

,

Customizing the In-place Editor action buttons

Use the following CSS to customize the default In-place Editor's action buttons.

```
`css
```

```
/ To change icon color for save button /
```

```
.e-inplaceeditor .e-editable-action-buttons .e-btn-save.e-icon-btn .e-btn-icon.e-icons,
```

```
.e-inplaceeditor-tip .e-editable-action-buttons .e-btn-save.e-icon-btn .e-btn-icon.e-icons{
```

```
color: green;
```

```
}
```

```
/ To change icon color for cancel button /
```

```
.e-inplaceeditor .e-editable-action-buttons .e-btn-cancel.e-icon-btn .e-btn-icon.e-icons, .e-  
inplaceeditor-tip .e-editable-action-buttons .e-btn-cancel.e-icon-btn .e-btn-icon.e-icons {
```

```
color: red;
```

```
}
```

```
/ To change background color for save button /
```

```
.e-inplaceeditor .e-editable-action-buttons .e-btn-save.e-icon-btn,
```

```
.e-inplaceeditor-tip .e-editable-action-buttons .e-btn-save.e-icon-btn {
```

```
background-color: antiquewhite;
```

```
}
```

```
/ To change background color for cancel button /
```

```
.e-inplaceeditor .e-editable-action-buttons .e-btn-cancel.e-icon-btn,
```

```
.e-inplaceeditor-tip .e-editable-action-buttons .e-btn-cancel.e-icon-btn {
```

```
background-color: antiquewhite;
```

```
}
```

,

Localization in React Inplace editor component

Localization

Localization library allows you to localize the default text content of the In-place Editor for different cultures using the [locale](#) property. In In-place Editor following keys will be localize based on culture.

| Locale key | en-US (default) |

|-----|-----|

| save | Close |

| cancel | Cancel |

| loadingText | Loading... |

| editIcon | Click to edit |

| editAreaClick | Click to edit |

| editAreaDoubleClick | Double click to edit |

To load translation object in an application use `load` function of `L10n` class. In the following sample, French culture is set to In-place Editor and change the tooltip text.

[Class-component]

APP.JSX

```
{% raw %}
import { L10n } from '@syncfusion/ej2-base';
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
class App extends React.Component {
  inplaceEditorObj;
  dropdownObj;
  editableOnData = ['Click', 'DbClick', 'EditIconClick'];
  model = { placeholder: 'Enter some text' };
  onChange(e) {
    const editType = e.itemData.value;
    this.inplaceEditorObj.editableOn = editType;
    this.inplaceEditorObj.dataBind();
  }
  // set locale culture to In-place Editor
  componentWillMount() {
    L10n.load({
      'fr-BE': {
        'inplace-editor': {
          'save': 'enregistrer',
          'cancel': 'Annuler',
          'loadingText': 'Chargement...',
          'editIcon': 'Cliquez pour éditer',
          'editAreaClick': 'Cliquez pour éditer',
          'editAreaDoubleClick': 'Double-cliquez pour éditer'
        }
      }
    });
  }
  render() {
    return (
      <div id='container'>
        <table className="table-section">
          <tbody>
            <tr>
              <td> EditableOn: </td>
              <td>
                <DropDownListComponent id='dropDown'
                  dataSource={this.editableOnData} width='auto' value='Click'

```



```

change={this.onChange = this.onChange.bind(this)} placeholder='Select edit
type' />
        </td>
      </tr>
      <tr>
        <td className="sample-td"> Enter your name: </td>
        <td className="sample-td">
          <InPlaceEditorComponent ref={(text) => {
this.inplaceEditorObj = text; }} id='element' mode='Inline' value='Andrew'
locale='fr-BE' model={this.model} />
        </td>
      </tr>
    </tbody>
  </table>
</div>);
  }
}
export default App;
{% endraw %}

```

APP.TSX

```

{% raw %}
import { L10n } from '@syncfusion/ej2-base';
import { ChangeEventArgs, DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { EditableType, InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
class App extends React.Component<{}, {}> {
  public inplaceEditorObj: InPlaceEditorComponent;
  public dropdownObj: DropDownListComponent;
  public editableOnData = ['Click', 'DbClick', 'EditIconClick'];
  public model = { placeholder: 'Enter some text' };
  public onChange(e: ChangeEventArgs): void {
    const editType: EditableType = e.itemData.value as EditableType;
    this.inplaceEditorObj.editableOn = editType;
    this.inplaceEditorObj.dataBind();
  }
  // set locale culture to In-place Editor
  public componentWillMount() {
    L10n.load({
      'fr-BE': {
        'inplace-editor': {
          'save': 'enregistrer',
          'cancel': 'Annuler',
          'loadingText': 'Chargement...',
          'editIcon': 'Cliquez pour éditer',
          'editAreaClick': 'Cliquez pour éditer',
          'editAreaDoubleClick': 'Double-cliquez pour éditer'
        }
      }
    });
  }
  public render() {
    return (

```

```

        <div id='container'>
            <table className="table-section">
                <tbody>
                    <tr>
                        <td> EditableOn: </td>
                        <td>
                            <DropDownListComponent id='dropDown' dataSource=
{this.editableOnData} width='auto' value='Click' change={
this.onChange=this.onChange.bind(this) } placeholder='Select edit type' />
                        </td>
                    </tr>
                    <tr>
                        <td className="sample-td"> Enter your name: </td>
                        <td className="sample-td">
                            <InPlaceEditorComponent ref={(text) => {
this.inplaceEditorObj = text! }} id='element' mode='Inline' value='Andrew'
locale='fr-BE' model={this.model} />
                        </td>
                    </tr>
                </tbody>
            </table>
        </div>
    );
}
}
export default App;
{% endraw %}

```

[Functional-component]

APP.JSX

```

{% raw %}
import { L10n } from '@syncfusion/ej2-base';
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-
editor';
import * as React from 'react';
function App() {
    React.useEffect(() => {
        // set locale culture to In-place Editor
        L10n.load({
            'fr-BE': {
                'inplace-editor': {
                    'save': 'enregistrer',
                    'cancel': 'Annuler',
                    'loadingText': 'Chargement...',
                    'editIcon': 'Cliquez pour éditer',
                    'editAreaClick': 'Cliquez pour éditer',
                    'editAreaDoubleClick': 'Double-cliquez pour éditer'
                }
            }
        });
    });
    let inplaceEditorObj;
    let dropdownObj;

```

```

let editableOnData = ['Click', 'DbClick', 'EditIconClick'];
let model = { placeholder: 'Enter some text' };
function onChange(e) {
    const editType = e.itemData.value;
    inplaceEditorObj.editableOn = editType;
    inplaceEditorObj.dataBind();
}
return (<div id='container'>
    <table className="table-section">
        <tbody>
            <tr>
                <td> EditableOn: </td>
                <td>
                    <DropDownListComponent id='dropDown'
dataSource={editableOnData} width='auto' value='Click' change={onChange =
onChange.bind(this)} placeholder='Select edit type' />
                </td>
            </tr>
            <tr>
                <td className="sample-td"> Enter your name: </td>
                <td className="sample-td">
                    <InPlaceEditorComponent ref={(text) => {
inplaceEditorObj = text; }} id='element' mode='Inline' value='Andrew'
locale='fr-BE' model={model}/>
                </td>
            </tr>
        </tbody>
    </table>
</div>);
}
export default App;
{% enddraw %}

```

APP.TSX

```

import { L10n } from '@syncfusion/ej2-base';
import { ChangeEventArgs, DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { EditableType, InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
function App() {
    React.useEffect(() => {
        // set locale culture to In-place Editor
        L10n.load({
            'fr-BE': {
                'inplace-editor': {
                    'save': 'enregistrer',
                    'cancel': 'Annuler',
                    'loadingText': 'Chargement...',
                    'editIcon': 'Cliquez pour éditer',
                    'editAreaClick': 'Cliquez pour éditer',
                    'editAreaDoubleClick': 'Double-cliquez pour éditer'
                }
            }
        });
    });
}

```

```

    });
    let inplaceEditorObj: InPlaceEditorComponent;
    let editableOnData = ['Click', 'DbClick', 'EditIconClick'];
    let model = { placeholder: 'Enter some text' };
    function onChange(e: ChangeEventArgs): void {
        const editType: EditableType = e.itemData.value as EditableType;
        inplaceEditorObj.editableOn = editType;
        inplaceEditorObj.dataBind();
    }
    return (
        <div id='container'>
            <table className="table-section">
                <tbody>
                    <tr>
                        <td> EditableOn: </td>
                        <td>
                            <DropDownListComponent id='dropDown' dataSource=
{editableOnData} width='auto' value='Click' change={onChange.bind(this)} >
placeholder='Select edit type' />
                        </td>
                    </tr>
                    <tr>
                        <td className="sample-td"> Enter your name: </td>
                        <td className="sample-td">
                            <InPlaceEditorComponent ref={(text) => {
inplaceEditorObj = text! }} id='element' mode='Inline' value='Andrew'
locale='fr-BE' model={model} />
                        </td>
                    </tr>
                </tbody>
            </table>
        </div>
    );
}
export default App;

```

Right to left

Specifies the direction of the In-place Editor component using the enableRtl property. For writing systems that require it like Arabic, Hebrew, etc., the direction can be switched to right-to-left.

It will not change based on the locale property.

[Class-component]

APP.JSX

```

import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-
editor';
import * as React from 'react';
class App extends React.Component {
    render() {
        return (<div id='container'>
            <span className="content-title"> Enter your name: </span>
            <InPlaceEditorComponent id='rtlelement' mode='Inline'
value='Andrew' enableRtl={true}/>
        </div>);
    }
}

```

```
    }  
  }  
  export default App;
```

APP.TSX

```
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';  
import * as React from 'react';  
class App extends React.Component<{}, {}> {  
  public render() {  
    return (  
      <div id='container'>  
        <span className="content-title"> Enter your name: </span>  
        <InPlaceEditorComponent id='rtlelement' mode='Inline'  
value='Andrew' enableRtl={true} />  
      </div>  
    );  
  }  
}  
export default App;
```

[Functional-component]

APP.JSX

```
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';  
import * as React from 'react';  
function App() {  
  return (<div id='container'>  
    <span className="content-title"> Enter your name: </span>  
    <InPlaceEditorComponent id='rtlelement' mode='Inline'  
value='Andrew' enableRtl={true}/>  
    </div>);  
}  
export default App;
```

APP.TSX

```
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';  
import * as React from 'react';  
function App () {  
  return (  
    <div id='container'>  
      <span className="content-title"> Enter your name: </span>  
      <InPlaceEditorComponent id='rtlelement' mode='Inline'  
value='Andrew' enableRtl={true} />  
    </div>  
  );  
}  
export default App;
```

Format

Formatting is a way of representing the value in different format. You can format the following mentioned controls with its `format` property, when it passed through the In-place Editor [model](#) property.

- [DatePicker](#)
- [DateRangePicker](#)
- [DateTimePicker](#)
- [NumericTextBox](#)
- [Slider](#)
- [TimePicker](#)

[Class-component]

APP.JSX

```
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
class App extends React.Component {
  value = new Date('11/23/2018');
  model = { placeholder: 'Select date', format: 'yyyy-MM-dd' };
  render() {
    return (
      <div id='container'>
        <span className="content-title"> Select date: </span>
        <InPlaceEditorComponent id='element' type='Date'
value={this.value} model={this.model}/>
      </div>);
  }
}
export default App;
```

APP.TSX

```
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
class App extends React.Component<{}, {}> {
  public value = new Date('11/23/2018');
  public model = { placeholder: 'Select date', format: 'yyyy-MM-dd' };
  public render() {
    return (
      <div id='container'>
        <span className="content-title"> Select date: </span>
        <InPlaceEditorComponent id='element' type='Date'
value={this.value} model={this.model} />
      </div>
    );
  }
}
export default App;
```

[Functional-component]

APP.JSX

```
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
function App() {
    const value = new Date('11/23/2018');
    const model = { placeholder: 'Select date', format: 'yyyy-MM-dd' };
    return (<div id='container'>
        <span className="content-title"> Select date: </span>
        <InPlaceEditorComponent id='element' type='Date' value={value}
model={model}/>
        </div>);
}
export default App;
```

APP.TSX

```
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
function App () {
    const value : Date = new Date('11/23/2018');
    const model : object = { placeholder: 'Select date', format: 'yyyy-MM-dd'
};
    return (
        <div id='container'>
            <span className="content-title"> Select date: </span>
            <InPlaceEditorComponent id='element' type='Date' value={value}
model={model} />
            </div>
        );
}
export default App;
```

How To

Dynamic edit mode in React Inplace editor component

At component initial load, if you want to open editor state without interacting In-place Editor input element, it can be achieved by configuring the [enableEditMode](#) property to `true`.

In the following sample, editor opened at initial load and when toggling a checkbox, it will remove or open the editor.

[Class-component]

APP.JSX

```
{% raw %}
import { CheckBoxComponent } from '@syncfusion/ej2-react-buttons';
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
import './App.css';
class App extends React.Component {
```

```

    inplaceEditorObj;
    checkboxObj;
    model = { placeholder: 'Enter some text' };
    onChange(e) {
        this.inplaceEditorObj.enableEditMode = e.checked;
        this.inplaceEditorObj.dataBind();
    }
    render() {
        return (<div id='container'>
            <table className="table-section">
                <tr>
                    <td> EnableEditMode: </td>
                    <td>
                        <CheckBoxComponent id='enable' label='Enable'
checked={true} change={this.onChange = this.onChange.bind(this)} />
                    </td>
                </tr>
                <tr>
                    <td className="sample-td"> Enter your name: </td>
                    <td className="sample-td">
                        <InPlaceEditorComponent ref={(text) => {
this.inplaceEditorObj = text; }} id='dynamicEdit' mode='Inline'
value='Andrew' enableEditMode={true} actionOnBlur='Ignore'
model={this.model} />
                    </td>
                </tr>
            </table>
        </div>);
    }
}
export default App;
{% endraw %}

```

APP.TSX

```

{% raw %}
import { ChangeEventArgs, CheckBoxComponent } from '@syncfusion/ej2-react-
buttons';
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-
editor';
import * as React from 'react';
import './App.css';
class App extends React.Component<{}, {}> {
    public inplaceEditorObj: InPlaceEditorComponent;
    public checkboxObj: CheckBoxComponent;
    public model = { placeholder: 'Enter some text' };
    public onChange(e: ChangeEventArgs): void {
        (this.inplaceEditorObj as any).enableEditMode = e.checked;
        this.inplaceEditorObj.dataBind();
    }
    public render() {
        return (
            <div id='container'>
                <table className="table-section">
                    <tbody>
                        <tr>

```



```

        <td> EnableEditMode: </td>
        <td>
            <CheckBoxComponent id='enable' label='Enable'
checked={true} change={ this.onChange = this.onChange.bind(this) }/>
        </td>
    </tr>
    <tr>
        <td className="sample-td"> Enter your name: </td>
        <td className="sample-td">
            <InPlaceEditorComponent ref={(text) => {
this.inplaceEditorObj = text! }} id='dynamicEdit' mode='Inline'
value='Andrew' enableEditMode={true} actionOnBlur='Ignore' model={this.model}
/>
        </td>
    </tr>
</tbody>
</table>
</div>
);
}
}
export default App;
{% endraw %}

```

[Functional-component]

APP.JSX

```

{% raw %}
import { CheckBoxComponent } from '@syncfusion/ej2-react-buttons';
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-
editor';
import * as React from 'react';
import './App.css';
function App() {
    let inplaceEditorObj;
    let checkboxObj;
    let model = { placeholder: 'Enter some text' };
    function onChange(e) {
        inplaceEditorObj.enableEditMode = e.checked;
        inplaceEditorObj.dataBind();
    }
    return (<div id='container'>
        <table className="table-section">
            <tr>
                <td> EnableEditMode: </td>
                <td>
                    <CheckBoxComponent id='enable' label='Enable'
checked={true} change={onChange = onChange.bind(this) }/>
                </td>
            </tr>
            <tr>
                <td className="sample-td"> Enter your name: </td>
                <td className="sample-td">

```

```

        <InPlaceEditorComponent ref={{(text) => { inplaceEditorObj =
text; }}} id='dynamicEdit' mode='Inline' value='Andrew' enableEditMode={true}
actionOnBlur='Ignore' model={model}/>
      </td>
    </tr>
  </table>
</div>;
}
export default App;
{% endraw %}

```

APP.TSX

```

{% raw %}
import { ChangeEventArgs, CheckBoxComponent } from '@syncfusion/ej2-react-
buttons';
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-
editor';
import * as React from 'react';
import './App.css';
function App () {
  let inplaceEditorObj: InPlaceEditorComponent;
  let checkboxObj: CheckBoxComponent;
  let model = { placeholder: 'Enter some text' };
  function onChange(e: ChangeEventArgs): void {
    (inplaceEditorObj as any).enableEditMode = e.checked;
    inplaceEditorObj.dataBind();
  }
  return (
    <div id='container'>
      <table className="table-section">
        <tr>
          <td> EnableEditMode: </td>
          <td>
            <CheckBoxComponent id='enable' label='Enable'
checked={true} change={ onChange = onChange.bind(this) }/>
          </td>
        </tr>
        <tr>
          <td className="sample-td"> Enter your name: </td>
          <td className="sample-td">
            <InPlaceEditorComponent ref={{(text) => { inplaceEditorObj =
text! }}} id='dynamicEdit' mode='Inline' value='Andrew' enableEditMode={true}
actionOnBlur='Ignore' model={model} />
          </td>
        </tr>
      </table>
    </div>
  );
}
export default App;
{% endraw %}

```

Disable edit mode in React Inplace editor component

The edit mode of In-place Editor can be disabled by setting the [disabled](#) property value to `true`. In the following sample, when check or uncheck the checkbox, In-place Editor component will disable or enable the edit mode.

[Class-component]

APP.JSX

```
{% raw %}
import { CheckBoxComponent } from '@syncfusion/ej2-react-buttons';
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
import './App.css';
class App extends React.Component {
  inplaceEditorObj;
  checkboxObj;
  model = { placeholder: 'Enter some text' };
  onChange(e) {
    this.inplaceEditorObj.disabled = e.checked;
    this.inplaceEditorObj.dataBind();
  }
  render() {
    return (
      <div id='container'>
        <table className="table-section">
          <tr>
            <td> Disabled: </td>
            <td>
              <CheckBoxComponent id='enable' label='Disable'
checked={false} change={this.onChange = this.onChange.bind(this)} />
            </td>
          </tr>
          <tr>
            <td className="sample-td"> Enter your name: </td>
            <td className="sample-td">
              <InPlaceEditorComponent ref={(text) => {
this.inplaceEditorObj = text; }} id='disableEdit' mode='Inline'
value='Andrew' model={this.model} />
            </td>
          </tr>
        </table>
      </div>
    );
  }
}
export default App;
{% endraw %}
```

APP.TSX

```
{% raw %}
import { ChangeEventArgs, CheckBoxComponent } from '@syncfusion/ej2-react-buttons';
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
```

```

import './App.css';
class App extends React.Component<{}, {}> {
  public inplaceEditorObj: InPlaceEditorComponent;
  public checkboxObj: CheckBoxComponent;
  public model = { placeholder: 'Enter some text' };
  public onChange(e: ChangeEventArgs): void {
    (this.inplaceEditorObj as any).disabled = e.checked;
    this.inplaceEditorObj.dataBind();
  }
  public render() {
    return (
      <div id='container'>
        <table className="table-section">
          <tbody>
            <tr>
              <td> Disabled: </td>
              <td>
                <CheckBoxComponent id='enable' label='Disable'
checked={false} change={ this.onChange=this.onChange.bind(this) }/>
              </td>
            </tr>
            <tr>
              <td className="sample-td"> Enter your name: </td>
              <td className="sample-td">
                <InPlaceEditorComponent ref={(text) => {
this.inplaceEditorObj = text! }} id='disableEdit' mode='Inline'
value='Andrew' model={this.model} />
              </td>
            </tr>
          </tbody>
        </table>
      </div>
    );
  }
}
export default App;
{% endraw %}

```

[Functional-component]

APP.JSX

```

{% raw %}
import { CheckBoxComponent } from '@syncfusion/ej2-react-buttons';
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-
editor';
import * as React from 'react';
import './App.css';
function App() {
  let inplaceEditorObj;
  let checkboxObj;
  let model = { placeholder: 'Enter some text' };
  function onChange(e) {
    inplaceEditorObj.disabled = e.checked;
    inplaceEditorObj.dataBind();
  }
}

```

```

    return (<div id='container'>
      <table className="table-section">
        <tr>
          <td> Disabled: </td>
          <td>
            <CheckBoxComponent id='enable' label='Disable'
checked={false} change={onChange = onChange.bind(this)} />
          </td>
        </tr>
        <tr>
          <td className="sample-td"> Enter your name: </td>
          <td className="sample-td">
            <InPlaceEditorComponent ref={(text) => { inplaceEditorObj =
text; }} id='disableEdit' mode='Inline' value='Andrew' model={model} />
          </td>
        </tr>
      </table>
    </div>);
  }
  export default App;
  {% endraw %}

```

APP.TSX

```

{% raw %}
import { ChangeEventArgs, CheckBoxComponent } from '@syncfusion/ej2-react-
buttons';
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-
editor';
import * as React from 'react';
import './App.css';
function App () {
  let inplaceEditorObj: InPlaceEditorComponent;
  let checkboxObj: CheckBoxComponent;
  let model = { placeholder: 'Enter some text' };
  function onChange(e: ChangeEventArgs): void {
    (inplaceEditorObj as any).disabled = e.checked;
    inplaceEditorObj.dataBind();
  }
  return (
    <div id='container'>
      <table className="table-section">
        <tr>
          <td> Disabled: </td>
          <td>
            <CheckBoxComponent id='enable' label='Disable'
checked={false} change={ onChange=onChange.bind(this) } />
          </td>
        </tr>
        <tr>
          <td className="sample-td"> Enter your name: </td>
          <td className="sample-td">
            <InPlaceEditorComponent ref={(text) => { inplaceEditorObj =
text! }} id='disableEdit' mode='Inline' value='Andrew' model={model} />
          </td>
        </tr>
      </table>
    </div>
  );
}

```

```

    </table>
  </div>
);
}
export default App;
{% endraw %}

```

Custom indication in React Inplace editor component

You can add custom indication to unsaved input value by using the [actionSuccess](#) event, when data not submitted to the server.

In this sample, the `actionSuccess` event configured and the `URL` property not included. Then submit button clicked, the current editor value saved into input and data sending to server action prevented due to the `URL` property not configured.

But `actionSuccess` event will trigger the handler function with `null` argument values. In handler function data property `primaryKey` value checked, whether it empty or not. If it is empty custom class, added in the `e-value-wrapper` element to customize its styles.

To send input value to local, set the `URL` property as empty.

[Class-component]

APP.JSX

```

import { isNullOrUndefined as isNOU } from '@syncfusion/ej2-base';
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
import './App.css';
class App extends React.Component {
  inplaceEditorObj;
  model = { placeholder: 'Enter some text' };
  actionSuccess(e) {
    const keyVal = 'PrimaryKey';
    const primeKey = e.data[keyVal];
    if (isNOU(primeKey) || primeKey === '') {
      document.querySelector('.e-editable-value').classList.add('e-send-error');
    }
  }
  render() {
    return (
      <div id='container'>
        <span className="content-title"> Enter your name: </span>
        <InPlaceEditorComponent id='customtextbox' mode='Inline'
          value='Andrew' model={this.model} actionSuccess={this.actionSuccess} =
          this.actionSuccess.bind(this) />
      </div>
    );
  }
}
export default App;

```

APP.TSX

```

import { isNullOrUndefined as isNOU } from '@syncfusion/ej2-base';

```

```

import { ActionEventArgs, InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
import './App.css';
class App extends React.Component<{}, {}> {
  public inplaceEditorObj: InPlaceEditorComponent;
  public model = { placeholder: 'Enter some text' };
  public actionSuccess(e: ActionEventArgs): void {
    const keyVal = 'PrimaryKey';
    const primeKey: string = e.data[keyVal];
    if (isNOU(primeKey) || primeKey === '') {
      ((document.querySelector('.e-editable-value') as any)).classList.add('e-send-error');
    }
  }
  public render() {
    return (
      <div id='container'>
        <span className="content-title"> Enter your name: </span>
        <InPlaceEditorComponent id='customtextbox' mode='Inline'
value='Andrew' model={this.model} actionSuccess={ this.actionSuccess =
this.actionSuccess.bind(this) } />
      </div>
    );
  }
}
export default App;

```

[Functional-component]

APP.JSX

```

import { isNullOrUndefined as isNOU } from '@syncfusion/ej2-base';
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
import './App.css';
function App() {
  let inplaceEditorObj;
  let model = { placeholder: 'Enter some text' };
  function actionSuccess(e) {
    const keyVal = 'PrimaryKey';
    const primeKey = e.data[keyVal];
    if (isNOU(primeKey) || primeKey === '') {
      document.querySelector('.e-editable-value').classList.add('e-send-error');
    }
  }
  return (<div id='container'>
    <span className="content-title"> Enter your name: </span>
    <InPlaceEditorComponent id='customtextbox' mode='Inline'
value='Andrew' model={model} actionSuccess={actionSuccess =
actionSuccess.bind(this)} />
  </div>);
}
export default App;

```

APP.TSX

```
import { isNullOrUndefined as isNOU } from '@syncfusion/ej2-base';
import { ActionEventArgs, InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
import './App.css';
function App () {
    let inplaceEditorObj: InPlaceEditorComponent;
    let model = { placeholder: 'Enter some text' };
    function actionSuccess(e: ActionEventArgs): void {
        const keyVal = 'PrimaryKey';
        const primeKey: string = e.data[keyVal];
        if (isNOU(primeKey) || primeKey === '') {
            ((document.querySelector('.e-editable-value') as any)).classList.add('e-send-error');
        }
    }
    return (
        <div id='container'>
            <span className="content-title"> Enter your name: </span>
            <InPlaceEditorComponent id='customtextbox' mode='Inline'
value='Andrew' model={model} actionSuccess={ actionSuccess =
actionSuccess.bind(this) } />
        </div>
    );
}
export default App;
```

Custom animation in React Inplace editor component

In popup mode, the In-place Editor rendered with the Essential JS 2 React **Tooltip** component. You can use tooltip properties and events to customize the popup by configure properties into the [model](#) property inside the [popupSettings](#) API.

In the following sample, popup animation can be customized by passing animation effect using the **model** property and the dynamic animation effect changes configured from the Essential JS 2 React **DropDownList** component **change** event.

[Class-component]

APP.JSX

```
{% raw %}
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-editor';
import * as React from 'react';
import './App.css';
class App extends React.Component {
    inplaceEditorObj;
    dropdownObj;
    openAnimateData = ['None', 'FadeIn', 'FadeZoomIn', 'ZoomIn'];
    model = { placeholder: 'Enter some text' };
}
```



```

        popupSettings = { model: { animation: { open: { effect: 'ZoomIn',
duration: 1000, delay: 0 } } } };
        onChange(e) {
            this.inplaceEditorObj.popupSettings.model.animation.open.effect =
e.value;
            this.inplaceEditorObj.dataBind();
        }
        render() {
            return (<div id='container'>
                <table className="table-section">
                    <tbody>
                        <tr>
                            <td> Open Animation: </td>
                            <td>
                                <DropDownListComponent id='openDropDown' value='ZoomIn'
dataSource={this.openAnimateData} placeholder='Select a animate type'
popupHeight='150px' change={this.onChange = this.onChange.bind(this)}>/>
                            </td>
                        </tr>
                        <tr>
                            <td className="sample-td"> Enter your name: </td>
                            <td className="sample-td">
                                <InPlaceEditorComponent ref={(text) => {
this.inplaceEditorObj = text; }} id='element' mode='Popup' value='Andrew'
model={this.model} popupSettings={this.popupSettings}>/>
                            </td>
                        </tr>
                    </tbody>
                </table>
            </div>);
        }
    }
    export default App;
    {% endraw %}

```

APP.TSX

```

{% raw %}
import { ChangeEventArgs, DropDownListComponent } from '@syncfusion/ej2-
react-dropdowns';
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-
editor';
import * as React from 'react';
import './App.css';
class App extends React.Component<{}, {}> {
    public inplaceEditorObj: InPlaceEditorComponent;
    public dropdownObj: DropDownListComponent;
    public openAnimateData = ['None', 'FadeIn', 'FadeZoomIn', 'ZoomIn'];
    public model = { placeholder: 'Enter some text' };
    public popupSettings = { model: { animation: { open: { effect: 'ZoomIn',
duration: 1000, delay: 0 } } } };
    public onChange(e: ChangeEventArgs): void {
        (this.inplaceEditorObj as any).popupSettings.model.animation.open.effect
= e.value;
        this.inplaceEditorObj.dataBind();
    }
}

```

```

public render() {
  return (
    <div id='container'>
      <table className="table-section">
        <tbody>
          <tr>
            <td> Open Animation: </td>
            <td>
              <DropDownListComponent id='openDropDown' value='ZoomIn'
dataSource= {this.openAnimateData} placeholder='Select a animate type'
popupHeight='150px' change={ this.onChange=this.onChange.bind(this) } />
            </td>
          </tr>
          <tr>
            <td className="sample-td"> Enter your name: </td>
            <td className="sample-td">
              <InPlaceEditorComponent ref={ (text) => {
this.inplaceEditorObj = text! }} id='element' mode='Popup' value='Andrew'
model={this.model} popupSettings={this.popupSettings} />
            </td>
          </tr>
        </tbody>
      </table>
    </div>
  );
}
}
export default App;
{% endraw %}

```

[Functional-component]

APP.JSX

```

{% raw %}
import { DropDownListComponent } from '@syncfusion/ej2-react-dropdowns';
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-
editor';
import * as React from 'react';
import './App.css';
function App() {
  let inplaceEditorObj;
  let dropdownObj;
  let openAnimateData = ['None', 'FadeIn', 'FadeZoomIn', 'ZoomIn'];
  let model = { placeholder: 'Enter some text' };
  let popupSettings = { model: { animation: { open: { effect: 'ZoomIn',
duration: 1000, delay: 0 } } } };
  function onChange(e) {
    inplaceEditorObj.popupSettings.model.animation.open.effect = e.value;
    inplaceEditorObj.dataBind();
  }
  return (<div id='container'>
    <table className="table-section">
      <tbody>
        <tr>
          <td> Open Animation: </td>

```

```

        <td>
            <DropDownListComponent id='openDropDown' value='ZoomIn'
dataSource={openAnimateData} placeholder='Select a animate type'
popupHeight='150px' change={onChange = onChange.bind(this)} />
        </td>
    </tr>
    <tr>
        <td className="sample-td"> Enter your name: </td>
        <td className="sample-td">
            <InPlaceEditorComponent ref={(text) => { inplaceEditorObj =
text; }} id='element' mode='Popup' value='Andrew' model={model}
popupSettings={popupSettings} />
        </td>
    </tr>
</tbody>
</table>
</div>;
}
export default App;
{% endraw %}

```

APP.TSX

```

{% raw %}
import { ChangeEventArgs, DropDownListComponent } from '@syncfusion/ej2-
react-dropdowns';
import { InPlaceEditorComponent } from '@syncfusion/ej2-react-inplace-
editor';
import * as React from 'react';
import './App.css';
function App () {
    let inplaceEditorObj: InPlaceEditorComponent;
    let dropdownObj: DropDownListComponent;
    let openAnimateData = ['None', 'FadeIn', 'FadeZoomIn', 'ZoomIn'];
    let model = { placeholder: 'Enter some text' };
    let popupSettings = { model: { animation: { open: { effect: 'ZoomIn',
duration: 1000, delay: 0 } } } };
    function onChange(e: ChangeEventArgs): void {
        (inplaceEditorObj as any).popupSettings.model.animation.open.effect =
e.value;
        inplaceEditorObj.dataBind();
    }
    return (
        <div id='container'>
            <table className="table-section">
                <tbody>
                    <tr>
                        <td> Open Animation: </td>
                        <td>
                            <DropDownListComponent id='openDropDown' value='ZoomIn'
dataSource= {openAnimateData} placeholder='Select a animate type'
popupHeight='150px' change={ onChange=onChange.bind(this) } />
                        </td>
                    </tr>
                    <tr>
                        <td className="sample-td"> Enter your name: </td>

```

```
        <td className="sample-td">
            <InPlaceEditorComponent ref={ (text) => { inplaceEditorObj =
text! }} id='element' mode='Popup' value='Andrew' model={model}
popupSettings={popupSettings} />
        </td>
    </tr>
</tbody>
</table>
</div>
);
}
export default App;
{% enddraw %}
```